

THE ROLE OF INTRAPRENEURSHIP IN A GLOBALLY COMPETITIVE TECHNOLOGY BUSINESS ENVIRONMENT:

A DESIGN CONCEPT AND EMPIRICAL STUDY

BY

BERND PETER PLATZEK

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DIE ROL VAN INTRAPRENEURSKAP IN 'N HOOGS KOMPETERENDE GLOBALE TEGNOLOGIE OMGEWING:

'N ONTWERP EN EMPIRIESE STUDIE

DEUR

BERND PETER PLATZEK

Studieleier: Prof L Pretorius
Medeleier: Dr D H Winzker
Departement: Na-graadse Skool vir Tegnologiebestuur
UNIVERSITEIT VAN PRETORIA
Graad: PhD (Ingenieurswese Bestuur)

Die agtergrond tot hierdie verhandeling is die aanname dat entrepreneuriale denke en aksie noodsaaklik is indien maatskappye in 'n dinamiese, globale en komplekse omgewing lewensvatbaar in die langtermyn wil wees. 'n Maatskappy in 'n dinamiese omgewing moet gelyktydig bedryfstake uitvoer, innoverend optree en nuwe besigheid in die medium en langtermyn genereer. Buigbaarheid en aanpasbaarheid is 'n vereiste ten einde oordeelkundig op geleenthede en bedreigings wat in die besigheidsomgewing ontstaan, te kan reageer. Die navorsing in die verhandeling verduidelik die rol van intrapreneurskap en ontwikkel die ontwerpkonsep vir holistiese intrapreneurskap.

Die navorsingsproses bestaan onder andere uit die daarstel en evaluering van 'n raamwerk van vyf pertinente sleutelpunte vir intrapreneurskap in 'n dinamiese sakewereld. In die proses word veronderstel dat holistiese en ekonomiese denke saam met teoretiese bestuurskonsepte 'n vrugbare basis vir die ondersoek van intrapreneurskap vorm. 'n Literatuurstudie volg wat sinoptiese, dog teoretiese konsepte daarstel vir die rol van intrapreneurskap, die besigheidsomgewing asook vir stelsel toepassings. Met die literatuur analise word die geïdentifiseerde doelwitte van holistiese intrapreneurskap verder ondersoek en daaruit word 'n konsep raamwerk ontwikkel. Drie empiriese studies lig die teoretiese gevoltrekkings met praktiese voorbeelde toe. Deur die vraelyste word die konsep raamwerk met die ontwikkeling van kern elemente vir die ontwikkeling van lewensvatbare, entrepreneurial denkende organisasies wat bereid is om nuwe aspekte te leer verder uitgebou.

Entrepreneuriale organisasies moet die rol van intrapreneurskap as 'n konsep om die toekoms te help bou, net so goed verstaan soos die eksterne omgewing en die wisselwerking van die organisasie en sy omgewing. Hierdie onderwerpe word meer breedvoerig in hoofstuk 3 bespreek en daaruit volg nege kern elemente vir die beskrywing van intrapreneurskap.

Op hierdie basis word daar dan in hoofstuk 4 organisatoriese inligtingsinsameling, toekomsbeskrywing van die organisasie asook die organisasiestruktuurering as 'n sentrale doelwit van die intrapreneuriale organisasie afgelei en geanaliseer. Om implementering van die intrapreneuriale doelwitte te verseker, word die raamwerkkonsep vir holistiese intrapreneurskap in hoofstuk 5 ontwikkel. Hierdie hoofstuk verskaf ook 'n rolmodel vir die organisasie, 'n konsep raamwerk vir die begrip en analise van die globale omgewing, sowel as 'n kwalitatiewe stelselmodel vir die wisselwerking van die intrapreneuriale organisasie in die besigheidswêreld.

Die rol van intrapreneurskap en die implementering van die model in die praktyk word in hoofstuk 6 ondersoek. In hierdie proses is die implementering van die rolmodel gebaseer op die werksverdeling soos gedokumenteer en saamgevat vir al die organisasies. Aanvullend word leerareas vir 'n lewensvatbare, entrepreneuriale organisasie voorgestel ten einde die ontwikkeling van entrepreneuriale oriëntasie deur middel van vyf versterkende entrepreneuriale rolle te bewerkstellig.

Die oorspronklike bydrae van die verhandeling bestaan onder andere daaruit om 'n geïntegreerde konsep van holistiese intrapreneurskap, afgelei van 'n teorie-gebaseerde verkenning, daar te stel. Die verhandeling fokus ook op entrepreneuriale aksie van 'n organisasie as 'n eenheid asook die bereiking van lewensvatbaarheid in 'n globale en dinamiese omgewing. Hierdie konsep omsluit 'n leerproses deur die entrepreneuriale deelnemers, die entrepreneuriale spanne asook die entrepreneuriale organisasie in geheel. Die uiteengesette konsep definieer die boublokke van 'n lewensvatbare, entrepreneuriale ontwikkelende organisasie.



DIE ROLLE VON INTRAPRENEURSHIP IN EINER GLOBALEN, WETTBEWERBSINTENSIVEN UND DURCH TECHNOLOGISCHE ENTWICKLUNGEN GEPRÄGTEN UNTERNEHMENSUMWELT:

GESTALTUNGSKONZEPT UND EMPIRISCHE STUDIE

von

BERND PETER PLATZEK

1. Supervisor: Prof. L. Pretorius
2. Supervisor: Dr. D.H. Winzker
Department: Graduate School of Technology Management
UNIVERSITY OF PRETORIA
Grad: PhD

Die Ausgangssituation der Untersuchung wird markiert durch eine dynamische und komplexe globale Unternehmensumwelt, die von Organisationen zur Sicherung der Lebensfähigkeit unternehmerisches Denken und Handeln fordert. Unternehmen in dynamischen Umfeldern müssen die operativen Aufgaben in bestehenden Geschäften effizient meistern und gleichzeitig mit einem mittel- bis langfristigen Fokus Innovationen in bestehenden und neuen Geschäften realisieren. Dies erfordert Flexibilität und Anpassungsfähigkeit um die Chancen und Risiken aus den Veränderungen der Unternehmensumwelt nutzen zu können. Die Forschungsarbeit klärt die Rolle von Intrapreneurship und entwickelt ein Gestaltungskonzept für ein ganzheitliches Intrapreneurship.

Im Forschungsprozess wird zunächst ein Bezugsrahmen mit fünf zentralen Feststellungen zur Rolle von Intrapreneurship in einer dynamischen Unternehmensumwelt vorgestellt. Dabei wird argumentiert, dass ganzheitliches und ökonomisches Denken sowie managementorientierte Theoriekonzepte zur Untersuchung von Intrapreneurship eine fruchtbare Basis bilden. Danach erfolgt in der Literaturstudie eine synoptische Darstellung der einzelnen theoretischen Konzepte zur Rolle von Intrapreneurship, zur Unternehmensumwelt sowie zu systemtheoretischen Konzepten.

In der weiteren Literaturanalyse werden die identifizierten Aufgaben eines ganzheitlichen Intrapreneurships untersucht und in der Synthese in ein Gestaltungskonzept überführt. Drei empirische Studien spiegeln die theoretischen Erkenntnisse an der Praxis. Mit Blick auf die Befragungsergebnisse wird das Gestaltungskonzept um Elemente zur Entwicklung einer lebensfähigen unternehmerischen lernenden Organisation erweitert.

Unternehmerische Organisationen müssen die Rolle von Intrapreneurship als Konzept für die Zukunftsgestaltung ebenso verstehen wie die externen Umfeldler und die Interaktion zwischen Organisation und Umwelt. Dieser Themenkomplex wird in Kapitel 3 bearbeitet und neun Gestaltungselemente zur Beschreibung der Rolle von Intrapreneurship abgeleitet.

Auf dieser Basis werden die unternehmerische Informationsgewinnung, Zukunftsgestaltung sowie Organisationsgestaltung als zentrale Aufgaben der unternehmerischen Organisation abgeleitet und in Kapitel 4 analysiert. Zur Umsetzung der unternehmerischen Aufgaben wird in Kapitel 5 ein Gestaltungskonzept für ganzheitliches Intrapreneurship mit einem Rollenmodell für die Organisation, einem konzeptionellen Rahmen für das Verstehen und Analysieren der globalen Unternehmensumwelt sowie einem qualitativen Systemmodell für die Interaktion der unternehmerischen Organisation mit der Unternehmensumwelt vorgestellt.

Die Rolle von Intrapreneurship und die Umsetzung des Rollenmodells in der Praxis werden in Kapitel 6 untersucht. Dabei wird auch die arbeitsteilige Umsetzung des Rollenmodells in einer Studie erfasst und firmenübergreifend verdichtet. Mit Blick auf die Erkenntnisse der empirischen Studie werden Lernfelder einer lebensfähigen unternehmerischen lernenden Organisation zur Entwicklung einer unternehmerischen Orientierung und zur kontextabhängigen Stärkung der fünf unternehmerischen Rollen skizziert.

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UNIVERSITY OF PRETORIA
Degree: PhD

The background of this examination is that we live in a dynamic and complex global business environment which requires entrepreneurial thinking and action in organisations (intrapreneurship) if they are to secure viability. Companies in dynamic environments have to deal efficiently with operational tasks in existing businesses and at the same time achieve innovation in existing and new business with a medium to long term focus. This requires flexibility and adaptability to be able to use the opportunities and threats arising from changes in the business environment. The research work in this thesis clarifies the role of intrapreneurship and develops the design concept for holistic intrapreneurship.

In the research process a frame of reference with five central findings on the role of intrapreneurship in a dynamic business environment is firstly introduced. In this process, the idea is that holistic and economic thinking together with management oriented theoretical concepts form a fruitful basis for the examination of intrapreneurship. Subsequently in the literature study there follows a synoptic illustration of the individual theoretical concepts on the role of intrapreneurship, the business environment and systems theory concepts.

In a further literature analysis, the tasks identified for holistic intrapreneurship are examined and conveyed as a design concept in the synthesis. Three empirical studies reflect the theoretical findings in practical situations. Taking into account the results of the survey, the design concept is extended by elements for the development of a vital, entrepreneurial learning organisation.

Entrepreneurial organisations have equally to understand the role of intrapreneurship as a concept for shaping the future as the external environments and the interaction between the organisation and its environment. This complex of themes is worked on in chapter 3 and nine design elements for the specification of the role of intrapreneurship are derived.

On the basis of this, entrepreneurial information gathering, shaping of the future and organisation design are derived as central tasks of the entrepreneurial organisation and are analysed in chapter 4. A design concept for holistic intrapreneurship with a role model for the organisation, a conceptual framework for the understanding and analysis of the global business environment as well as a qualitative systems model for the interaction of the entrepreneurial organisation with the business environment is introduced in chapter 5 to aid with implementation of the entrepreneurial tasks.

The role of intrapreneurship and the implementation of the role model in practice are examined in chapter 6. In this process, implementation of the role model based on the division of labour is recorded and condensed across all firms. In chapter 6.4, learning areas for the development of an entrepreneurial orientation and for a context-related strengthening of the five entrepreneurial roles in a vital entrepreneurial learning organisation are outlined.

The novel contribution of the thesis is to present an integrated concept of holistic intrapreneurship derived from theory-based exploration which thus focuses on the entrepreneurial action of the organisation as a whole and the achievement of viability in a global and dynamic environment. This concept contains learning by the entrepreneurial actors, the entrepreneurial teams and the whole entrepreneurial organisation and defines the building blocks of a vital, entrepreneurial learning organisation.

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Table of contents

Abstract	i
Acknowledgements	iii
List of tables	vii
List of illustrations	viii
1. Introduction and the issue at stake	1
1.1 Outline of problem and terminology	2
1.2 Background and framework for the chapters to come.....	9
1.3 Chapter sequence and research road map of the study	16
2. Research strategy	19
2.1 Research objective and process of study	19
2.2 Research design and methodology of study	24
3. Intrapreneurship and the global business environment	29
3.1 The role of intrapreneurship.....	30
3.1.1 Intrapreneurship and economic tradition	32
3.1.2 Management-oriented approaches at the meta level.....	36
3.1.2.1 Management concepts for the entrepreneurial organisation: Opportunities, risks, and revitalisation	36
3.1.2.2 Management concepts and holistic view of the entrepreneurial firm	43
3.1.2.3 Management concepts and orientation for corporate management.	52
3.1.3 Management-oriented approaches at the micro level.....	57
3.1.3.1 Concepts on entrepreneurial structure and internal division of labour	57
3.1.3.2 Concepts on entrepreneurial process, culture, and structural leadership	66
3.1.3.3 Concepts on entrepreneurial top management, strategic leadership and learning	75
3.1.3.4 Concepts on viable entrepreneurial communities and individual entrepreneurial action	82
3.1.4 Intrapreneurship and the changing global context.....	88
3.1.5 Conclusion: Design elements of holistic intrapreneurship	99
3.2 Business environment: Characterisation, segments, analysis	103
3.2.1 Concepts for describing the business environment	106
3.2.1.1 Nature of the business environment	106
3.2.1.2 Specification of the business environment	111
3.2.1.3 Cultural context.....	125

3.2.2 Areas of analysis	135
3.2.2.1 Framework of analysis for the general macro environment	136
3.2.2.2 Analytical framework for the specific micro environment	138
3.2.2.3 Networking within the external business environment	143
3.2.2.4 Analytical framework for the internal business environment	145
3.2.2.5 Linking analyses to the external and internal environment	153
3.2.2.6 Levels of analysis for the global business environment	155
3.2.3 Comment: Understanding the global business environment	155
3.3 Organisation, environment and systems thinking	162
3.3.1 System and environment according to Bertalanffy	165
3.3.2 Organisation and environment according to Katz and Kahn	166
3.3.3 Relationship networks according to Emery and Trist	167
3.3.4 Viable organisations according to Beer	168
3.3.5 Living systems according to Miller	174
3.3.6 Organic organisations according to Wheatley	177
3.3.7 Holistic thinking and adjustment according to Ulrich and Probst	178
3.3.8 Dealing with complexity according to Bleicher	181
3.3.9 Networking and recognition of models according to Vester	183
3.3.10 The adaptable organisation according to Morgan	185
3.3.11 Comment: Evolutionary development of the organisation and symbiosis with the environment	185
3.4 Conclusion: The three central tasks of an entrepreneurial organisation ...	188
4. Analyses of the three central tasks of an entrepreneurial organisation	192
4.1 Entrepreneurial information gathering	196
4.1.1 Key activities and process of entrepreneurial information gathering	198
4.1.2 Analysis of entrepreneurial information gathering	201
4.1.3 Entrepreneurial information gathering from observing trends	208
4.1.4 Learning as part of entrepreneurial information gathering	214
4.1.5 Conclusion: Notes on entrepreneurial information gathering	218
4.2 Entrepreneurial shaping of the future	220
4.2.1 Organisation, environment and shaping of the future	222
4.2.2 Reactive, proactive and future-oriented adaptations	225
4.2.3 Entrepreneurial decisions in a global economy	230
4.2.4 Conclusion: Notes on entrepreneurial shaping of the future	233
4.3 Entrepreneurial shaping of the organisation	235
4.3.1 Framework conditions, organisation design and change	237
4.3.1.1 Dual orientation and internal action fields	238
4.3.1.2 Shaping the organisation and strategic change	240
4.3.1.3 Resource-oriented entrepreneurial strategies in a changing environment	246
4.3.2 Design and integration fields in the entrepreneurial organisation	257
4.3.2.1 Structure, processes and entrepreneurial organisation design	257
4.3.2.2 Integration and harmonisation of interests	264
4.3.2.3 Entrepreneurial organisational culture	270
4.3.3 Conclusion: Notes on entrepreneurial organisation design	280

5. Design concept for holistic intrapreneurship.....	285
5.1 Role model of the entrepreneurial organisation	285
5.2 Conceptual framework to describe and analyse the global business environment.....	292
5.3 Networking and interaction between the entrepreneurial organisation and the global business environment	297
5.3.1 Bilateral action relationships and the role of system variables	297
5.3.1.1 Entrepreneurial organisation, environment and set of variables....	298
5.3.1.2 Entering data into the system with the influence matrix: interactions between the system variables.....	302
5.3.1.3 The role of the key variables in the system	306
5.3.2 Reduction of complexity and qualitative system model	308
5.3.2.1 Statement of problem, purpose of model and reduction of complexity	308
5.3.2.2 Model of a viable entrepreneurial organisation.....	312
5.4 Conclusion: Building blocks for the vital entrepreneurial learning organisation	316
6. Studies on the role of intrapreneurship and on the role model	320
6.1 Study on the role of intrapreneurship in technology companies.....	323
6.2 Intrapreneurship in an innovative technology company	331
6.3 Survey of experts on implementation of the role model in practice.....	335
6.4 Conclusion: Elements for development and strengthening entrepreneurial orientation	341
7. Closing remarks and outlook.....	347
7.1 Summary and contributions of the study.....	347
7.2 Implications and some directions for further research.....	350
List of references.....	353
Appendix	383
A.1 Role of intrapreneurship: Aspects derived from the literature.....	383
A.2 Questionnaire on the role of intrapreneurship in a company	386
A.3 Guidelines for survey on entrepreneurial orientation	391
A.4 Technology companies in the Bodensee-Oberschwaben region.....	393

List of tables

Table 1: Business and environment: three fundamental system levels	7
Table 2: Management and entrepreneurial qualities according to Maucher	81
Table 3: Competitive advantages based on cultural differences as per Hofstede	130
Table 4: Model to describe culture specific business practices as per Schuster and Copeland	135
Table 5: Components of organisation according to Child	152
Table 6: The global and national environment according to Morrison	160
Table 7: Entrepreneurial information gathering as a task of the entrepreneurial organisation	197
Table 8: Entrepreneurial shaping of the future as a task of the entrepreneurial organisation	221
Table 9: Entrepreneurial mindset and managerial mindset, and dual perspective in the entrepreneurial organisation	236
Table 10: Entrepreneurial organisation design as a task of the entrepreneurial organisation	236
Table 11: Checking the consistency of a competitive strategy according to Porter	248
Table 12: Characterisation of business activities according to level of experience in the divisions of product, market, technology as per Block and MacMillan	343

List of illustrations

Figure 1:	The entrepreneurial company and the business environment in the total system	11
Figure 2:	The individual intrapreneur within the company system and the overall system	14
Figure 3:	Structure of study and examination process	18
Figure 4:	Research design	24
Figure 5:	Examination of intrapreneurship and the global business environment	29
Figure 6:	Schwab's schematic for evaluation of entrepreneurial activities.....	37
Figure 7:	Chance management concept as per Schwab.....	38
Figure 8:	Intrapreneurship by direct involvement of all employees in entrepreneurial challenges as per Brandt.....	42
Figure 9:	Guth and Ginsberg's intrapreneurship and lever for the entrepreneurial orientation of an organisation	42
Figure 10:	Covin and Slevin's entrepreneurial orientation of the whole organisation	43
Figure 11:	Dual planning of current and future entrepreneurial opportunities as per Abell	45
Figure 12:	Abell's synergy effects at different levels of the organisation	45
Figure 13:	Synergy effects by common use of resources as per Abell.....	46
Figure 14:	Synergy effects by using existing resources for new entrepreneurial activities.....	46
Figure 15:	Search for new opportunities with existing and new customers as per Hamel and Prahaland.....	48
Figure 16:	Entrepreneurial opportunities on the basis of existing and new core competencies according to Hamel and Prahaland.....	49
Figure 17:	Hierarchy of innovation as per Hamel.....	51
Figure 18:	Entrepreneurial orientation according to Lumpkin and Dess	53
Figure 19:	Intrapreneurship model according to Morris et al	56
Figure 20:	Block's activity flow diagram defining bureaucratic versus entrepreneurial basic orientation of employees	62
Figure 21:	Pinchot's intrapreneurs close the innovation gap	63

Figure 22: Pinchot's 10 commandments for intrapreneurship	65
Figure 23: Wunderer's frame of reference for the concept of co-entrepreneurship	68
Figure 24: Portfolio approach to co-entrepreneurial competence for employee groups as per Wunderer	70
Figure 25: Dependence of development of the internal business environment on the external environment as per Kuhn	72
Figure 26: Relational framework for collective entrepreneurship according to Kuhn	73
Figure 27: Business, environment and internal entrepreneurship as per to Kuhn	74
Figure 28: Direct and indirect influence of top managers on entrepreneurial activities according to Sathe	76
Figure 29: Focus and roles of entrepreneurial management according to Thornberry	80
Figure 30: Drive model for entrepreneurial orientation of actors and teams according to Kohlöffel and Rosche	87
Figure 31: Product life-cycle theory according to Vernon	89
Figure 32: Conceptual model for generation of entrepreneurial initiatives of national subsidiaries according to Birkinshaw	95
Figure 33: Integrated model for international intrapreneurship according to Zahra and George.....	97
Figure 34: Nine central design elements for holistic intrapreneurship	100
Figure 35: Process model for analysis of environment as per Johnson and Scholes.....	105
Figure 36: Resource distribution in different environment types as per Aldrich	108
Figure 37: Increasing uncertainty with increasing complexity and dynamic as per Johnson and Scholes	109
Figure 38: Two levels of the business environment according to Worthington and Britton	111
Figure 39: Organisation and business environment as per Palmer and Hartley	111
Figure 40: Business environment according to Dawsen.....	112
Figure 41: Business environment as per Weinshall.....	114
Figure 42: Interaction of systems in a society as per Fayerweather.....	115

Figure 43: Company and business environment as per Fahey and Narayanan	116
Figure 44: Institutions and dimensions of the business environment according to Ulrich and Probst	117
Figure 45: Environment influence matrix as per Ulrich and Probst.....	118
Figure 46: Business environment according to Tepstra and David	119
Figure 47: Layer model for considering the environment as per Dülfer	120
Figure 48: Vertical cut in the layer model as per Dülfer	121
Figure 49: Simultaneous influence of the natural and cultural framework conditions on the task environment and the business according to Dülfer	121
Figure 50: Segments of the external business environment according to Hitt et al	122
Figure 51 : Internal business environment, micro environment and macro environment as central elements of the business environment according to Palmer and Hartley.....	123
Figure 52: Organisation and international business environment as per Morrison	124
Figure 53: Internal and external control of the relationship between the organisation and the environment as per Trompenaars and Hampden-Turner	128
Figure 54: Use of local knowledge for improvement of global corporation as per Trompenaars and Woolliams	132
Figure 55: Model for classification of cultures as per Schuster and Copeland .	133
Figure 56: Model of the macro environment as per Fahey and Narayanan.....	137
Figure 57: Five competitive forces of an industry as per Porter.....	139
Figure 58: Framework for competition analysis according to Porter.....	141
Figure 59: Task environment according to Ulrich and Fluri	142
Figure 60: Value net according to Brandenburger and Nalebuff.....	143
Figure 61: Macro and industrial environments according to Grant	144
Figure 62: Technology intelligence according to Narayanan.....	144
Figure 63: The five basic elements of an organisation according to Mintzberg	146
Figure 64: The internal business environment according to Mintzberg	147
Figure 65: The internal business environment as a value chain of activities according to Porter	148

Figure 66: The internal business environment with structural and deep system as per Hammer.....	149
Figure 67: Internal business environment according to Rüegg-Stürm.....	151
Figure 68: SWOT analysis as per Forgang and Einolf	153
Figure 69: Identification of internal strengths and weaknesses and external opportunities and risks from the business environment as per Palmer and Hartley	154
Figure 70: Business environment levels of analysis as per Graf	155
Figure 71: PEST analysis framework for a global company as per Narayanan	157
Figure 72: Entrepreneurial opportunities in triad and non-triad regions as per Rugman	159
Figure 73: Conceptual framework for an analysis of countries as per Marthinsen	160
Figure 74: The organisation as an open system as per Duncan	163
Figure 75: The organisation as an open system with three internal sub-systems as per Duncan	164
Figure 76: Business and environment as per Beer.....	170
Figure 77: Recursive structure of viable organisations according to Beer.....	172
Figure 78: Viable organisation as an integrated whole with four units (A, B, C, D) according to Beer.....	173
Figure 79: Levels of living systems according to Miller.....	174
Figure 80: Systems approach and management instruments according to Bleicher.....	182
Figure 81: Three tasks of the entrepreneurial organisation	188
Figure 82: Tasks and design elements for holistic intrapreneurship.....	189
Figure 83: Method of analysis for the three entrepreneurial tasks.....	191
Figure 84: Organisation and environment according to Brickley	192
Figure 85: Framework for entrepreneurial information gathering according to Fahey and Narayanan	199
Figure 86: Model for information gathering according to Palmer and Hartley...	200
Figure 87: Principles and practices of theory U for innovation and change according to Scharmer.....	206
Figure 88: Information gathering according to Checkland and Holwell.....	207
Figure 89: Systematisation of mega trends according to Holzhauer	209

Figure 90: Mega trends according to Narayanan	209
Figure 91: Identification of entrepreneurial activities from the fusion of technological possibilities according to Palmer and Hartley	211
Figure 92: Single-loop and double-loop learning according to Argyris	216
Figure 93: Entrepreneurial decisions and entrepreneurial shaping of the future	231
Figure 94: Four central levers for entrepreneurial organisation design	235
Figure 95: Dual orientation of the entrepreneurial organisation.....	238
Figure 96: Change within the organisation through opportunities and threats in the business environment according to Tichy	244
Figure 97: Context for the development of a competitor strategy according to Porter.....	248
Figure 98: Entrepreneurial strategy according to Ireland et al.....	250
Figure 99: Design problem of the entrepreneurial organisation according to Roberts	251
Figure 100: Development of an entrepreneurial strategy according to Andrews	253
Figure 101: Components of organisational architecture according to Brickley et al	263
Figure 102: Integration fields for harmonisation of interests and for the creation of cooperation and synergies.....	265
Figure 103: Adaptable cultures according to Kotter and Heskett.....	277
Figure 104: Entrepreneurial organisation design for the environment – strategy – structure – culture - <i>fit</i>	281
Figure 105: Development process for holistic intrapreneurship design concept.	284
Figure 106: Role model for the entrepreneurial organisation	286
Figure 107: A framework for the global business environment.....	294
Figure 108: Process model for a holistic view on the three central entrepreneurial tasks of the vital entrepreneurial learning organisation (VELO).....	296
Figure 109: Influence matrix for networking of an entrepreneurial organisation with the global business environment	303
Figure 110: Table of strength of influence within the sensitivity analysis for networking the entrepreneurial organisation with the global business environment.....	304

Figure 111: Influence index in the sensitivity analysis for networking the entrepreneurial organisation with the global business environment	305
Figure 112: Interpretation of role distribution according to Vester	306
Figure 113: Role distribution of variables in the sensitivity analysis for networking the entrepreneurial organisation with the global business environment	307
Figure 114: The viable entrepreneurial organisation and the business environment	315
Figure 115: Empirical exploration on the role of intrapreneurship and the role model	319
Figure 116: Frequency of Pinchot intrapreneurs and degree of support in global technology companies in the Bodensee-Oberschwaben region	323
Figure 117: Elitist versus collective intrapreneurship in global technology companies in the Bodensee-Oberschwaben region	324
Figure 118: Entrepreneurial action as community task in global technology companies in the Bodensee-Oberschwaben region	325
Figure 119: Entrepreneurial profile of global technology companies in the Bodensee-Oberschwaben region	326
Figure 120: Manager roles in intrapreneurship system: Entrepreneurial profile of globally active technology companies in the Bodensee-Oberschwaben region	327
Figure 121: Structural constraints for entrepreneurial thinking and action in globally active technology companies in the Bodensee-Oberschwaben region	328
Figure 122: Intrapreneurs as per Pinchot working for globally active technology companies in the Bodensee-Oberschwaben region	329
Figure 123: Frequency of Pinchot intrapreneurs and degree of support in a highly innovative technology company in the Bodensee-Oberschwaben region	331
Figure 124: Elitist versus collective intrapreneurship in a highly innovative technology company in the Bodensee-Oberschwaben region	332
Figure 125: Entrepreneurial action as a community task in a highly innovative technology company in the Bodensee-Oberschwaben region	332



Figure 126: Entrepreneurial profile of a highly innovative technology company in the Bodensee-Oberschwaben region	333
Figure 127: Little structural support for entrepreneurial thinking and action in the highly innovative technology company	334
Figure 128: Implementation of the roles of the entrepreneurial organisation in practice	339
Figure 129: Workshop for entrepreneurial shaping of the future	341
Figure 130: Five elements for the development and strengthening of a vital entrepreneurial learning organisation	345
Figure 131: Closing remarks and outlook.....	346

1. Introduction and the issue at stake

This chapter provides an introduction and background for examination of the role of intrapreneurship in a global business environment. It offers an outline of the research questions, the chapter sequence and research road map of the study. According to Morris and Kuratko (2002:22), we are presently living through a global entrepreneurial revolution that will set free the power of innovation in medium to large-sized companies. Farrell (2001) sees the whole world as being in a state of change. Social actors, companies and countries with an entrepreneurial orientation could be in a position to lay the foundations for growth and wealth. Particularly in organisations that already exist, entrepreneurial activities would have to be pursued with a sense of urgency if those organisations are to survive in the global and intensively competitive business environment (Baumol 2004).

In the following discussion, it will become clear that this requires particularly proactive and reactive entrepreneurial activities and organisational adaptations in response to changed framework conditions¹. To do this, entrepreneurial opportunities must be pursued, and risks in the business world must be recognised and taken into account when taking business decisions. New market sectors and opportunities should strengthen the competitive position and financial power of established companies and lead to strategic innovation (Brandt 1986, Guth and Ginsberg 1990, Baden-Fuller and Stoppford 1994, Oden 1997). This study shows how entrepreneurial thinking and action within a business can take on a central role in securing vitality and competitiveness for a globally active company operating in an uncertain, global business environment. Thus, the following theoretical and empirical research presents a new concept on holistic intrapreneurship. This concept, defined by new theoretical building blocks for a vital entrepreneurial learning organisation, helps to understand the new big picture of an emerging new business arena and the required holistic entrepreneurial management.

¹ Heifetz et al (2009) see more and more turmoil and crises in the future that will require companies to be able to permanently adapt to changes in the market environment. As part of this, the adaptation process will be a process of preservation and reinvention. Adaptable company management must overcome acute challenges and achieve continuous adaptability. A large number of small decentralised adjustments in response to changes in the business environment would promote a division of management responsibility, the use of collective intelligence and a culture of exchange relationships. Top management have to promote a feeling of community spirit and the flow of information, in particular about the quest for innovation.

1.1 Outline of problem and terminology

Technological developments and the global networking of markets create a dynamic and complex business environment. This constantly-changing business environment offers opportunities and risks for mature enterprises². Against this background, a number of fundamental questions come into focus in the following exploration:

- Can mature enterprises³ make use of their significant advantages over new and growing companies by applying intrapreneurship⁴, even in a complex world, and thus secure their long-term viability (see chapter 3, chapter 5.3 and chapter 6)?
- What are the tasks and roles that an entrepreneurial organisation must fulfil (see chapter 4 and chapter 5.1)?
- How should an organisational system of intrapreneurship be set up so that mature enterprises can make use of market opportunities, achieve innovations and deal with threats from the business environment (see chapter 4.3 and chapter 6.4).
- What are the levers of intrapreneurship that can be identified within the system of a business (see chapter 4.3 and chapter 5.3)?
- How can the business environment be analysed systematically in order to seek out future opportunities and risks in a proactive way (see chapter 4.1 and chapter 5.2)?
- How can interaction and networking between organisations and the environment be specified and formulated (see chapter 3.3 and chapter 5.3)?
- How can an organisation learn from entrepreneurial activities in order to secure sustainable viability (see chapter 4.1.4 and chapter 6.4)?

² Schein (2003:27) distinguishes, for example, three development stages in the degree of maturity of an organisation: Start-ups, established and dinosaurs (ageing companies). This examination on the role of intrapreneurship in mature companies puts the focus on established and ageing companies.

³ Süssmuth Dyckerhoff (1995:15-22) describes attributes and problems of mature enterprises. According to Baumol (2002a) mature firms have no alternative but to be innovative because of the competitive market mechanism. As a result, innovation is the product of entrepreneurial activities.

⁴ The literature uses for entrepreneurial thinking and acting in organisations terms such as intrapreneurship, entrepreneurship within the company, corporate entrepreneurship, organisational entrepreneurship, or even corporate venturing. In this study, the term intrapreneurship is used for entrepreneurial thinking and action by and in existing organisations. This also achieves a better differentiation from the term entrepreneurship that Gartner (1989:47-68) uses to describe the creation of new organisations.

1. Introduction and the issue at stake

Each business is part of a general business environment and is networked with a specific business environment (Bea and Haas 2005:89-91, Bateman and Snell 1996:56,57, Louw and Venter 2006:79,80). The general business environment can be delineated by the economic, technological, ecological, political, cultural, social and demographic framework conditions and trends that are relevant for the organisation. The specific business environment is unique for all enterprises and specifies the network in relation to the organisation's relational groups, such as customers, suppliers and competitors.

Thus, an entrepreneurial organisation focuses on specific sectors and markets for the present and the future⁵. Between this external business environment and the internal business environment, there are a variety of interactive relationships. Entrepreneurial organisations must use and formulate these exchange relationships to secure their own viability.

The general and specific business environments determine the entrepreneurial opportunities and risks and, when examining the role of intrapreneurship at the macro level, they must be a major consideration. The business environment, on the other hand, is subject to a considerable change dynamic. Significant drivers of these changes are globalisation⁶, competitive pressure and technological developments.

⁵ Brown (2007:208-214) describes a framework for the analysis of the business environment by way of three time dimensions. Horizon 1 contains trends which have an influence on existing businesses in the present. Horizon 2 considers trends that have an effect on existing business in the near future. Horizon 3 focusses on trends that can create new businesses in the future. The time dimensions have to be considered within the context of entrepreneurial information gathering from the business environment (see chapter 4.1).

⁶ Globalisation and problems of implementation as well as suggestions for the design of the globalisation process are described by, inter alia, Stiglitz (2002). For an interpretation of the term globalisation (for this study also) see Teusch (2004). According to this, fundamental characteristics of globalisation as a multidimensional process with a high self-dynamic are an increasing networking of the world and the loss of significance of limitations. Thus, the globalisation dynamic brings both winners and losers.

1. Introduction and the issue at stake

The global business environment⁷ can be defined as

- (1) a networked and turbulent macro and micro environment (Ansoff 2007, Grant 2005) with
- (2) global and national economic systems (Kolde 1982, Walter 2006) with special cultural environments (Trompenaars and Hampden-Turner 1998)⁸,
- (3) competitive forces in the relevant industries (Porter 2004a),
- (4) technology developments at all levels of the system (Narayanan 2001).

However, looking at the external business environment alone is not sufficient. In particular, present and future networks within the system of interactions between the enterprise and the business environment have to be investigated further and systematically placed within the context of conceptual approaches to intrapreneurship. The approaches until now have been mainly concerned more with aspects of intrapreneurship internal to the company (see Chapter 3.1).

However, it is precisely out of the interaction between the business environment and the enterprise that new business opportunities can be developed, relevant risks identified and entrepreneurial action justified.

⁷ In chapter 3.2 there follows a systematic description of the business environment on the basis of which a conceptual framework on the global business environment is presented in chapter 5.2. The networking between the organisation and the environment are examined in chapter 3.3 and in chapter 5.3, a qualitative systems model on aggregated levels is introduced.

⁸ Of particular significance for the concept developed here of holistic intrapreneurship are (1) the individual versus the collective, (2) short-term versus long-term and (3) the internal versus external (company) cultural orientation.

According to Block and MacMillan (1995:95)⁹, intrapreneurship¹⁰ can be defined as the use of opportunities and consideration of risks

- (1) inside the business,
- (2) from the specific business environment (micro environment),
- (3) from the general business environment (macro environment),
- (4) taking account of existing and future resources and competencies,

in a way that enables the entrepreneurial activities for innovation and adaptation necessary for viability in a mature enterprise to take place.

Approaches in scientific literature until now have focused mainly either on intrapreneurship by individuals from middle or senior management who act as champions of entrepreneurial activity (Pinchot 1988)¹¹ or on a broad-based collectivist intrapreneurship involving as many employees and managers as possible (Wunderer 2006, Kuhn 2000).

⁹ The definition proposed here illustrates an extension of the approach described there in three points: Focus also on risks – see inter alia Schwab (1976), explicit consideration of the relationship between opportunities, resources and competencies - see inter alia Andrews (1987), consideration of entrepreneurial decisions and activities in existing and new businesses – see inter alia Sanchez and Heene (2004). This also achieves a better differentiation from the term entrepreneurship. Gartner (1989:47-68) presents a comprehensive illustration of literature concerning entrepreneurship from which it emerges that the term entrepreneurship has very much been transferred to existing organisations. The author is, unlike Gartner, of the view that entrepreneurship does not end when the organisation has been spurred into life but rather can be pursued as corporate entrepreneurship during the entire life cycle of the organisation. Shane (2003) presents a further view in which the discovery of existing entrepreneurial opportunities by individual actors is the focus of the matter. These opportunities can be organised through the founding of a new company or through the issue of a licence to existing companies. The possibility of discovering opportunities by entrepreneurial actors or teams in existing organisations is not however envisaged explicitly with Shane. For this, he provides a model of an entrepreneurial process which, in the view of the author, can very much be used for the identification and (collective) pursuit of opportunities in existing companies: (1) Discovery of existing entrepreneurial opportunities, (2) Decision for the pursuit of opportunity, (3) Provision of resources necessary for implementation, (4) Realisation of the opportunity taking into account the design of strategy and the design of the organisation. For a detailed description of entrepreneurship as a process for identification and pursuit of entrepreneurial opportunities taking into account the founder or the founding team, see for example Barringer and Ireland (2006). They present a comprehensive model of the entrepreneurial process – from the decision to set up to the development of the business idea, through to the founding and management of a new organisation. Kirzner (1973:75-87) gives a brief overview on the classic literature on entrepreneurship in association with the achievement and distribution of the entrepreneurial profit of an organisation. Some aspects relevant for intrapreneurship in this illustration are dealt with in the literature study in chapter 3.

¹⁰ In chapter 3.1, there is a synoptical description of the theoretical concepts of intrapreneurship and on this basis a role model for holistic intrapreneurship is developed in chapter 5.1.

¹¹ Block and MacMillan (1995) emphasise in this context the relevance of a management practice which actively promotes the implementation of individual opportunities through leadership and an entrepreneurial organisational culture.

1. Introduction and the issue at stake

This study will show that there should not be an either/or situation but rather that the specific framework conditions, in particular the cultural ones, of a business, a business sector or a delimited market permit or require various recipes for success when implementing intrapreneurship. The design concept introduced here builds a theoretical framework which makes it possible, with consideration being given to a specific context, to build a model of intrapreneurship which can provide a lever to help secure long-term viability.

For implementation of intrapreneurship in a global business environment and in a variety of economic areas and countries, (inter)cultural aspects are of great significance. It is precisely because of the impact of globalisation that the mental programmes of employees and managers have to be taken into account when designing a system of intrapreneurship. The relevant cultural differences are to be found particularly in the social actors' short and long term orientation, their external or internal orientation and their individualistic or collectivistic orientation¹².

These orientations have a big influence on which intrapreneurship conception and design concept should be chosen for each situation. With this it becomes clear that the actual design of intrapreneurship concepts should be distinctly independent and that it is not possible to define an optimum premise for all situations. The framework conditions and the cultural programming that are already present in the company and the sectors the company operates in will influence the chances of success of various intrapreneurship concepts¹³.

Thus, the cultural context defines whether a more individualistic or a more collectivist path should be taken, or whether a more internal or external orientation of the social actors should be encouraged.

¹² For the role of culture for the global business see inter alia Hofstede (2006) and Trompenaars and Hampden-Turner (1998).

¹³ Schein (2003:28) also points out the relevance of the company culture. It should also be considered that an entrepreneurial culture that has led to entrepreneurial success also causes problems for employees in terms of perceiving changes in the business environment that need to be responded to. Thus, the company culture comes into focus as a parameter of design and influence.

1. Introduction and the issue at stake

With the objective of exploring an integrated approach, the role model of an entrepreneurial organisation proposed here is used to introduce the microeconomic concept of the firm as a corporate actor (Homann 2005, Schnell 2005:106-109). The securing of long-term viability of a business is formulated as the fundamental objective of intrapreneurship and thus of an entrepreneurial company's management (De Geus 2002). And so, intrapreneurship in this sense means that the company system is designed such that the company as a corporate (business) actor acts entrepreneurially at the meta level (company level). Roles have to be ascertained for this corporate actor to undertake if the organisation is to achieve an entrepreneurial direction for the whole system. The necessary roles of the corporate actor at the micro level are carried out and shared by individual company managers and employees taking into consideration the specific circumstances within the business and in accordance with the relevant and specific environmental conditions.

The starting point in an intrapreneurship system is, thus, the individual company actor in the company system who, depending on the specific task they have taken on within the division of labour, understands with varying degrees of intensity the complex business environment, and who is forward-looking when taking entrepreneurial decisions. In consequence, it becomes clear that thinking in systems and system levels can assume great importance in terms of the research process¹⁴. Three levels of systems (see also Wennekers and Thurik 1999) can be defined (see table 1):

Levels of systems	Focus
Macro level:	Global economy, economic areas and national economies; division of labour within the global economic system
Meta level:	Entrepreneurial organisation as corporate actor and interaction with the business environment
Micro level:	Individual company actors and division of labour within the entrepreneurial organisation

Table 1: Business and environment: three fundamental system levels

¹⁴ Against this background, there is a description in chapter 3.1 of theoretical approaches to intrapreneurship in line with the three basic system levels with particular attention paid to the global context. Within this, it must be taken into account that individual contributions also show in details aspects from the different system levels (see McMullen and Shepherd 2006).

1. Introduction and the issue at stake

According to Drucker (1985:219-221), the decisive stumbling block for entrepreneurial and innovative thinking and action in a business are the ingrained ways of doing things and not so much the size. Since valuable experience is gained with each entrepreneurial activity, these learning experiences can be used for the further entrepreneurial development of the organisation. Therefore, intrapreneurship also means that organisational learning should be firmly anchored in an intrapreneurship system.

The question is how to survive in a turbulent business environment? The dynamic development of the framework conditions increases the pressure of competition on mature companies. They have to react to permanent changes in the business environment. Technological progress and developments offer new opportunities and enable profitable innovation. From the point of view of company management, opportunities and potential to secure long-term viability must be used and risks must be absorbed as far as possible.

For this purpose, intrapreneurship can serve as a central tool. Intrapreneurship must be supported by an understanding of entrepreneurial management with a proactive, strategic direction in harmony with an entrepreneurial development of resources and competencies, an entrepreneurial company culture and an entrepreneurial design of structures and processes within the company. Therefore, the examination of a design concept for the entrepreneurial organisation with particular attention to the interaction relationships between the organisation and the external business world and the conceptual characteristics of the business environment, is an important research requirement with noteworthy practical relevance.

This is all the more so, as within management research (Hentze et al 2005) structural management research is gaining in importance. A systematic examination of intrapreneurship within the context of company strategy, company culture, company structure and company resources, with a particular focus on a dynamic and global business environment, creates a gap in research that must be filled.

1.2 Background and framework for the chapters to come

In the past, many companies had a stronger position in the market than they do now. At the beginning of the product's life cycle, products were met with high levels of demand (Kotler et al 2003:705-714) and many companies were able to successfully implement noteworthy growth strategies in supply-driven markets¹⁵. The companies got bigger and bigger and the organisations developed levels of hierarchy that responded to the interior division of labour¹⁶. After the start up phase, pioneer companies developed within the framework of the organisational life cycle via a growth and stabilisation phase into large, slender organisations (Morris and Kurratko 2002:8-14)¹⁷. Propelled by economies of scale¹⁸ the companies were able to flourish in a relatively stable environment. The progressive internal division of labour led to close-knit task orientation amongst staff and many managers. Consideration of the enterprise as a whole and particularly of the relevant markets and company environments took more and more of a back seat for many employees and managers. Entrepreneurial orientation (see Rauch et al 2009) in these organisations took a big step backwards and the organisations became less innovative, adaptable and flexible (Morris et al 2008:18,19).

In recent decades, the supply of goods and services has developed more than demand. Kotler et al (2003:47) also takes the view in this respect that most markets have today become buyers' markets. Many sectors¹⁹ find themselves in a mature state in which strategic defence of their own position has been made more difficult by high intensity of competition or by a level of demand that was already falling.

¹⁵ Sellers have a stronger market position than buyers in offer markets that are also described seller markets.

¹⁶ Division of labour in the economy has been increasingly organised via long-term employment contracts within (large) companies. For organisational forms of division of labour see inter alia Bofinger (2003:69).

¹⁷ According to Chase and Aquilano (1992:13-16), the productive system of an organisation follows a life cycle which can be extended. Within this they distinguish five stages: development of the system of all companies and product targets, product design and selection, design and localisation of production, start-up of production, production system in operation.

¹⁸ If a business increases its output volume and thereby reduce the average costs of a product unit, economists call this *economies of scale*: Companies that can achieve large production volumes gain a cost advantage, see inter alia Morgan et al (2006:316-318).

¹⁹ Johnson and Scholes (1993) distinguish four stages in the industry life cycle: embryonic stage, growth stage, mature stage, ageing stage.

1. Introduction and the issue at stake

Current economic development is characterised by globalisation and is driven by technological development. Internationalisation of markets, in combination with a growing dynamic and complexity of the political, economic and social company environments, pose a special challenge for today's enterprises. They have to prove themselves in a globally competitive environment, make use of technological trends for the development of current and future business environments, and implement modern workplace technology for the optimisation of processes. Organisations with a more hierarchical structure have to adopt a more entrepreneurial perspective and move the organisation's life cycle forward through innovation, adaptations and internal flexibility (Morris and Kurratko 2002:14-17).

The permanent pressure of change on the present structures, concepts and attitudes becomes even greater as a result of smaller and quicker companies – often using technological innovation – winning market share at the cost of larger companies. The changes in the business environment require a rethink in mature organisations about management concepts and organisation structure required to secure long-term viability (Wunderer 2006:528-530).

Using the life cycle approach, four central tendencies can be deduced which justify a strengthening of the role of intrapreneurship in a global, competition-intensive business environment characterised by technological innovation: in view of ever shorter product life cycles, sectoral cycles marked by increasing global competition and product system life cycles (see Notger and Kiesel 2000) that are driven by technological developments, an increasingly entrepreneurial orientation is required if a sustained lengthening of an organisation's life cycle (see Greiner 1998) is to be attained. At the same time, a decreasing tendency towards entrepreneurship can be ascertained in the course of the organisational life cycle in businesses with a more bureaucratic structure. Viable organisations must therefore strengthen their own entrepreneurial dynamic within the organisation and use entrepreneurial activities in the areas of products, market and technology for efficiency, innovation, and adaptation to changes in the external business environment. The more dynamic and complex the external business environment is, the higher the entrepreneurial orientation in a viable organisation must be (see Morris et al 2008:74-76).

1. Introduction and the issue at stake

Before starting the examination of the role of intrapreneurship within a design concept, the study should first take a look at five central findings. Globalisation, increasing pressure of competition and a dynamic development of technology are important drivers of change in the business environment in which companies seek to optimise their future in a complex world. Companies are open to their environment (see figure 1). Changes in the business environment cause changes within the organisation and in the interaction between businesses and the environment (Khandwalla 1977:223-235).

Finding 1: Today's business environment is changing rapidly. Particularly as a result of increasing global networking of markets and the continuing increase in international division of labour, there are resultant sustainable design necessities and opportunities to ensure long-term viability. Technological progress drives this development forward.

Against this background, new research questions become more important in terms of company management:

- How can globally active technology companies secure their long-term viability in a technology-driven competitive environment that is continuously changing?
- What role can entrepreneurial thinking and action inside the business play?
- How can we make the total enterprise system act entrepreneurially?

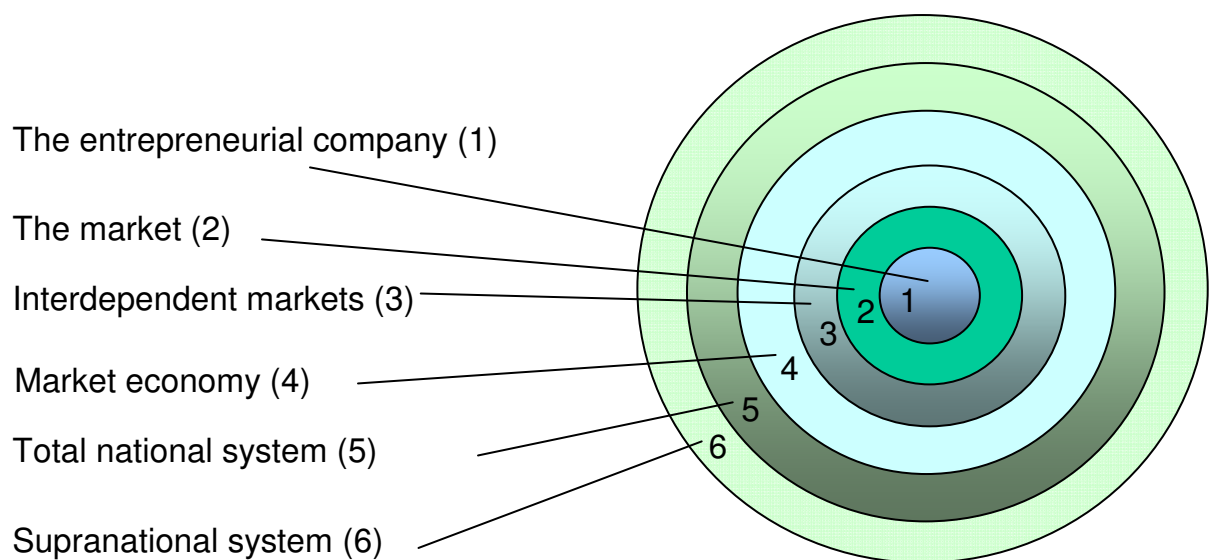


Figure 1: The company and the business environment in the total system

1. Introduction and the issue at stake

In terms of a re-shaping management concepts, the change in the business environment leads to an emphasis on entrepreneurial thinking and action within the business (Hentze et al 2005:62). One of the consequences of intrapreneurship, on the other hand, is the need to take into account the short and long-term developments in the business environment when developing the company. Thus, elements such as the (worldwide) economy and long-term (global) trends determine entrepreneurial opportunities and risks.

On the one hand, the dynamic business environment requires intrapreneurship in the company and intrapreneurship, on the other hand, requires systematic consideration of the dynamic business environment in entrepreneurial decision-making. With intrapreneurship, large organisations can fight against the transaction costs of a (hierarchically organised) delicately structured division of labour²⁰, continuously increase innovativeness, improve their ability to adapt to changing conditions in the environment and therefore, secure long-term success potential.

Finding 2: Intrapreneurship can anchor the necessary dynamic entrepreneurship in mature companies, compensate for the disadvantages of large units and play a central role in the design of the company's future.

Basic premises for an active, future-orientated company structure are the perceptions of the world picture (Capra 2004), the business environment, the business institution, its internal actors and of the appropriate networks and interactions (Senge 2003:17,213-250,2006:xiii-xv)²¹. In scientific and corporate discussions, a holistic focus when dealing with the new challenges is increasingly postulated as a central requirement in this context.

Finding 3: Within the context of holistic entrepreneurial management, holistic thinking and action (Vester 2005, Ulrich and Probst 1991) by individual actors can lead to entrepreneurial success in a complex world²².

²⁰ According to Picot et al (1997:67), the costs of exchange and agreement between specialised actors can be described as the transaction costs. Williamson (1992:75-97) says organisational innovations are intended to reduce transaction costs. For him, this approach accounts for the decentralisation of operational decisions and focuses on internal efficiencies in organisational design.

²¹ Senge (2003, 2006) also particularly emphasises as well as systems thinking in this context, the big influence of mental models on the perception of the world and action in management situations.

²² With the *wheel of business evolution*, Wood (2000:91-139) presents a practice-oriented framework for the design of the complex interactions between the company and the business environment.

1. Introduction and the issue at stake

With intrapreneurship, successful long-term development is supported by way of innovation (e.g. products and services, markets, technology, processes and procedures) within the framework of individualistic intrapreneurship²³ or collective entrepreneurship²⁴. This study outlines a modified conception of intrapreneurship which brings entrepreneurial action of corporate actors to the fore. This approach can be interpreted as a synthesis between individual and collective approaches and develops a role model for the entrepreneurial organisation overall.

The culture factor plays a central role in the design of an intrapreneurship system that secures the long-term viability of a business (as opposed to short-term success orientation). In a global business environment, the typical culture of the country in terms of it being a mental programme has a big influence on whether an intrapreneurship system should be set up more as an individualistic or as a collective concept. With this approach, the result, i.e. the entrepreneurial orientation of the whole organisation, is always at the forefront.

According to Hofstede (2006:501-506,512-517) the influence of national cultures on organisations is enormous, although in his research there are hardly any levers that would bring cultures internationally closer in the course of time. If his approach is to be followed, much attention must be paid to these cultural differences when exploring the role of intrapreneurship in a global world²⁵.

Finding 4: In the literature, there are various design models of intrapreneurship. On the one hand, a strong focus on an elite (individualistic) intrapreneurship is at the forefront. On the other side of the spectrum, intrapreneurship is being set up as collective intrapreneurship. The role concept of an entrepreneurial organisation developed in chapter 5.1 can be interpreted as a synthesis of both these approaches. With the design of the intrapreneurship system (individualistic vs collectivistic), cultural differences must be taken into account in the thinking and acting (mental programme). Securing long-term viability is defined as the basic direction of an entrepreneurial organisation.

²³ See Pinchot (1988), who puts the strong (individual) intrapreneur who realises profitable ideas outside of their own structure (supported by a sponsor and a team) at the forefront.

²⁴ See Kuhn (2000) who emphasises the necessity of the involvement of all employees in the new management concept of the internal entrepreneurship and requires an effective agreement between the company (offers employment security and individual incentive) and the employees (acting and thinking entrepreneurially).

²⁵ Particularly with specific company research projects - see inter alia Cooper and Schindler (1998).

1. Introduction and the issue at stake

Intrapreneurship commences at the individual level. Entrepreneurial actors must understand the complexity of their particular system and fulfil their role within the framework of an entrepreneurial system containing division of labour.

By designing and implementing an intrapreneurship system, companies can achieve the efficiency, adaptability and innovation required to ensure long-term viability of the organisation in a dynamic business environment (see figure 2).

The structural company management²⁶ must achieve a supportive company system so that entrepreneurial thinking and action is attained at the level of the individual as well as at an institutional level, and so that the relevant changes in the business environment can be understood and taken into account. In developing a design concept, there must also be an examination of how the interests of the individual role players in the system of the entrepreneurial firm can be harmonised as one with the entrepreneurial interests of the business.

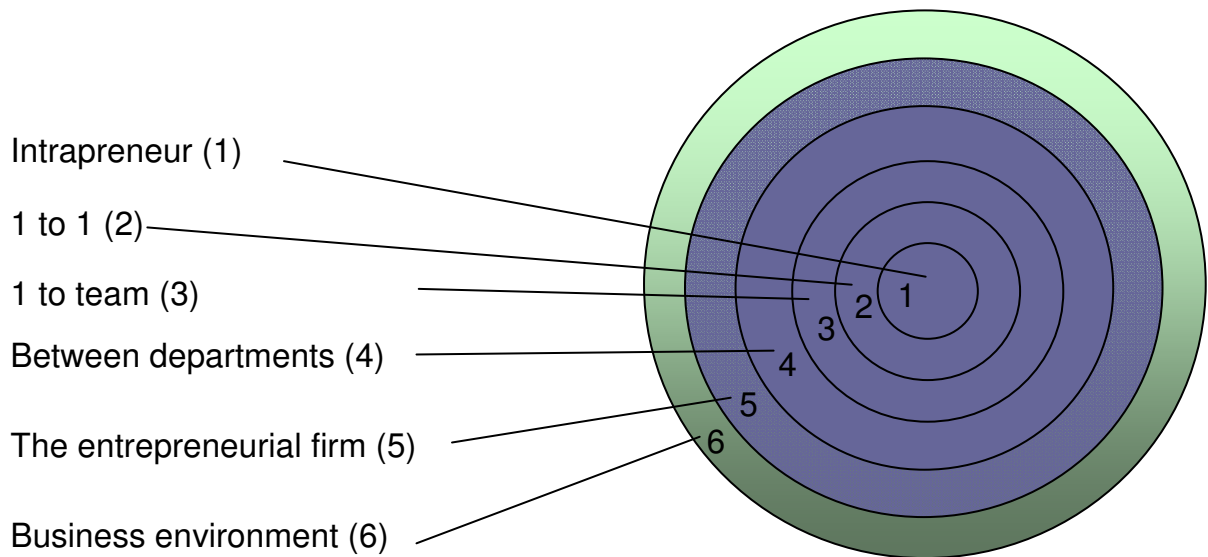


Figure 2: The individual Intrapreneur within the company system and the overall system

²⁶ Wunderer (2006:5-14) *inter alia* distinguishes the two central management dimensions of structural systemic and personal interactive management. The starting points for (indirect) structural management are: culture, strategy, organisation and qualitative personnel structure. This distribution defines the lever for achieving entrepreneurial action in an organisation and forms the framework for examining the internal business environment and the entrepreneurial organisation design in chapter 4.3. Personal management (direct) helps with the implementation of structural management and (alternating) fine tuning of behaviour. For Wunderer, structural management is more fitting for motivated and qualified employees. This especially appears to be the case for entrepreneurial employees and managers.

1. Introduction and the issue at stake

The entrepreneurial behaviour of the organisation is therefore a central point in the examination that follows. With a holistic design of entrepreneurial tasks in structures that tend towards being decentralised and central coordination of team and group work (Wunderer 2006:508-510), the entrepreneurial challenges present in mature companies can be overcome²⁷.

Finding 5: Individual entrepreneurial actors must have the desire themselves to carry out their role (motivation), they must be able to (qualification, empowerment), and be allowed to and be supposed to (authorisation), if an entrepreneurial orientation is to be achieved.

The five central findings presented here mark a first frame of reference (Winter 2005) for examination of the role of intrapreneurship in a business environment characterised by global competition and technological dynamics.

As well as the models and concepts found in the literature on intrapreneurship, systems theories for the discussion about the interaction between the organisation and the environment, economic theory in the discussion about the entrepreneurial organisation as a corporate actor as well as models and concepts of management sciences in the discussion about frameworks for analysing the business environment all serve as a theoretical framework. This interdisciplinary approach is supplemented by the design concept developed in chapter 5 which defines an integrative frame of reference for holistic intrapreneurship.

In this way, the research presents a literature review in chapter 3 to describe the essence of the existing concepts that has been studied, to give some basic implications on the role of intrapreneurship, to explore design elements for holistic intrapreneurship via synthesis, and to identify basic entrepreneurial tasks for further analysis in chapter 4. In chapter 5 (on the basis of the theoretical analysis) and chapter 6 (on the basis of the empirical analysis) an integrated synthesis is done and a design concept of holistic intrapreneurship with theoretical constructs and framework models is developed.

²⁷ Beer (1979), inter alia, defines this kind of viable division of labour between central and decentral systems within an organisation.

1.3 Chapter sequence and research road map of the study

Against this background, chapter 2 outlines the fundamental research questions of the study and its research process, design and methodology. In order to clarify the role of intrapreneurship in a business environment characterised by technological development and global competition, chapter 3 develops three central tasks of an entrepreneurial organisation and these are based on a comprehensive study of the literature on intrapreneurship, on the business environment, as well as on the relationship between organisation and environment:

- (1) entrepreneurial collection of meaningful information,
- (2) entrepreneurial shaping of the future,
- (3) entrepreneurial design of the organisation.

Chapter 4 analyses these three central tasks of an entrepreneurial organisation. Entrepreneurial retrieval of information identifies opportunities and risks in the business environment. Entrepreneurial shaping of the future analyses potential opportunities and risks with an eye to existing and future resources and competencies and makes decisions about entrepreneurial activities. The entrepreneurial design of the organisation develops an organisation design that enables flexible adaptation to change in the business environment and adapts the organisational architecture so that entrepreneurial shaping of the future can be implemented. Thus, the central design tools for intrapreneurship are introduced by way of the entrepreneurial strategy, structure and culture in combination with the resources and competencies of the entrepreneurial organisation.

On the basis of the theoretical findings resulting from the analysis of the three entrepreneurial tasks identified, chapter 5 defines a role model for entrepreneurial organisation, develops a conceptual framework for the delineation of the business environment and proposes a qualitative system model to illustrate the interaction between the entrepreneurial organisation and the external business world. The role model specifies five roles that are realised by an entrepreneurial organisation via a division of labour.

1. Introduction and the issue at stake

The knowledge manager for opportunities and risks analyses the business environment and develops a mental model of the characteristics, components and contexts of the business environment. Knowledge of potential opportunities and risks, as well as of developments and trends are used as part of the other roles. The idea finder analyses actual entrepreneurial opportunities with an eye to there being a fit with the current and future resources and competencies and identifies the entrepreneurial activities to be realised. The idea implementer (innovation manager) realises the opportunities in the start-up phase. If an established business should develop, the entrepreneurial manager manages the business through its life cycle, taking into consideration changes in the business world. The synergy manager takes care of the coordination and collaboration and also deals with a holistic orientation for the organisation in the achievement of efficiency, innovation and adaptation.

The conceptual framework for delineating the business environment focuses on the characteristics of the components of the global business environment. The desired intensity and the main design points of intrapreneurship can be deduced by reference to the characteristics. The opportunities and risks can be identified in various operational fields with reference to the components. The proposed qualitative system model relating to interaction of the organisation with the environment shows on an aggregate level the two exchange fields between the environment and the organisation that are fundamental to the viability of an organisation: by implication, established and new business represent a start to the business cycle and define the optimisation and renewal (see Rüegg-Stürm 2004) required for viability with reference to the turbulent characteristics of the business environment.

In chapter 6, the theoretical findings of the study are reflected against reality by way of an empirical study. Further, the role of intrapreneurship in a globally active technology enterprise in the dynamic Bodensee-Oberschwaben region of southern Germany is examined. Chapter 7 gives conclusions and an outlook for further research. The study is organized around the outline depicted in figure 3.

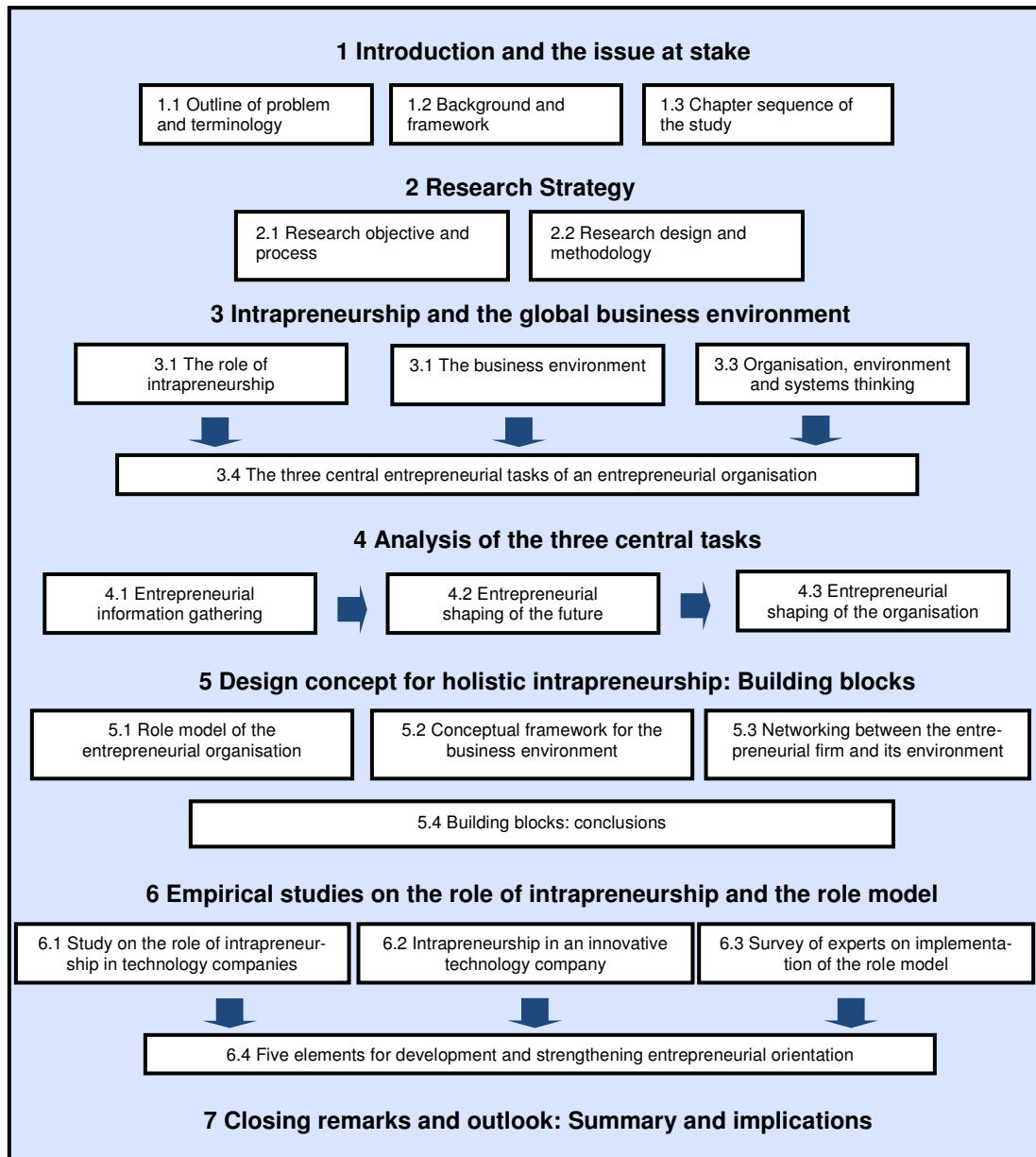


Figure 3: Structure of study and examination process

The following chapter 2 gives an outline of the research strategy used to arrive at the research road map of the study (see figure 3). Consequently, the essence of the relevant literature is presented and condensed in design elements of holistic intrapreneurship (as a dynamic end state) and identifies central entrepreneurial tasks (chapter 3). The three derived entrepreneurial tasks are further analysed and defined to develop a design concept for the vital entrepreneurial learning organisation (chapter 4). The synthesis based on the literature review, analysis and empirical study is done in chapter 5 and 6 to outline theoretical constructs for the vital entrepreneurial learning organisation.

2. Research strategy

The purpose of this chapter is to show the research objective and the research process with literature study, theoretical analysis, conceptual analysis, synthesis and empirical study to illustrate the design concept and theoretical constructs for holistic intrapreneurship. The research strategy (see chapters 2.1 and 2.2) is implemented with five key elements. Firstly, the starting point is made clear, a frame of reference defined and the process of the research is established (see chapter 1). Subsequently, there is an informed literature study concerning clarification and description of the role of intrapreneurship in a global environment (see chapter 3) and the analysis and declaration of the three key tasks of an entrepreneurial organisation (see chapter 4). A design concept for intrapreneurship in a dynamic and global business environment is developed by building models and concepts (see chapter 5). The role of intrapreneurship in practice is examined in an empirical study (see chapters 6.1 and 6.2). The implementation and application of the role model is analysed by a survey of experts and described in a specific (cultural) context (see chapter 6.3). The reflection of theory and practice brings not only theory-based empirical research but also feedback for the development of theory. In addition, there is an outline of a conceptual framework for developing and strengthening a vital entrepreneurial learning organisation (see chapter 6.4). Conclusions therein summarise the findings (see chapter 7).

2.1 Research objective and process of study

Clarification of the role of intrapreneurship by describing the central tasks of an entrepreneurial organisation in a dynamic, global business environment (see chapter 4) can be said to be the research objective²⁸. Which roles must an entrepreneurial organisation carry out to fulfil the central entrepreneurial tasks of securing viability (see chapter 5.1)? How can the interaction between the entrepreneurial organisation and the business environment be described as an operational field (see chapters 5.2 and 5.3)?

²⁸ At the centre of the examination is the research of knowledge about the entrepreneurial interaction between organisation and environment and also within the entrepreneurial organisation via the development of theory and the associated empirical studies (see Dubin 1969).

2. Research strategy

At the same time, when describing the interaction between organisation and environment, reference should also be made to the findings of systems thinking²⁹, as in a complex world, a holistic, networked examination of the research problem and objective appears to be necessary. When specifying and designing the division of labour within the entrepreneurial organisation, reference should also be made to economic thinking (Homann and Suchanek 2005). Even when the actual actors will not always behave rationally in the sense of the economic behaviour model, this perception offers an important frame of reference for the necessary design of the incentive system of an entrepreneurial company system³⁰.

This economic design approach to organizational architecture (Brickley et al 2004) should help the organisation to act entrepreneurially itself when the real actors are driven by egoistical motives. When bringing economic and holistic thinking together, a key factor when specifying the role of intrapreneurship and setting up the model is the development of a role concept for the entrepreneurial organisation in its function as a corporate actor interacting with the external business environment. The entrepreneurial organisation is active in global operational fields. Understanding the dynamic and complex business environment is fundamental for the entrepreneurial organisation in terms of identifying opportunities and risks.

Against this background, a conceptual framework is presented which describes the general operational field of intrapreneurship. An aggregated systems model will be developed to specify the basic interactions between the viable entrepreneurial company and the external business environment. An overall concept of the role of intrapreneurship in a changing business environment is examined using the conceptual framework that specifies the business environment, the systems model for specifying the exchange relationships between the entrepreneurial organisation and the environment and the role model of the entrepreneurial organisation (see Chapter 5).

²⁹ Networked thinking – see Vester (2005) or holistic thinking – see Ulrich and Probst (1991) – is also spoken about in the literature.

³⁰ For a critical microeconomic evaluation of the organisation design's orientation see Osterloh and Frost (2000a:492-496).

2. Research strategy

The research process follows the business research methods outlined by Cooper and Schindler (1998). The starting point of the examination is marked by a constantly changing external business environment. Increasing business networking in global markets that are highly competitive and technological developments are important drivers of change in the business environment. Companies have to adjust to dynamic developments (management dilemma). Apart from efficiency in existing businesses, they must use innovations in the areas of products, the market and technology and also systematically make use of opportunities and risks from the business environment in order to set themselves internal and external challenges (management questions).

An entrepreneurial organisation can find the answer to the challenges. Organisations in dynamic environments can secure their viability with an entrepreneurial orientation. What does intrapreneurship mean in a global business environment (see chapters 3.1.4 and 5.3)? How can an entrepreneurial organisation be specified and achieved in a way that resolves the management dilemma (see chapter 3.1.5)? What central tasks does an entrepreneurial organisation have (see chapters 3.4 and 4)? Which roles have to be fulfilled as a whole and which ones by division of labour (see chapter 5.1)? How can the operational fields for opportunities and risks (see chapter 5.2) and the interaction between the entrepreneurial organisation and the external business environment (see chapter 5.3) be specified? What role does intrapreneurship play in the company reality of global technology companies (see chapters 6.1 and 6.2)? How are the central tasks and roles of an entrepreneurial organisation implemented (see chapter 6.3)?

In chapter 3.1, the role of intrapreneurship in a global, competitive environment characterised by technological developments is examined with reference to relevant literature (Kornmeier 2007:109-136) from the research field relating to entrepreneurial thinking and action in organisations. In so doing, it becomes clear that salient significance must be allocated to the specification of the business environment and the interaction between the organisation and environment. Accordingly, models and aspects for specifying the business environment are studied (chapter 3.2), as well as holistic approaches for specifying the organisation as a system which is exposed to the environment (chapter 3.3).

2. Research strategy

The literature study in chapter 3 identifies three central tasks of an intrapreneurship system. These three central tasks of the entrepreneurial organisation are analysed in chapter 4. In this process, the retrieval of entrepreneurial information (chapter 4.1) as well as an entrepreneurial shaping of the future (chapter 4.2) are key factors. The entrepreneurial shaping of the organisation (chapter 4.3) considers, in particular, the structural components of the entrepreneurial organisation. In the synthesis, a design concept with three building blocks is introduced. Firstly, a role model for the entrepreneurial organisation is developed (chapter 5.1). A conceptual framework of the business environment is presented as the second building block, enabling a systematic identification of opportunities and threats and making it possible to deduce entrepreneurial opportunities (chapter 5.2). The third building block can be defined as an aggregated, qualitative model (Bossel 2004) for examining networks (Vester 2005) and the fundamental pattern of interaction between businesses and the business environment (chapter 5.3).

An empirical study of the role of intrapreneurship and of the role model developed (chapter 6), applies the theoretical research results to globally active technology companies in the Bodensee-Oberschwaben region of southern Germany. In addition, a research design with three studies and three consciously selected spot checks as samples is designed and implemented in the empirical part of the research process (see Schnell et al 2005:7-15). As part of this, managers and employees from globally operative technology companies are asked in writing and telling about the role of intrapreneurship and the role model (see Mayer 2006:57-116). A further written survey is directed at managers and project workers in a highly innovative technology company with the aim of being able to derive additional findings about this reference group (chapter 6.2). In order to make the picture of the empirical study into a full template, a third building block of the empirical study is a survey of experts (see Bogner et al 2005) which contains some additional aspects of intrapreneurship (chapter 6.3). Thus, a systematic gaining of knowledge³¹ about the entrepreneurial orientation of technology companies and about the implementation of the central entrepreneurial tasks and roles in the practices of the company is pursued using a questionnaire and questionnaire guideline (see appendix).

³¹ For qualitative content analysis from interviews with experts, see Gläser and Laudel 2009:197-259).

2. Research strategy

In chapter 6.4, five design elements for developing a vital entrepreneurial learning organisation are outlined which are derived from the theoretical and empirical findings of chapters 3 to 6. These design elements can be used for company research projects and to strengthen the entrepreneurial orientation of individuals and the company. The management workshop for shaping the entrepreneurial future (building block 1) offers a framework concept for individual and collective learning of entrepreneurial competencies taking into account the three central entrepreneurial tasks of an entrepreneurial organisation through entrepreneurial agents. Learning from individual entrepreneurial activities (building block 2) is founded on a systematic documentation of individual entrepreneurial activities through entrepreneurial agents as a basis for learning for future entrepreneurial activities and to raise managers' awareness of entrepreneurial orientation.

Culture analysis by cultural agents (building block 3) helps to analyse as well as to design common mental models. The analysis of countries by country agents (building block 4) helps to analyse the general macro environment for opportunities and risks. The analysis of industry sectors by industry agents (building block 5) helps with the analysis of the specific micro environment for opportunities and risks. Specific implementation of the central entrepreneurial tasks and roles in a specific context of an organisation are the domain of specific company research projects. The role model developed can be used and specified for various cultural frameworks and stimulate additional empirical studies in specific contexts.

Thus, the central research results of this study provide a framework for the systematic specification of the settings of a globally active business, clarify the role of intrapreneurship in a business world that is particularly driven by technological developments, define the roles of the entrepreneurial organisation, describe the central structural components of the entrepreneurial company system and offer, for the first time, a comparison with business practice. This is achieved by a well substantiated study of the literature together with an analysis and theoretical processing of the research task. On this basis, the model building blocks for the design concept are developed as part of the synthesis. An empirical study takes a look at the role of intrapreneurship and the implementation of the role models in business practice (see figure 4).

2. Research strategy

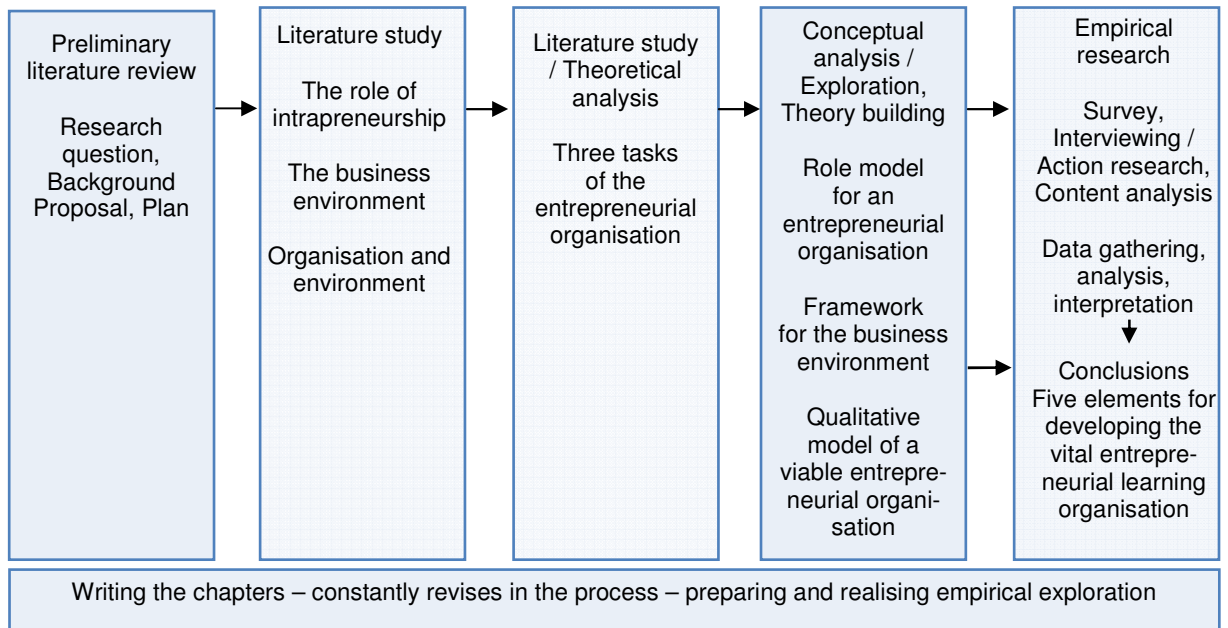


Figure 4: Research design³²

2.2 Research design and methodology of study

In terms of the research methodology, the starting point of the study is marked by the conclusion that an increasingly complex and dynamic business environment requires an increasingly entrepreneurial orientation from companies if they are to secure viability (Morris et al 2008). The research and explanation of the role of intrapreneurship in a dynamic, global business environment is done on the basis of an intensive literature study. In reworking the literature (see Kornmeier 2007:109-121), it becomes clear that the economic and management theory³³ concepts found in the literature treat a whole range of individual aspects of intrapreneurship. A synoptical illustration of the individual theoretical concepts³⁴ and the association of central elements of an entrepreneurial organisation can thus lead to a holistic view which can, in turn, be considered as the ultimate prerequisite for entrepreneurial orientation (see Haines 1998:204). Thus, it would appear to be helpful to consider not only economic and management theory concepts but also systems thinking as a theoretical frame of reference (see Winter 2005:57-59) for entrepreneurial thinking and action.

³² For management and research projects see inter alia Mouton (2001). Mouton presents a map for standardisation of research studies. For the research design selected here, see particularly pages 150-153,165-167,175-180.

³³ For the history of management approaches see Ghillyer (2011).

³⁴ For a chronological tabular synopsis of the theoretical illustrations analysed see appendix.

2. Research strategy

The connection between the economic view that the behaviour of the organisation ensues from the interplay of individual actors (self-serving) and systems thinking (see Wright 1989, O'Connor and McDermott 2006), according to which the organisation can, through coordinated interplay, become an integrated whole – which is more than the sum of the parts – enables a holistic understanding of intrapreneurship. With a dual perspective, i.e., a holistic view of the organisation and its parts in interaction with the dynamic environment on the one hand, and a microeconomic view of the objectives of the individual actors in the process of internal coordination through the harmonisation of individual and collective targets (see Katz and Kahn 1966:88) on the other, the role of intrapreneurship can be considered as being substantiated. In addition, a contextual frame of reference is developed in order to then examine and describe, in the in-depth literature study, intrapreneurship, the business environment and the interaction between the organisation and the environment (Dubin 1969).

From the theoretical eclectic literature study (see Kornmeier 2007:196), it is possible to account for, define and carry over into the three central entrepreneurial tasks nine elements for the specification of holistic intrapreneurship. Using the economic concept of the corporate actor (see Homann and Suchanek 2005:304-309), the three entrepreneurial tasks can explain the role of intrapreneurship on the level of the whole organisation. The theoretical analysis of the three entrepreneurial tasks by way of a further substantial literature study enables a deeper understanding of intrapreneurship and the lever for the design of a viable entrepreneurial organisation.

In the process of building the model, a design concept for holistic intrapreneurship with three theoretical constructs (Pidd 1996) is developed with a theory-based exploration (see Bortz and Döring 1995:334-341). The role model of the entrepreneurial organisation specifies and explains the roles necessary for implementation of the three entrepreneurial tasks that an organisation as a whole must fulfil in an integrated way.

2. Research strategy

This *modus operandi* thus links the microeconomic concept of the corporate actor with the role concept from the discipline of sociology³⁵. The role model thus offers a holistic perspective to the theoretical reflections and principles on the role of intrapreneurship identified in the literature study.

A conceptual orientation framework is presented which integrates the different concepts for the specification of the business environment arising from the literature study with a holistic perspective for the systematic specification of the business environment based on theoretical findings³⁶. The interdependence between the entrepreneurial organisation and the external operational fields is illustrated by a qualitative systems model on aggregated levels (see Bossel 2004). Model building is prepared via a theoretical examination to identify basic system variables and bilateral property relations³⁷. The three complementary theoretical constructs of the role model, orientation framework and systems model form a reference system for the design of the three entrepreneurial tasks of organisation design, information gathering and shaping of the future in interdependence with the dynamic and complexity of the business environment. The design concept can act as a starting point and conceptual framework (Mouton 1996:114-124,195-202) for the theory-led empirical research (see Kornmeier 2007:90).

As part of the empirical study on the role of intrapreneurship there is a survey (see Kornmeier 2007:158-187, Schnell et al (2005), Cooper and Schindler 1998:303-309) of 100 managers in 50 technology companies from the Bodensee-Oberschwaben region together with 75 managers in a highly technological company from the Bodensee-Oberschwaben region, these being conscious choices taking into account the spatial unit, their global and technological orientation and also the regional economic significance. The formal questionnaire contains an accompanying letter with a short introduction of the content, an explanation of terms, as well as 24 questions with ratings.

³⁵ For application of the role concepts in the organisation and management theory, see inter alia Kieser and Kubicek (1983:394-406), Khandwalla (1977:111-119), Schein (1980:146-147), Koontz et al (1980:73-74).

³⁶ See inter alia Graf's levels of analysis (2005:331), Fahey and Narayanan's environment concept (1986), Johnson and Scholes' environmental characteristics (1993:78) as well as Trompenaars and Hampden-Turner's culture concepts (1998) or those of Hofstede (2001).

³⁷ This procedure is supported by Vester's sensitivity model (2005).

2. Research strategy

The questionnaire is carried out as a web survey (survey of managers from 50 companies) or by a written questionnaire (survey of managers from the highly innovative company). Data preparation takes place on the basis of the *inkidu* survey system at the Ravensburg-Weingarten University. From the data analysis, statements on the role of intrapreneurship in technological companies in the Bodensee-Oberschwaben region are derived and, in addition, there is an examination of cross company profile trends (by the connection of mean values) relating to the features of an entrepreneurial organisation, the degree of support from intrapreneurship via structural design of the internal framework conditions and the potential of entrepreneurial thinking and action from managers. By comparing cross company profile lines with the profile lines of highly innovative companies, it is possible to examine development potential and success factors. Plausibility questions regarding the content enable consistent answers to the questions posed.

In the survey of experts (see Gläser and Laudel 2009, Bogner et al 2005) relating to implementation of the role model in practice, the selection of experts questioned was done with the conscious intention of defining access for the information gathering process that is as comprehensive as possible (see Gläser and Laudel 2009, Bogner et al 2005). With globally active technology companies in the Bodensee-Oberschwaben region in mind, contacts with managers and human resources managers are used so that those questioned can also act as agents for the involvement of further interview partners.

Thus, a sampling design is selected (see Cooper and Schindler 1998:212-247) which can be used to examine certain information needs based on theoretical considerations and taking into account the organisation as whole. In order to enable the systematic involvement of further interview partners, guide questions on the operationalisation of the research question are formulated in writing and are discussed in personal interviews. Using this research concept, further company-specific specialist knowledge can be obtained qualitatively. The data collection takes place involving company agents on the basis of written instructions with standardised guide questions.

2. Research strategy

Also with this concept, it is possible to obtain and analyse implicit knowledge and accounts of motivated interviewees in a social information process. With qualitative data analysis, it is possible to derive a stylised implementation of the role model. In interpreting the findings of the survey of experts, one should however take into consideration that the stylised illustration reflects a (culture) specific context. By reflecting the findings of the empirical study against the theoretical findings of the literature study, one can see the benefit of the design concept developed for specifying and explaining the role of intrapreneurship. Furthermore, it is possible to identify design fields for strengthening entrepreneurial orientation for a specific (cultural) context. As an aside, five elements for developing of a vital entrepreneurial learning organisation can be outlined.

The research strategy thus balances out the theory concepts identified in the literature and the newly-developed theoretical constructs using empirical studies and examinations for the implementation of the theoretical findings, which in turn stimulate further theoretical considerations. The findings process itself is supported by systems thinking (see Haines 1998:91-95, O'Connor and McDermott 2006:45-51,140-151) and reflection (see Maturana and Varela 2009:19-36).

Thus, the research process (see figure 4) to clarify the role of intrapreneurship via a design concept for holistic intrapreneurship contains (1) a preliminary literature review to define the research objective and questions, (2) a literature study to describe the role of intrapreneurship via a synoptical illustration of theoretical constructs, the business environment and the interaction of the organisation and the environment, (3) a theoretical analysis to explore the tasks of the entrepreneurial organisation, (4) a conceptual analysis to develop the theoretical constructs for holistic intrapreneurship (role model for an entrepreneurial organisation, framework for the business environment, qualitative model of a viable entrepreneurial organisation), (5) an empirical research and content analysis on intrapreneurship in the company reality with conclusions which lead to five elements for developing the vital entrepreneurial learning organisation. After the outline of the research process in chapter 2 the following chapter 3 describes the cornerstones for the theoretical analysis (see chapter 4) and theory building (see chapter 5).

3. Intrapreneurship and the global business environment

In order to research the role of intrapreneurship in a dynamic, global business environment that is competitive and affected by technological developments, chapter 3 (see also figure 5) examines the three central themes of intrapreneurship (see chapter 3.1), business environment (see chapter 3.2) and interaction between the organisation and the environment (see chapter 3.3) to enable the establishment of the contexts and further topics to be investigated for the analysis of the central entrepreneurial tasks (see chapter 3.4 and chapter 4) of holistic intrapreneurship (see chapter 5).

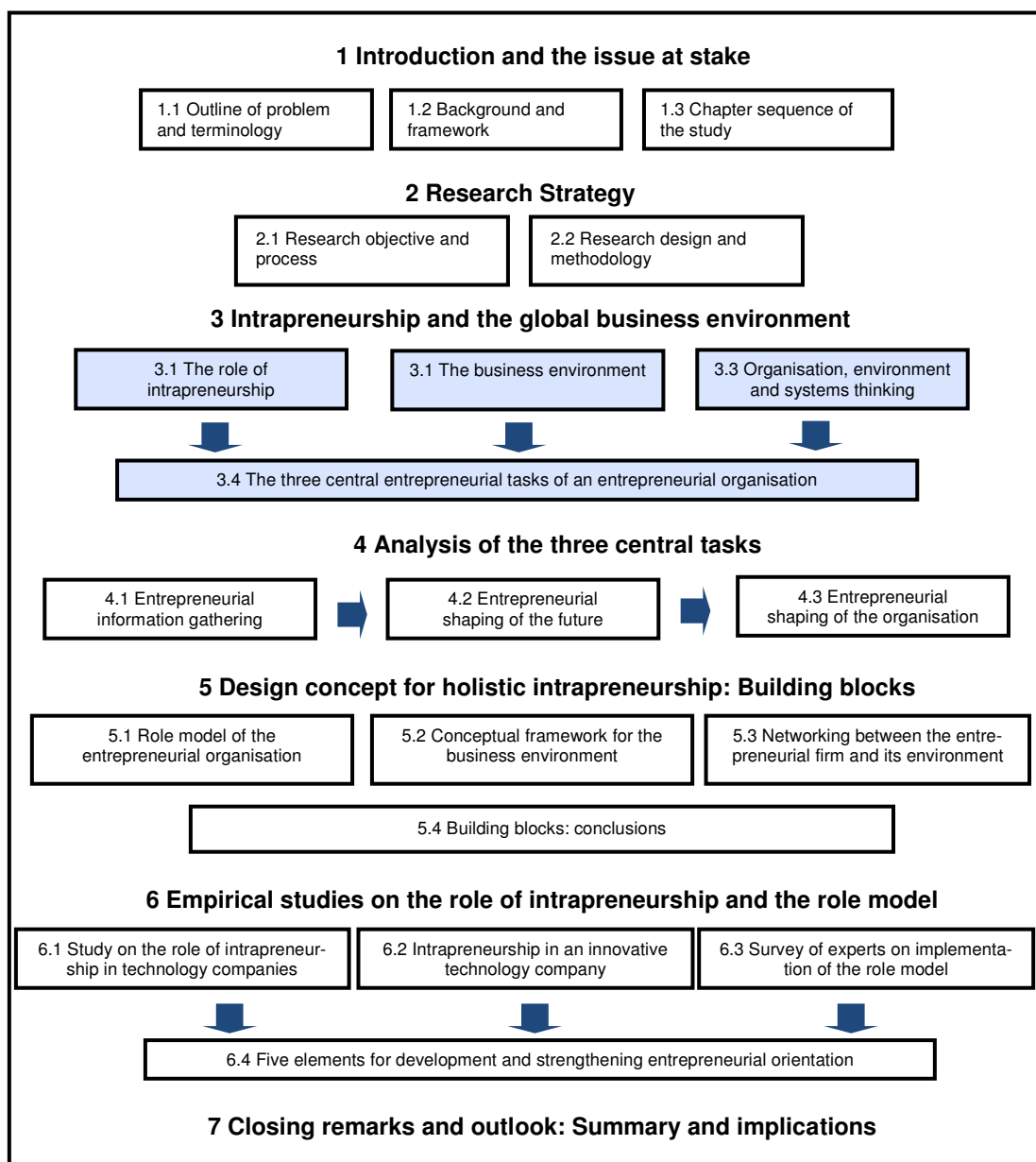


Figure 5: Examination of intrapreneurship and the global business environment

3.1 The role of intrapreneurship

This chapter will focus on the role of intrapreneurship from an economic, management and international perspective. Thus, the chapter describes a number of aspects on intrapreneurship from different system levels. First it will present the origins of the examination of entrepreneurial thinking and action in economic theory. Second it will explore the holistic character of intrapreneurship in the field of corporate management. Third it will examine findings from management theory on the implementation of intrapreneurship in organisations. Finally, it will layout the international, intercultural and holistic orientation as cornerstones of entrepreneurial management in interaction with the global business environment.

In what follows, the central conclusions are evaluated in terms of entrepreneurial thinking and action in organisations so that the various roles and tasks of intrapreneurship can be systematically deduced and illustrated. It is possible to identify the fundamental roles of intrapreneurship from the viewpoint of the classical economics tradition by looking at the findings of Smith (1982), Schumpeter (2006, 1950), Penrose (1995), Hayek (1968), Kirzner (1973), Porter (1991), and Baumol et al (2002b, 2007, 2010). In these works, the explanation of the roles and tasks at the macro level is of foremost importance. Chapter 3.1.1 examines what the roles and tasks of intrapreneurship are for the growth of the total economic system (see Holcombe 1998, Kuratko and Audretsch 2009).

In recent decades, entrepreneurial thinking and action has also been examined more and more at a meta and micro level within the scope of behavioural science and management disciplines. In particular, management research can make an important contribution to the discussion of the role of intrapreneurship for organisational performance (see Antoncic and Hisrich 2003, 2004). Central findings from this field of research concerning the entrepreneurial organisation at a meta level are reworked in chapter 3.1.2. Further roles of intrapreneurship are drawn from the works of Schwab (1976), Drucker (1985, 1993, 2007), Brandt (1986), Guth and Ginsberg (1990), Covin and Slevin (1991), Abell (1993), Hamel and Prahaland (1994, 2008), Lumpkin and Dess (1996), Oden (1997), Weick and Sutcliffe (2007), Morris et al (2002, 2008).

3. Intrapreneurship and the global business environment

In chapter 3.1.3, further roles at a micro level can be deduced by looking at the findings of Peters and Waterman (1982), Kanter (1983, 1989, 1997), Pinchot (1988), Block (1987), Block and MacMillan (1995), Wunderer (2006), Baden-Fuller and Stopford (1994), Kuhn (2000), Sathe (2003), Hentze et al (2005), Thornberry (2006), Maucher (2007), Joyce (2008), Kotter (2009), Kohlöffel and Rosche (2009). At the forefront of these contributions are the intent and implementation of intrapreneurship. Why intrapreneurship in organisations plays an important role and how intrapreneurship is arranged. The business environment for organisations has changed significantly due to globalisation and the intensive pressure of competition, not to mention the ground breaking technological developments of recent years³⁸. Thus, the focus of entrepreneurial thinking and action in companies has been widened. Intrapreneurship in turbulent times means, therefore, that there are new opportunities and risks to be recognised from the change in the global business environment and it also means that these are to be taken advantage of by proactive entrepreneurial decisions³⁹.

Intrapreneurship can thus be understood as a source of the competitiveness of an organisation on global markets (Morris et al 2008:iv). A key role for intrapreneurship flowing from this is the establishment of international entrepreneurial activities keeping in mind the ever-changing business environment and the international division of labour. Entrepreneurial organisations must examine when, for example, entrance into or exit from markets or industries should take place⁴⁰. Mastering complexity in the business environment and within organisations, together with networking between the organisation and the global business environment, require holistic thinking and collective learning, an international orientation, as well as making the most of cultural differences if the viability of an organisation is to be secured. Pointing the way in this context are the works of Vernon (1966), Senge (2006), Trompenaars et al (1998, 2003, 2007), Birkinshaw (2000), Zahra and George (2002), de Geus (2002) and Hitt et al (2002).

³⁸ Porter (2004b:164) ascertains that technological change is a fundamental driver for the competition in industries, is responsible for changes within industries or also enables the creation of new industries.

³⁹ Huse and Gabrielsson (2004:130-141) show that entrepreneurial orientation in an organisation has a positive influence on international activities.

⁴⁰ Thurow (2004) suggests that a Chief Knowledge Officer (CKO) is established for this important entrepreneurial task in the future.

In the contributions analysed in chapter 3.1.4, the new international context of intrapreneurship is also of importance, alongside identification of the fundamental roles of intrapreneurship and being able to understand the role of intrapreneurship in today's business world. At the same time, there is an examination of what the implications are for the role of intrapreneurship in a global economy. In addition, it follows the examination of the various aspects of entrepreneurial action in the light of the complex, dynamic and multicultural business environment (see Mason 2006). Chapter 3.1.4 examines what role intrapreneurship plays in a global and turbulent business environment and what the implications of the cultural context are. The historical context of the research is described by, amongst others, Corbetta, Huse and Ravasi (2004), Landström (2004), Wunderer (2006) and Frank (2006). Bitzer (1991) offers a summary of the different aspects of entrepreneurial behaviour in organisations with particular reference to management, organisation structure and culture.

3.1.1 Intrapreneurship and economic tradition

The historical origins of the examination of entrepreneurial thinking and action by and within organisations were already discernable with the work of Smith (1776:9-103). Smith identified the goal-oriented division of labour as the main productive force for an economy and its organisation. For the achievement of capital gain in an organisation, the risk or security associated with an entrepreneurial activity was considered to be decisive. The scope of the division of labour would then be delineated by the market. With the globalisation of markets, it is possible to achieve a worldwide division of labour, and the competitive advantage of a national economic system can be a source for entrepreneurial activities (Porter 1991). At the level of the individual organisation, therefore, the goal-oriented arrangement of an efficient division of labour as well as the opportunities and risks arising from the international division of labour can be formulated as one of the roles of intrapreneurship. According to Schumpeter⁴¹ (1950), a central entrepreneurial activity is the implementation of innovations for the achievement of pioneering gains.

⁴¹ For a critical assessment of Schumpeter's contribution in relation to entrepreneurial thinking and action in modern organisations, see Wunderer (2006:38,39) who indicates the restriction of the target group for entrepreneurial behaviour to the entrepreneurial type as unnecessary.

3. Intrapreneurship and the global business environment

Intrapreneurship is to be understood as an individualistic process, in that the entrepreneurial actors strive for independence and experience deep satisfaction from achieving of innovation. These innovations create imbalances in the markets. Generating permanent innovations⁴² can be identified as a role of intrapreneurship, and at the level of the total economy, can be considered as a lever for the process of creative destruction as described by Schumpeter (1950:134-142). In this way, it is not so much the existing products, markets and technologies that determine the competitive situation, but much more that the (potential) new competitors, new products, new organisation and technology types threaten existing business and structures. In particular, this development-oriented view (Schumpeter 2006:103-180) of the innovation system as a view that is complementary to a static approach⁴³, where there is a focus on creating efficiency, enables a fundamental awareness of the role of intrapreneurship.

Entrepreneurial organisations must exercise the function of a routine entrepreneur⁴⁴ in existing business and adapt as well as possible to changes in the environment. They must, however, also exercise the function of an innovation entrepreneur and develop new business with new resources or with a different combination of existing resources. The new business may come from the innovation system or be induced through changes in the external business environment.

Schumpeter (2006) indicates that the two basic types of entrepreneurial action in routine business and innovation business should be considered as structures that are independent from one and other. For innovation business, he emphasises the necessary implementation competencies⁴⁵ and entrepreneurial function (see Schumpeter 1950:213-219)⁴⁶ which change production processes and organisation, open up new sources of raw material, develop new products and create new markets, and also pursue competition strategies.

⁴² Innovations can be seen as new products, new markets, new organisation forms, new materials, new combinations of resources, new production methods and new technologies.

⁴³ Baumol (2002a) explains the absence of the Schumpetrian entrepreneur in standard microeconomic theory with the lack of standardization in innovation and the nature of the model of the firm.

⁴⁴ Schumpeter (2006:125) speaks specifically of thinking and action in outmoded ways and making passive adjustments and draw conclusions.

⁴⁵ According to Schumpeter (1950:215) the power to act require a spirit that only a minority possess.

⁴⁶ Schumpeter (1950) formulates the tendency that qualified experts increasingly see inventing as a routine task. He believes that the significance of an entrepreneurial personality is tending to decrease.

3. Intrapreneurship and the global business environment

Along with Hayek (1968), new entrepreneurial activities change the market structure and according to Baumol et al (2002b, 2004, 2007, 2010) the market mechanism with competition, profits, and a mix of smaller innovative firms and established larger enterprises (see Prashantham and Birkinshaw 2008) produces innovation and growth of an economy.

Penrose (1995) developed an alternative approach to the classical economic price and production theory to explain actual behaviour of enterprises. Here, it is less about explaining scarce resources and market price setting and much more about entrepreneurial determination of which products can be developed, produced and marketed in a creative process using the available resources. The build up of expectations about future happenings in the business environment then moves to the fore. Entrepreneurial managers have to develop and examine a specific image of the business environment in terms of to what extent opportunities and restrictions exist. As long as there are profitable opportunities, then these entrepreneurial opportunities can be used for the growth of a business. On the basis of expected future events, an entrepreneurial organisation has to shape and expand long term change and generate innovation; all of this would have to be at the same time as coordinating and managing existing business with a view to necessary short term adjustments.

The central management of an organisation has to pursue the correct company and personnel policy, actively organise the structures in the growth phase, and also make investment decisions that are future-oriented. This would happen with increasingly decentralised decision-making which has to lead to a higher level of consistency in decisions across every level of the hierarchy. Penrose indicates that as well as the monetary incentive, motivation for entrepreneurial managers would derive in particular from prestige, personal satisfaction from growth achieved and the possibility of taking on responsibility. Whether companies also pursue new entrepreneurial activities alongside their established business and thus identify resources for potential opportunities, is dependent on the organisation's spirit of enterprise. Entrepreneurial organisations would always use a part of their resources for the search for possible new business and would regularly keep an eye open for worthwhile opportunities.

3. Intrapreneurship and the global business environment

As part of this, it would be important to develop orientations and visions to find the necessary resources for entrepreneurial ideas and, with ambitious entrepreneurial managers, to create new products and services. Alongside the entrepreneurial characteristics personal to the organisation and its actors, information retrieval and the build up of expectations concerning the development of the environment are said to be decisive in order to be able to achieve change and growth on the basis of the resources.

Kirzner (1973) asserts that the economic behaviour model for a predictable world with market participants who are fully informed has served a good purpose in terms of explaining the decisions and reactions of the actors. In reality though, the acceptance of a world in equilibrium with perfect knowledge available for all market participants has to be forsaken and an additional entrepreneurial element has to be introduced into the market process. Entrepreneurial actors can take decisions actively and creatively and they can develop and modify their objectives in accordance with market information resulting from learning processes. Thus, it is possible to explain a pattern of changing individual decisions arising from the learning experience process with new information. He develops the concept of the pure entrepreneur who searches out and uses entrepreneurial opportunities not realised by other actors in the market. According to this concept, there are passive actors whose decision-making is based on the economic behaviour model, and pure entrepreneurs, who buy resources and sell products in order to use existing price differences between inputs and outputs as an entrepreneurial opportunity.

Kirzner also separates the functions of owner and entrepreneur. The pure entrepreneurial decisions then lead to an entrepreneurial profit which would be realised not by the owner⁴⁷, but rather by the active entrepreneur⁴⁸. If one follows this line of argument, managers in the company can be described as entrepreneurs, provided that they pursue worthwhile entrepreneurial opportunities and can secure for themselves the entrepreneurial profits by creating the framework conditions.

⁴⁷ Owners receive interest on the capital invested.

⁴⁸ The entrepreneur could otherwise also implement his entrepreneurial ideas in another company or his own company.

If the owner pockets these profits, they would, according to this concept, take over the role of the entrepreneur. However, if this happens, the attraction of entrepreneurship for managers would be removed⁴⁹. Basically, Kirzner's concept provides a theoretical foundation for entrepreneurial action by managers who use entrepreneurial opportunities to their own advantage. The economic theoretical concepts of intrapreneurship give basic implications on the role of intrapreneurship at the level of the economy (e.g. goal-oriented division of labour, entrepreneurial action in routine business and innovation business). In chapter 3.1.2 the focus is more at the level of the organisation and corporate management.

3.1.2 Management-oriented approaches at the meta level⁵⁰

The following chapter describes findings from the field of corporate management concerning the basic character of intrapreneurship (section 3.1.2.1), the holistic aspects of intrapreneurship (section 3.1.2.2), and the orientation of entrepreneurial management (section 3.1.2.3).

3.1.2.1 Management concepts for the entrepreneurial organisation: Opportunities, risks and revitalisation

Based on a fundamental change of entrepreneurial achievement within the restrictions of the world economy⁵¹, Schwab (1976) formulates chance management as the core task of an entrepreneurial organisation. Since the world economy was developing in an unstable way, but with identifiable trends, it was necessary when formulating company strategies to bring the following into harmony; profit (short-term), growth (long-term), social responsibility in relation to the organisation's partners, the security of the company in the face of danger and the flexibility of companies in order to be able to take advantage of opportunities arising.

⁴⁹ According to this logic, managers can no longer be described as true entrepreneurs.

⁵⁰ see table 1

⁵¹ The global crisis 2009 (Bofinger 2009, Stiglitz 2010) hints at a renewed basic turning point for world economic development. It becomes clear in such times that the basic orientation appears to follow a simple fundamental principal when dealing with change: avoid danger, use opportunities. Thus, in business practice it is not always simple to identify the relevant trends and appropriate entrepreneurial activities and then put them into practice. Fundamentally, it is necessary to accept developments or proceed consciously with a proactive reaction to changed framework conditions.

3. Intrapreneurship and the global business environment

A central entrepreneurial task for him is the evaluation of all entrepreneurial activities with the help of a chance management schematic. A thorough investigation of an organisation can be done, for example, on the basis of a 9-grid schematic (see figure 6) which derives from a combination of two factors that can have a negative, neutral or positive impact on strategy formulation. Activities can be allocated to an opportunity zone, a warning zone or a danger zone so that entrepreneurial decisions can be taken systematically. Companies can use this schematic, for example, to determine the attractiveness of the sector in order to define entry or exit strategies, as well as product development strategies. In particular, changes over time would have to be anticipated and local differences taken into account so that the correct decisions relating to product, market and location can be taken.

According to Schwab (1976), investment alternatives should also be evaluated in terms of the effect on tying up capital, since financial means are needed to defend against danger and to make use of opportunities. Further entrepreneurial tasks for Schwab are also the early identification of possible risks from the environment, the decline in independence and a spreading of risk when making decisions such as selecting location. In accordance with the opportunities and risks analysed, a regular new direction for entrepreneurial activities can follow (see figure 7).

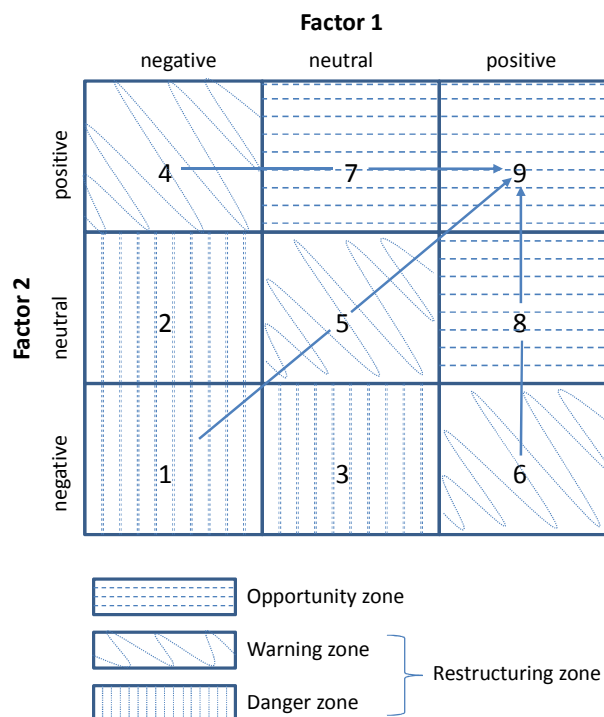


Figure 6: Schwab's schematic for evaluation of entrepreneurial activities (Schwab 1976:16)

3. Intrapreneurship and the global business environment

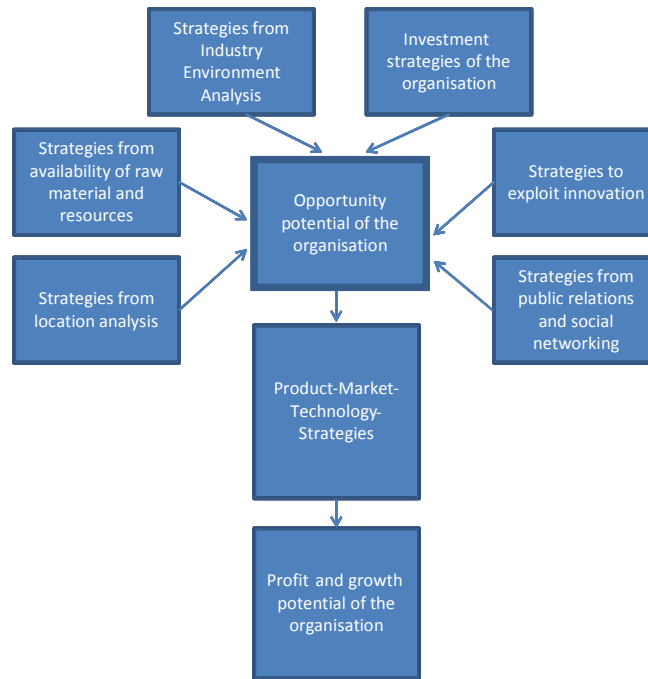


Figure 7: Chance management concept as per Schwab (1976:61)

Entrepreneurial organisations must have an understanding of the exchange relationship with the business environment of their own organisations to enable them to adapt continuously, use their strengths positively and minimise the risk of wrong decisions. As well as this, a total entrepreneurial concept based on an analysis of the environment and of the company has to be developed. With this, not only probable assumptions but also pessimistic and optimistic ones have to be examined if potential opportunities and risks from the business environment are to be identified on the basis of a common approach. It is important not to sacrifice long-term issues that are critical to the organisation in short-term crisis situations.

To deal with changes in the business environment, entrepreneurial organisations have to permit decentralised autonomy and self-regulation, and also orientate individual actions towards the overall interests of the organisation. In this way, a participative structure can be created which makes every employee into a full spiritual partner of the organisation. Within the context of a long-term strategy, decisions have to be made with an entrepreneurial feel and on the basis of continuous market experience, as well as using systematic analyses of the business environment.

3. Intrapreneurship and the global business environment

According to Drucker (1985:217-254) the size of a company is no obstacle to intrapreneurship. Many large companies have proved themselves as entrepreneurs and innovators. The biggest obstacle to entrepreneurial thinking and action is the ingrained, successful mode of operation in the company and the associated bureaucracy and conservative attitude. Because new business appears to be not extensive and unlikely when compared to existing, mature business, there is a danger that new business will be neglected.

Successful operation and everyday crises require a lot of attention and in times of rapid change, a company can quickly decline. So that change can be turned into an opportunity, the company must be organised in a way that generates an entrepreneurial climate, that there are methods of performance evaluation in areas where innovation is created and that there is an entrepreneurial oriented management which arranges organisation structures and staff/management selection in a methodical manner.

Thus, there must be no restrictions in place that inhibit entrepreneurial management. Systematic innovation should be an integral part of a business. The scope, as well as the time frames for innovation, must be defined and an innovation plan with targets has to be drawn up. In his guiding principles, Drucker defines fundamental entrepreneurial activities that help a company achieve entrepreneurial-oriented management. Products, processes, techniques, markets, and sales channels must be evaluated regularly and those that are no longer productive, ceased. For new things, the best staff must be made available. At the same time, it must be accepted that all activities evaluated only have a limited life expectancy.

New entrepreneurial achievements must then be big enough to fill any gaps. Because innovative efforts are never certain to lead to success, Drucker says that at least three times as many entrepreneurial activities should be pursued as are necessary to fill the gaps. A thorough systematic examination of the company with a critical look at existing products, markets, and technologies make it possible to draw up an entrepreneurial plan with innovation targets. Entrepreneurial management have to make sure that the key activities for a successful future are worked on in the present.

3. Intrapreneurship and the global business environment

The entrepreneurial manager must concentrate on the discovery of opportunities and not on dealing with problems. Drucker (1993:9,42-46,87,157-175,253-264) also emphasises that successful entrepreneurial management must have a certain ease of learning. According to Drucker, all successful managers have to learn how to be effective. Entrepreneurial management means dealing with the important issues first and this, in the knowledge that one's own decisions impact on the performance of the whole business. Flowing from this, it is necessary that managers act in a responsible way. Managers owe it to the organisation to be effective. Here, Drucker gives an important piece of advice, which is that entrepreneurial management must be consistently carried out with the whole organisation in mind. This means that management must make a contribution which justifies why they are on the payroll.

Entrepreneurial management have the duty and privilege to develop themselves and at the same time, show commitment, decisiveness and single-mindedness for the results of the organisation. Thus, when fulfilling their tasks, individual managers have to think about the purpose and objectives of their actions with a view to effectiveness for the organisation. Entrepreneurial managers must make the most of opportunities and set priorities.

The effectiveness of management is the prerequisite for an effective organisation and the central objective of a highly-developed company. Drucker therefore requires a harmonisation of the needs of the manager with the needs of the organisation and also the company as a whole. This has to happen with a kind of self-discipline, so that a merging of the organisation's objectives with individual needs, as well as concentration on an effective contribution to the business environment, can be achieved (see chapter 4.3.2.2).

The entrepreneurial organisation considers entrepreneurship as a duty and as a disciplined job, and less as natural or creative behaviour. The current organisation must be led like a new organisation and continuously develop the spirit of enterprise (Drucker 2007:167-175).

3. Intrapreneurship and the global business environment

Brandt (1986) describes entrepreneurial organisations as creative, innovative, flexible and customer-oriented. These qualities should be deeply anchored in the company culture so that ideas can be commercialised. He looks at the historical context and from it, derives an increasing need for entrepreneurial activities. And so, managers have to accept an orientation towards innovation at all levels. With the support of technological developments, there can be an increase in decentralised activities. An entrepreneurial orientation within the entire organisation and when carrying out all activities within a business brings much more success than the strengthening of individual organisational components, such as increasing research and development budgets, supporting individual product champions, creating budgets for entrepreneurial activity or the creation of incentive systems.

According to Brandt (1986) entrepreneurial organisations are the next stage of development towards centrally coordinated profit centre structures. Company planning must lay a stronger focus on the external business world. Thereby, planning and implementation of strategies have to become closer. In order to orientate entrepreneurial employees, it is particularly important to develop entrepreneurial personnel management and an entrepreneurial company culture.

Brandt (1986) requires the creation of flat and flexible organisations with relatively autonomous units which make and implement entrepreneurial decisions. Incentive systems should be fixed directly with individual actors and preferably use resources beyond departmental boundaries. Long-term orientation must be incorporated in company planning via many small improvements in existing business and the pursuit of bigger entrepreneurial opportunities. Entrepreneurial organisations must involve employees at all levels in entrepreneurial decisions and react quickly to changes in the business environment. Entrepreneurial organisations would gather information about the business environment and let it flow freely.

Various activities and various happenings have to demand various and new reactions. Managers at all levels must promote the intrinsic motivation of their employees and involve them (with technological support) in entrepreneurial activities. Regular feedback for significant contributions by the employee is the central reward for entrepreneurial thinking and action (see figure 8).

3. Intrapreneurship and the global business environment

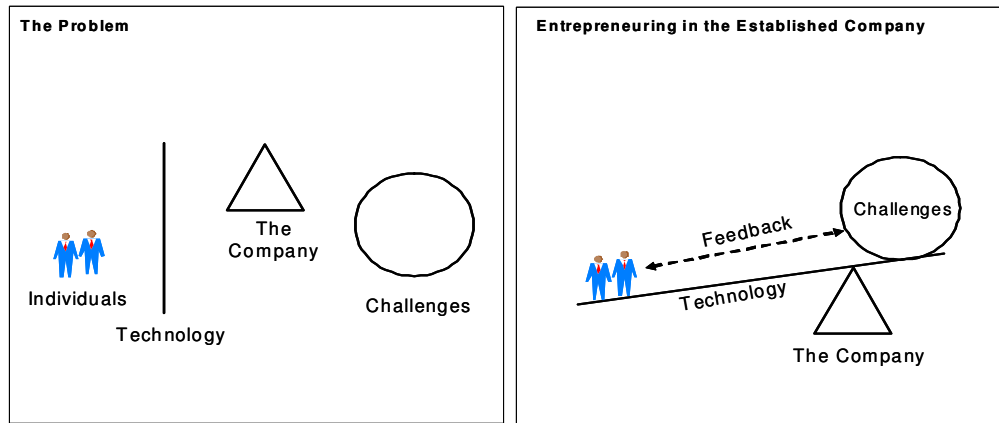


Figure 8: Intrapreneurship by direct involvement of all employees in entrepreneurial challenges as per Brandt (1986:77)

Guth and Ginsberg (1990) foresee a central role for middle managers in the strategic renewal of organisations. This strategic renewal through autonomous action by managers defines the two central entrepreneurial processes in established companies, together with the winning of new business (innovation). According to this concept, a strategic renewal can take place without having to change top management. They create thereby a direct link between intrapreneurship and strategic management (see figure 9). The strength of entrepreneurial orientation is accordingly defined in three areas. A strong change dynamic in the business environment leads to more intrapreneurship as well as to a stronger entrepreneurial orientation amongst managers who also drive through change in the organisation. The shaping of the organisation architecture and company performance are said to be the other central drivers of intrapreneurship.

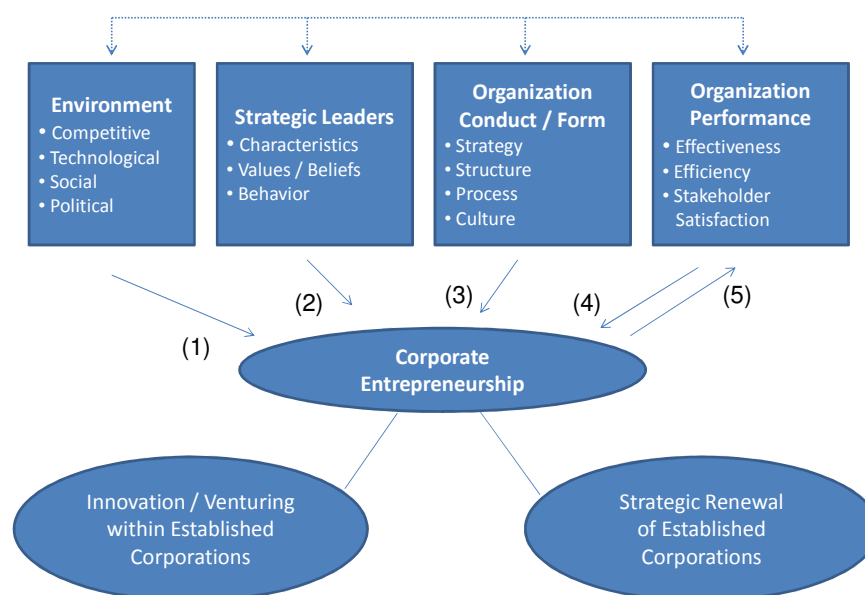


Figure 9: Guth and Ginsberg's intrapreneurship and lever for the entrepreneurial orientation of an organisation (according to Morris et al 2008:47)

3.1.2.2 Management concepts and holistic view of the entrepreneurial firm

Covin and Slevin (1991) describe entrepreneurial organisations by reference to behaviour and not characteristics. According to them, entrepreneurial behaviour is proactive, innovative, and characterised by the taking of risks. Thus, the whole organisation has to be considered. Entrepreneurial activities lead to an entrepreneurial organisation. Product, market or technological innovations should be realised proactively so that the entrepreneurial organisation can be the first to enter markets. According to them, entrepreneurial behaviour of organisations can be configured using strategy, structure, systems and culture⁵².

This configurable entrepreneurial orientation of an organisation has a positive effect on the development of company performance (see figure 10).

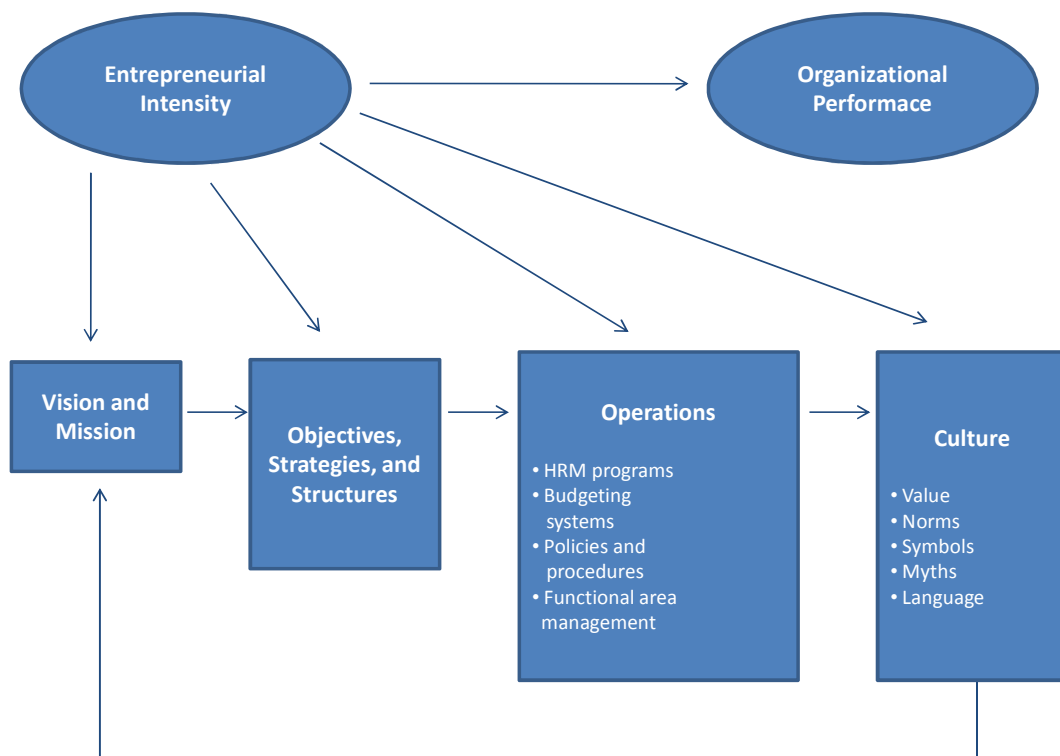


Figure 10: Covin and Slevin’s entrepreneurial orientation of the whole organisation (according to Morris et al 2008:50)

⁵² In a commentary on this integrative model, Zahra (1993) emphasises that intrapreneurship appears on different levels within the organisation, e.g., on the level of the actors, the team, the business unit or also in the various function areas. This must be taken into account when analysing and designing entrepreneurial organisations. Also, there must be a sharper focus on the international dimension of entrepreneurial activities and on entering international markets. He works on this research field in later studies (see chapter 3.1.4)

Intrapreneurship can enhance the performance of an organisation and can drive general economic development at the macro level. The business environment influences the organisation and the organisation influences the business environment. Therefore, organisations have to take account of sector life cycles just as much as economic, political, social and technological framework conditions. Thus, changes in the business world, e.g. political economic measures or new regulations, stimulate entrepreneurial activities. In turn, innovations in the organisation provide a dynamic in the business environment. In this way, a dynamic business environment characterised by a high level of competitive pressure demands the stability of a stronger entrepreneurial orientation in the organisation, especially in new sectors. Covin and Slevin (1991) link the success of entrepreneurial activities directly to the character of the business environment. Intrapreneurship is thus successful in a business environment in which technological developments play an important role, there is a predominance of competitive pressure, the sectors are at the beginning of their cycle and there is a high dynamic overall. An entrepreneurial orientation has a big influence on corporate and competitive strategies. The monitoring of sectors and markets, including the identification of trends, are said to be an important requirement for the improvement of company performance. Learning experiences must be systematically gathered from innovation projects, and systems for monitoring the business environment must be continuously developed⁵³.

According to Abell (1993:245) the drivers for intrapreneurship are not just structures and processes; individual actors are also key. Organisations must identify current opportunities and use them on the basis of existing competencies and resources; at the same time, they must grasp future opportunities by changing and developing competencies (dual strategies)⁵⁴. Also, a plan (see figure 11) has to be drawn up for the realisation of current entrepreneurial opportunities and additionally, a plan for the shaping of change based on a vision of the future has to be drafted and communicated within the organisation.

⁵³ With particular attention to the selected research task, this view of integration of entrepreneurship across the whole organisation forms an important starting point for analysis (chapter 4) and model building (chapter 5) of the role of intrapreneurship in a global, intensively competitive dynamic business environment that is driven by technological developments.

⁵⁴ Sarkess and Hulland (2009) describe the implementation of dual strategy in innovation and efficiency (see also Magnusson and Martini 2008). According to Markides and Charitou (2004), dual strategies (new and established business models) can be pursued in the same market: The organisation must balance the benefit of two separate business models while exploiting synergies.

3. Intrapreneurship and the global business environment

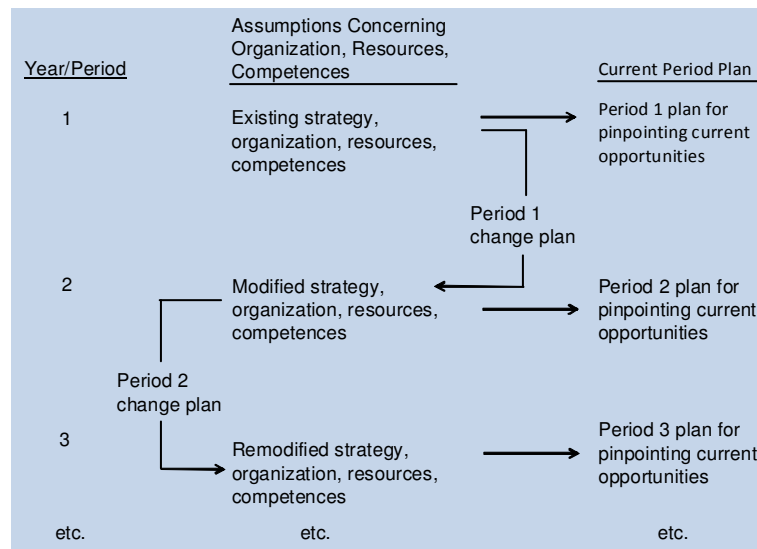


Figure 11: Dual planning of current and future entrepreneurial opportunities as per Abell (1993:266)

Since entrepreneurial opportunities in a global and complex business environment are pursued decentrally and thus, at first, not in a coordinated fashion, there is a danger that potential company-wide synergy effects are not exploited. Top management must then ensure that opportunities to use synergies between and within units of the organisation are identified and realised⁵⁵ (see figure 12).

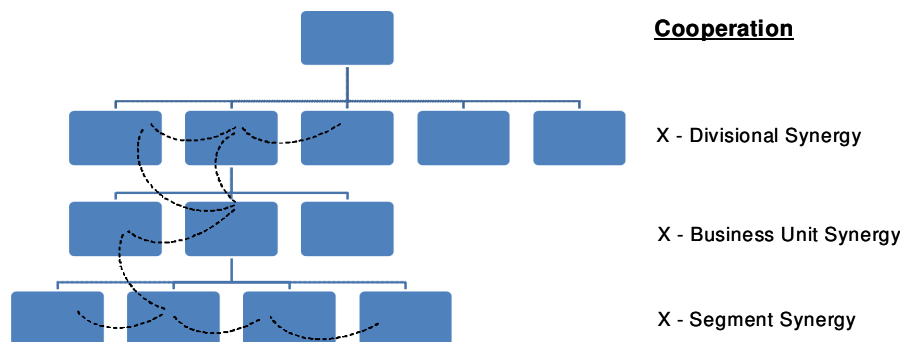


Figure 12: Abell's synergy effects at different levels of the organisation (Abell 1993:123)

Thus, worldwide marketing networks of the whole organisation, for example, can be used via individual local business units or company-wide synergies⁵⁶ can be pursued in the various function areas and at all levels of the organisation; this is achieved by a common use of resources (see figure 13).

⁵⁵ As per Vora et al (2007), in multinational corporations the subsidiary managers have a critical role: They need a dual organizational identification towards the interests of the multinational corporation and the interests of the subsidiary to achieve local responsiveness and global integration

⁵⁶ Baumol (2004) describes the synergy in the market system between small entrepreneurial enterprises (with responsibility for revolutionary breakthrough innovation) and the large industry (with responsibility for incremental improvements).

3. Intrapreneurship and the global business environment

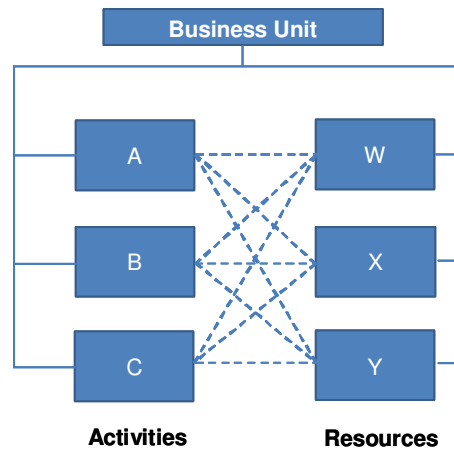


Figure 13: Synergy effects by common use of resources as per Abell (1993:124)

With holistic management, quality improvements and cost advantages can be realised, new entrepreneurial activities using existing resources can be implemented and new products⁵⁷ or services can be launched onto the market more quickly (see figure 14). As stated by Tushman et al (2011), Top management has to manage a constant creative conflict between the need to explore new business and markets and the claims of established businesses on existing resources.

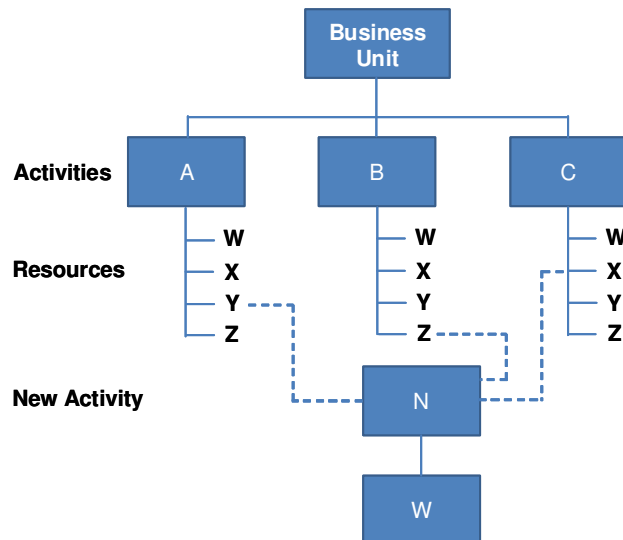


Figure 14: Synergy effects by using existing resources for new entrepreneurial activities (Abell 1993: 124)

Hamel and Prahalad (1994) emphasise the necessity of a permanent regeneration and renewal of an organisation and the opportunities arising from it. Thus, it is said to be important to react to changes in the business environment, even when there is no crisis. Keys to this are the individual actors who can also *think outside the box* (see De Bono 1989, 1995).

⁵⁷ Naveh (2005) describes a dual strategy via an integrated product development process with flexibility in the beginning to foster innovation and workflow activities later to foster efficiency.

3. Intrapreneurship and the global business environment

Thus, it is more about the ability to be able to develop an idea about the future and less about the attempt to predict actual future developments. The sights must be set on possible changes in, for example, the areas of technology, work and life styles and global developments. The central entrepreneurial task is said to be the search for future opportunities to ensure the organisation's sustainability, as well as the development and revolution of markets and industries whilst taking the competition dynamic into consideration.

An organisation must be regarded in terms of its portfolio of products and services as well as its competencies. On this basis, new entrepreneurial opportunities can be uncovered and by developing new core competencies⁵⁸, future growth can be realised by pursuing new business⁵⁹. Top management must see opportunities that other organisations do not see or develop company competencies that other organisations cannot achieve. As well as striving for efficiency in established business (operations management), management must also pursue entrepreneurial opportunities (opportunity management).

This should take place not so much through the acquisition of other companies and elitist intrapreneurship (skunk works) but more through the development of visions of the future, new competencies, and of existing abilities so that the whole organisation can be developed. Individual entrepreneurial activities are said to be no replacement for this. The whole organisation must commit itself to future entrepreneurial opportunities. Entrepreneurial management has to manage the future and in so doing, take account of the potential change in the general business environment, the development of competition and the resulting consumer wishes (Hamel and Prahalad 1994:83-87,125-138,158-161). New entrepreneurial opportunities can be identified, for example, taking account of existing and potential customers and their needs (see figure 15).

⁵⁸ For core competencies see Hamel and Prahalad (1994:223-233). Subsequently, core competencies are the company competencies that are decisive for long-term competitiveness. They fulfil three conditions: a contribution to the fundamental customer benefit, a definition of a significant competitive advantage, usefulness for new products and services.

⁵⁹ Hamel and Prahalad (1994:245) name five tasks for competence management: identification of existing core competencies, drawing up of an agenda for new core competencies, development of core competencies, use of core competencies, protection and defence from management in core competencies.

3. Intrapreneurship and the global business environment

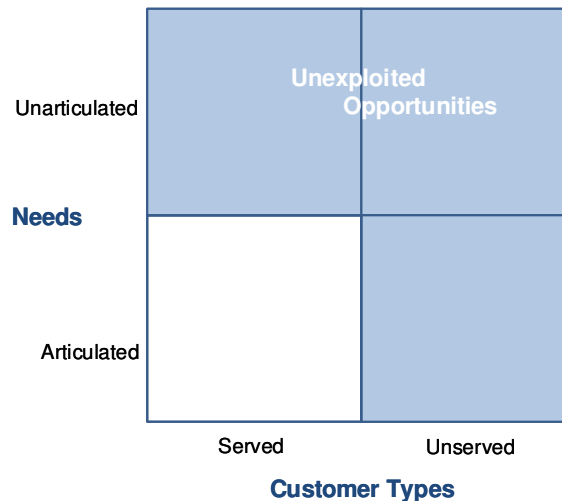


Figure 15: Search for new opportunities with existing and new customers as per Hamel and Prahalad (1994:112)

Hamel and Prahalad set their sights not directly on opportunities for products and services, but rather take into account the arena for opportunities defined by core competencies. The bundle of abilities and technology of an organisation determine the core competencies which, in turn, enable the pursuit of different market and product opportunities⁶⁰. New core competencies would then be realised through acquired learning and less through innovation surges. Since core competencies form the basis for different products and services, their development cannot be left to individual business units, but must be controlled by central management. Also, the necessary resources for developing new core competencies cannot usually be provided by individual business units.

The concept of core competencies is seen by Hamel and Prahalad as complementary to a strict alignment of the organisation with strategic business units, which in turn, are focussed on end products⁶¹. Thus, entrepreneurial activities for safeguarding the future both at a higher level and outside of spheres addressed to-date, can be identified and implemented.

⁶⁰ Hamel and Prahalad (1994:222) describe the core competencies as roots of competitiveness and the products and services as the fruits.

⁶¹ Hamel and Prahalad (1994:258,259) name eight steps for the development of this perspective: implementation of a process to identify core competencies; involvement of strategic business units when establishing the new core competencies to be developed for the future; definition of priorities when developing new business; establishment of persons to be responsible for core competencies; establishment of an allocation mechanism for critical resources; benchmarking of activities for development of core competencies with competitors; regular monitoring of core competencies; development of a group of agents for core competencies in the organisation.

3. Intrapreneurship and the global business environment

They describe an agenda for developing competencies in the form of a matrix that distinguishes between existing and future core competencies and between existing and future markets. Successful entrepreneurial activities can be based on existing core competencies and aimed at existing and new markets. New core competencies can also be developed and existing core competencies can be used for new entrepreneurial opportunities. New core competencies can help to improve competitiveness in existing markets (see figure 16).

Four central entrepreneurial questions can be formulated for the competence development agenda:

- (1) Which entrepreneurial opportunities in existing markets can be pursued by using existing core competencies?
- (2) Which new core competencies must be developed to be successful in existing markets in the future as well?
- (3) Which new markets can be developed by using existing core competencies?
- (4) Which new core competencies must be developed to enable the conquest of new, highly attractive markets?

Core Competence		New	<u>Premier plus 10</u> What new core competencies will be needed to build to protect and extend our franchise in current markets?	<u>Mega-opportunities</u> What new core competencies would we need to build to participate in the most exciting markets of the future?
		Existing	<u>Fill in the blanks</u> What is the opportunity to improve our position in existing markets by better leveraging our existing core competencies?	<u>White spaces</u> What new products or services could we create by creatively redeploying or recombining our current core competencies?
			Existing	New
			Market	

Figure 16: Entrepreneurial opportunities on the basis of existing and new core competencies according to Hamel and Prahalad (1994:250)

3. Intrapreneurship and the global business environment

According to Hamel (2006, 2008), an organisation's ability to adapt must be achieved by management innovation, i.e. by new management methods for the organisation and leadership of companies. The company must be capable of spontaneous renewal in the future and of motivating their employees to perform at a high level. Existing methods would suppress imagination and innovation and thus reduce the flexibility of organisations necessary for the future. Alongside operational efficiency, companies must also achieve a high level of strategic adaptability to changes in the business environment. Hamel (2008) requires the whole organisation to be innovative⁶². Individual innovation projects or innovation units cannot replace the entrepreneurial orientation of the whole company. Operational innovation would change work processes in terms of value-added, while management innovations can improve management processes (Hamel 2006).

Hamel (2008) defines nine central fields of management innovation:

- Change of structures and roles in an organisation,
- Establishment and programming of objectives,
- Motivation of the actors,
- Coordination and regulation of activities,
- Development and tutelage of talent,
- Collection and application of knowledge,
- Accumulation and allocation of resources,
- Development and maintenance of relationships,
- Settlement and fulfilment of stakeholder claims.

Improvements in management⁶³ (see Birkinshaw 2010) could significantly improve the competitive position of an organisation and secure pioneering gains. Management organisation can produce advantages that are difficult to replicate and take over top place in the hierarchy of the innovation pyramid ahead of strategic innovation, product or service innovation and operational innovation (see figure 17).

⁶² According to Mulej and Potocan (2007), business success depends strongly on innovation.

⁶³ Hamel (2008:38-52) describes some groundbreaking innovations in management from company practice: bringing some discipline to chaotic processes for scientific discoveries, development of investment planning techniques, systematic brand management, involvement of employees in the search for quality and efficiency, development of virtual companies, development of a product innovation system that is difficult to copy. Buckley (2011) describes the evolution of the global factory as a strategic response to a changing external global business environment.

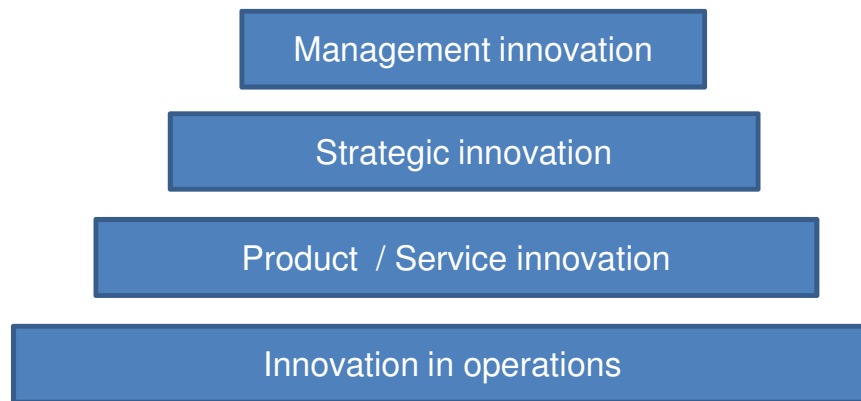


Figure 17: Hierachy of innovation as per Hamel (2008:53)

Hamel (2008) defines an innovation agenda with three tasks:

- (1) Acceleration of strategic renewal,
- (2) Involvement of all employees in everyday innovation and
- (3) Creation of a work environment in which all employees can give of their best.

Entrepreneurial organisations adapt the business models to perceived changes in the business environment. They develop new business models to achieve continuing change as far as is possible. They must develop new strategic options on a continuing basis and ensure the timely internal distribution of resources. Companies should thus create an innovation system that spans the whole enterprise and gives employees the opportunity of creative activity. Creativity is said to be not only the domain of research and development departments and business venture units. An important prerequisite for innovation is the surrender of old mental models and the creation of time for reflection, learning and experimentation.

Diversity and selection are said to be the recipe for success when adapting to changes that are difficult to predict in the business environment. Thus, organisational requirements should also be created for random discoveries and interactions between employees. In evaluating existing beliefs, it can be helpful to reveal the political incentives. Thereby, one can question whose interests any particular idea serves so that the decision process can be depoliticised. According to Hamel, management systems should be shaped in such a way that all employees are able to and want to bring (creative) contributions to success, use their own initiatives and be prepared to perform.

Common objectives, norms and values set the framework for individual entrepreneurial action and individual interests of employees are taken into account. In addition to this, strategic information and context knowledge has also to be communicated to employees in order to achieve a strong bond with the company. Management should be accountable to the employees. Employees must have the right to have different opinions. Operative decisions should happen decentrally, as far as possible, and entrepreneurial activities should be supported by the whole workforce.

Such a management system can significantly improve the organisation's adaptability provided that employees are prepared willingly to accept change and have a motivating mission. The shaping of the future is steered by a collective thinking process which highlights management innovation that, in turn, enables a competitive advantage in the future. Within an organisation, individual contributions should be put together such that the whole brings more than the individual parts can achieve. The basis for a development like this is individual creativity, initiative and dedication of individual actors, who must, at the same time, be rewarded for this.

3.1.2.3 Management concepts and orientation for corporate management

Lumpkin and Dess (1996:135-172) define entrepreneurial orientation of a business as a five-dimensional construction:

- (1) *Autonomy* of operational units in the generation of ideas and implementation of entrepreneurial opportunities;
- (2) *Innovation* in the areas of product, market and technology;
- (3) *Readiness to take risks* in the determination of resources for the realisation of entrepreneurial opportunities;
- (4) *Proactivity* through anticipation of future market developments and identification of new opportunities;
- (5) *Aggressive orientation towards competition* to gain entry into markets or to improve market positions.

3. Intrapreneurship and the global business environment

The orientation of a business in these five dimensions determines how new or existing markets with new or existing products (or services) are developed. As stated by Lumpkin and Dess, entrepreneurial behaviour of an organisation requires a high orientation in all five dimensions. The company must select and shape various degrees of entrepreneurial orientation independently of the characteristics of the external business environment and the organisational context. The development of processes, practices and decision-making to enable entry into markets can be defined as a fundamental entrepreneurial task. With this, Lumpkin and Dess also emphasise the connection between entrepreneurial activities and strategic management. The business environment, the company strategy and organisational architecture influence how entrepreneurial orientation should be shaped in order to achieve the best possible company performance (see figure 18).

Entrepreneurial orientation is thus considered to be in harmony with traditional microeconomics, explicitly on the level of the organisation and thus the entrepreneurial behaviour of the organisation is examined as a whole and related to company performance. Thus, entrepreneurial organisations with an organic (decentralised, informal) structure (in place of a mechanistic structure with strong centralisation and formalisation) have a higher performance in dynamic environments. This is particularly illustrated by the fact that an organic structure promotes innovation and autonomy (Burns and Stalker 2001). An entrepreneurial orientation can then be seen as a source of competitive advantages and strategic renewal.

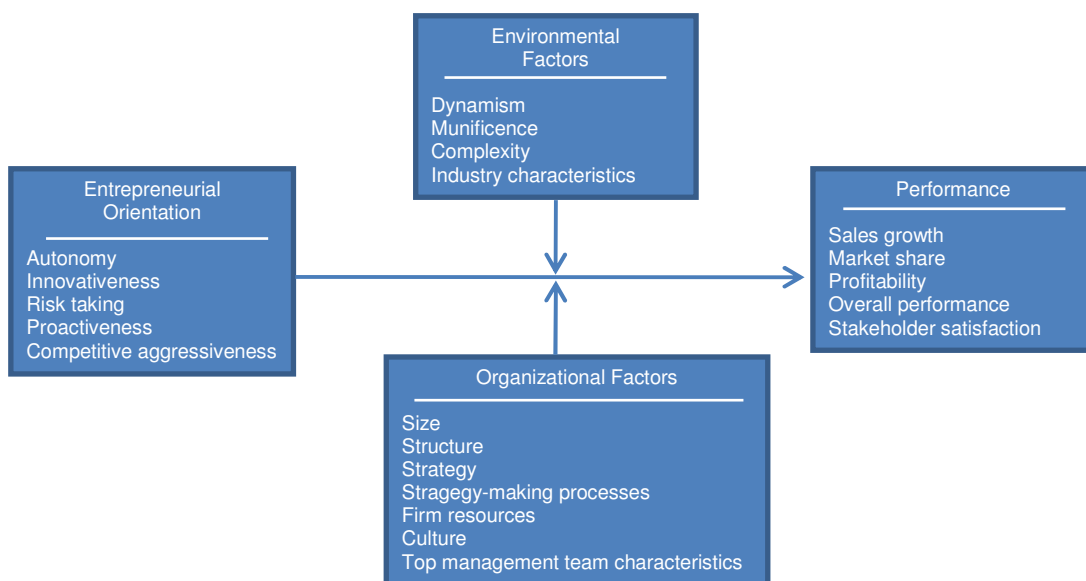


Figure 18: Entrepreneurial orientation according to Lumpkin and Dess (1996:152)

3. Intrapreneurship and the global business environment

Oden (1997:8-10) asserts that the fundamental role of intrapreneurship is the development of new products. Intrapreneurship can then only be successful if there is an appropriate company culture. He puts the shaping of the internal business environment at the forefront. As well as an aggressive strategy and an entrepreneurial culture, the developments of optimisation and innovation processes are central to the achievement of the global competitiveness required. In realising entrepreneurial product innovation processes, he distinguishes three fundamental phases: concept development (with brainstorming and concept evaluation), technical development (with the draft design, the setting up and testing of prototypes, as well as the final design and pilot production) and the launching onto the market of the new product. Through this process, ideas that can be marketed can be specified and transferred into a business plan. This is then implemented by an entrepreneurial team working together with the functional unit of the organisation. Because the required entrepreneurial culture often does not exist, entrepreneurs would have to overcome certain obstacles.

Oden also provides guidelines for dealing with external and internal partners. He says it is important, for example, to take a first small step successfully and to get customers and suppliers involved at an early stage. Also, it is necessary to enter into coalitions that support entrepreneurial activities such as projects for product, market or process development; supporters must be found within the organisation. In order to build up credibility, intrapreneurs preferably have to establish performance criteria in a low key way and make sure they succeed in meeting them.

In putting together entrepreneurial teams, complementary abilities and entrepreneurial competencies have to be taken into account. Oden divides the entrepreneurial team into a core team and a virtual team with alternating members from across the organisation. He emphasises the necessity of network structures in place of a rigid hierarchy for the achievement of better results. Entrepreneurial organisations must learn continuously if they are to be able to react to changing framework conditions. Adaptable entrepreneurial activities have to analyse themselves and the business environment continuously and learn about and apply systems thinking.

3. Intrapreneurship and the global business environment

To achieve an entrepreneurial culture, all managers have to display a long-term orientation in their thinking and action and all employees, at all levels of the organisation, have to develop new ideas. The entrepreneurial organisation must develop a strong customer focus, constantly improve performance quality and also have flexible and adaptable structures. Organisational learning must accompany change and decisions must be taken at the point where the necessary information is available. The development of the internal culture follows the same path as strategy development, which in turn is determined by adapting to the external business environment.

According to Weick and Sutcliffe (2007) how one deals with risks and crises is classed as an important field of action. They say that it is important to understand the dynamic and uncertain business environment and to react consistently even to weak signals. The objective must be to create a robust organisation. They emphasise the necessity to continuously learn from success and failure and define five success principles for attaining attentiveness at all levels of the organisation:

- (1) Failures are documented and interpreted as indicators that something can be learned and that something within the company system has to be changed. Small failures can be indications of larger problems.
- (2) Organisations must get as comprehensive a picture as possible of themselves and their business environment and continuously update it, even when this is complex, unstable, barely predictable and difficult to interpret.
- (3) There must be continuous adjustments in how operational activities are carried out in order to prevent an accumulation of mistakes.
- (4) Entrepreneurial activities must achieve a stable state even in difficult situations or crisis situations.
- (5) Decisions must be delegated to employees who have the most knowledge about the task in question.

According to Morris and Kuratko (2002:3-17), an entrepreneurial organisation uses the company resources adeptly for entrepreneurial projects in global markets. Entrepreneurial management wear two hats here: they are visionary change agents and at the same time, effective managers.

3. Intrapreneurship and the global business environment

They make mistakes and learn from them for future success. Entrepreneurial organisations can thus have various characteristics in terms of entrepreneurial orientation. Morris et al (2008) present a model (see figure 19) for the transformation of organisations without entrepreneurial orientation into organisations with a strong entrepreneurial alignment. This model has three components. Firstly, they define the basic elements for entrepreneurial thinking and action in established organisations (Morris et al 2008:1-133)⁶⁴. To become an entrepreneurial organisation, the four key elements of strategy, structure, culture and human resources must be developed (Morris et al 2008:137-273)⁶⁵. The third component of the model is concerned with the restrictive and beneficial elements required for the attainment of a sustainable entrepreneurial organisation (Morris et al 2008:277-421).

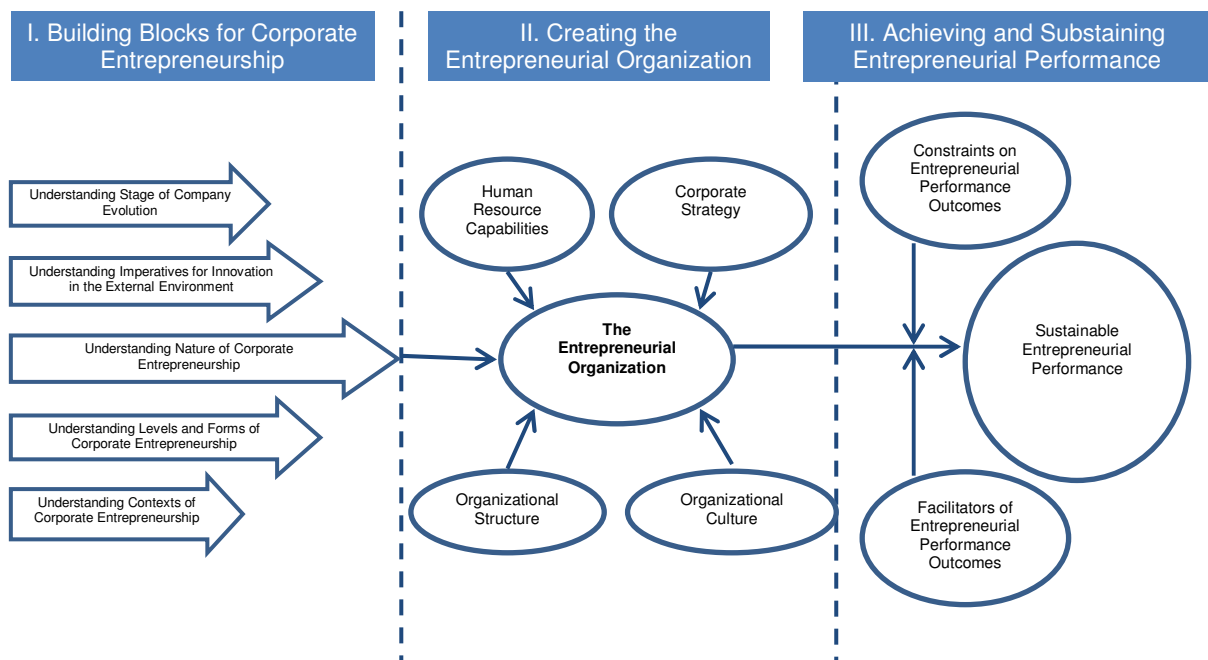


Figure 19: Intrapreneurship model according to Morris et al (2008:21)

The management orientated theoretical concepts of intrapreneurship at the level of the organisation have further basic implications for the role of intrapreneurship (e.g. systematic analyses of the business environment, entrepreneurial activities in new and existing markets / new and existing products, renewal of organisation and shaping of organisational architecture and synergies). In chapter 3.1.3, the focus is more at the level of the individual actors and the interaction inside the organisation.

⁶⁴ Here, the five fundamental building blocks for corporate entrepreneurship are described in detail.

⁶⁵ These elements are examined in more detail in chapter 4.3.

3.1.3 Management-oriented approaches at the micro level⁶⁶

The following chapter describes findings from management research concerning implementation of intrapreneurship in the fields of structure and culture (see sections 3.1.3.1 and 3.1.3.2), top management and strategic leadership (see section 3.1.3.3), collective and individual action (see section 3.1.3.4).

3.1.3.1 Concepts on entrepreneurial structure and internal division of labour

Peters and Waterman (1982:200-234)⁶⁷ emphasise the prominent role of innovation for an entrepreneurial organisation. Their recipe for success is to be big, but at the same time to act like a small unit. The spirit of enterprise must be able to have an impact in autonomous and decentralised units. Champions of innovation must be given support and must in turn, be the drivers of the most important projects and developments. This project structure with its innovation champions, which is often initially applied in secrecy, is said to be far superior to formal product planning. Accordingly, entrepreneurial organisations must tolerate these creative fanatics. New things would not only be thought about but would be put into operation. Peters and Waterman (1982:208) define three necessary roles of a system of championing. In addition to the innovation champion (product champion), there must also be a sponsor (executive champion) and a guardian (godfather).

According to Peters and Waterman (1982:209) for sustainable innovation success, it is necessary to initiate a large number of entrepreneurial projects since a very many of the activities would have no success. Successful companies, therefore, have to be organised in such a way that as many champions as possible can be present and take action. Whether intrapreneurship is pursued in formal or informal structures is not the decisive factor, as long as the structures are clear.

⁶⁶ see table 1

⁶⁷ Some of the thoughts formulated there are also contained in Pinchot (1988) - *Heroic Intrapreneurs* - and Collins (2008) - *first who then what*. For a critique on Peters and Waterman's research methods see Aupperle et al (1986). They state, that the strong culture's role in business performance indicated by Peters and Waterman should be analyzed more methodically and empirically driven and that the strategies, structures and resources could also have a critical role to performance (see chapter 4.3 and the proposed holistic shaping of the four organisational levers). Hitt and Ireland (1987) make reference to the relevance of the industry and competitive environment.

3. Intrapreneurship and the global business environment

However, such an intrapreneurship system fundamentally exhibits a more informal culture. Communication has a high value and there is a higher fault tolerance. The informal communication system serves at the same time as a control system and enables a transfer of technology across all departments. The reward system must be arranged in such a way that the innovation champion and the whole team are rewarded for success. Successful heroes should be celebrated and success stories promulgated in the long term so that a culture of entrepreneurialism can be nurtured.

Kanter (1983) postulates that individual employees are the most important lever for new ideas, creative activities and the implementation of opportunities. She examines how employees fashion new products, new markets, new technological processes or working practices for the overall good of the organisation and for themselves. Small and large changes can contribute to an organisation being able to adapt successfully to changing framework conditions. Thus, Kanter requires that all employees at all levels of the organisation should be involved in the creation and implementation of ideas. She states that entrepreneurial thinking and action should already be anchored as an aspect of the national culture. At the level of the business, new ideas, processes, products or services can be promoted by the way that problems are solved and by an appropriate organisation structure and culture. In new sectors, intrapreneurs would develop new products and services and use technological developments for product improvements. In established sectors, innovations for increases in efficiency and cost reductions would be at the forefront.

Changes in the business environment would require a high level of innovation in the organisation and employees with an entrepreneurial orientation. Thereby, more and more unfamiliar paths must be followed in making adaptations. A holistic approach in dealing with entrepreneurial activities which stretch staff to the limits of their competencies and resources is the key to creating more innovation. At the same time, the information flow in the company beyond divisional boundaries by the development of cooperative structures and cultures takes on an important role. Individual actors are often the starting point for entrepreneurial activities, but implementation has to be taken care of by a team.

3. Intrapreneurship and the global business environment

Kanter (1989) demands the application of entrepreneurial principles in established companies as well as the need to strive for continuous improvements, cooperation and teamwork in relation to existing business. Mature companies would require a revitalisation if they are to be able to react with increased innovation to the dynamic change in the business environment. How this revitalisation would in fact happen for an organisation must depend on the history of the company, the current situation and the specific business environment. With such a revitalisation, the human capital of the workforce would be developed and a greater involvement in entrepreneurial decisions would be realised. At the same time, dreams and discipline have to be balanced out. New opportunities have to be pursued with limited resources and a strong international orientation⁶⁸.

Companies have to appear in many games across the whole world against national and international competitors. In addition, excellent individual battlers and organised, high performance teams must take responsibility together and deal with constant change in the internal and external business environment. In particular, entrepreneurial actors have to develop a close relationship with customers and employees. Less bureaucracy and a more entrepreneurial orientation of employees and the organisation are necessary. Kanter (1989) also formulates a number of fields of conflict at the management level. Thus, there must be strategic and future-oriented thinking at the same time as current tasks are completed.

Entrepreneurial thinking and action must take risks, but may not endanger existing business. Creativity and innovation should lead in new directions without abandoning their own trails. Decentralisation should delegate responsibility to small, autonomous units without neglecting the efficiency drive when combining resources through centralisation⁶⁹. New technologies and globalisation make new entrepreneurial opportunities possible and these must be actively sought out. In a complex world with more competition, more entrepreneurial opportunities must be realised. Thereby, resource efficiency with an entrepreneurial orientation must be combined in order to be able to use new opportunities with fewer resources.

⁶⁸ Kanter describes this entrepreneurial competition as *global corporate olympics*.

⁶⁹ The necessity of dual orientation of an entrepreneurial organisation is described in more detail in chapter 4.3.1.1.

3. Intrapreneurship and the global business environment

Kanter (1989) names several components of a success strategy for global entrepreneurial competition. Firstly, synergies between the various divisions and businesses must be pursued within the organisation so that the whole is worth more than the sum of its parts. A second important component is the development of close alliances and partnerships with other organisations. New entrepreneurial opportunities must be developed continuously as a third component in current or new business areas. Overall, bureaucratic management must be replaced by stronger people-orientated entrepreneurial management which focuses on efficiency as well as creativity and innovation. Entrepreneurial managers must operate successfully, even without formal authority and also be capable of achieving results. They must be proficient in competition and cooperation, maintain personal standards, and be able to drive through processes that are strong, flexible and multi-faceted and which, at the same time, transcend divisions.

Kanter (1997) emphasises that all managers who have current tasks to fulfil must, at the same time, devise future developments in their role as agents of change⁷⁰. With continuous improvement and innovation, change can be shaped proactively before external threats enforce changes. The organisation must be structured such that a change-friendly culture ensues and continuous change is perceived by the actors in a business as being natural. To be successful in a period of change, as many employees as possible have to be involved in creation of ideas, innovation, in learning and working together. The research and development department in an organisation has to pursue new ideas and a culture of innovation must promote entrepreneurial experiments. In this way, employees can act as idea scouts and seek out ideas for entrepreneurial opportunities inside and outside the business. Ideas can also be identified within the framework of customer and supplier relationships. Entrepreneurial organisations must combine decentralised creation of ideas with centralised and formal processes for rapid implementation of ideas. Thereby, centralised, bureaucratic structures are increasingly replaced by networks, alliances and partnerships.

⁷⁰ According to Kanter (1997:252-269), entrepreneurial organisations in the future have to attain global competitiveness, even if they only wish to serve local markets. Companies in foreign markets should use entrepreneurial actors who commit themselves also for the development of local entrepreneurial activities in the long-term and thus use the local environment as partners.

However, abrupt changes within the organisation should be avoided if the required basis for the development of new business is to be achieved. As a first step, information about markets and customers must be collected and their wishes for the future anticipated. Then, existing resources and competencies have to be analysed and, on the basis of this, new paths pursued using a large number of entrepreneurial experiments⁷¹.

Block (1987) states that all employees should increasingly take on entrepreneurial responsibility. This is in the interests of the organisation and of the employees themselves. He puts forward a way in which all employees can replace bureaucracy with entrepreneurial orientation. The key, he says, is the development of a culture in which employees can take on responsibility for themselves and at the same time for the organisation. Every individual employee is then a source of improvement and of cultural change, and thus of the creation of an organisation, business unit or a task in accordance with his own beliefs. Important in this process is to obtain the agreement of other employees and managers in order to secure their support for their activities⁷².

In established companies, entrepreneurial orientation must be re-awakened and anchored in the company's culture. This in itself is a fundamental entrepreneurial activity. By making his own personal choice of activities, every individual employee can then decide how to adapt to his own individual business environment, even though this is restricted by the effective norms and values of the organisation. Basically, this means there is a choice between a bureaucratic and an entrepreneurial path. The way of carrying out the task then shows how the individual employee would like to shape the whole organisation. By choosing his way, each employee has an influence on the shaping and entrepreneurial orientation of his organisation. Block (1987) also asserts that following periods with a lot of entrepreneurial activity and high levels of change, there should be a (short) period of stabilisation.

⁷¹ Kanter (1997:99-107) defines three phases of innovation: project definition, forming and implementation of coalitions.

⁷² Block (1987:1-6,99-195) calls this dialogue *positive political skills at work*.

3. Intrapreneurship and the global business environment

The choice of an entrepreneurial or bureaucratic orientation involves four elements which together would make up an activities flow diagram (see figure 20):

- Element 1 defines the fundamental agreement between the individual actor and the organisation;
- Element 2 defines how each actor pursues his own gain;
- Element 3 defines the efforts of individual actors to gain support for their activities;
- Element 4 defines the level of autonomy of individual actors.

In order to achieve an entrepreneurial approach, the bureaucratic cycle must be broken. Entrepreneurial employees work at all levels of the organisation in a self organised fashion and with an awareness of responsibility, as well as with a level of motivation that they would have if they were working for their own organisation. Success would be defined by the contribution to the whole organisation and to the benefit accruing to customers. Reward for employees is in terms of meaningful tasks and opportunities to learn and be creative. Monetary incentives are important but only of secondary relevance. Entrepreneurial employees can act authentically and in harmony with their own values and support the general use of information within the organisation. Autonomy in the fulfillment of tasks creates space and serves as a role model for other employees or other business units.

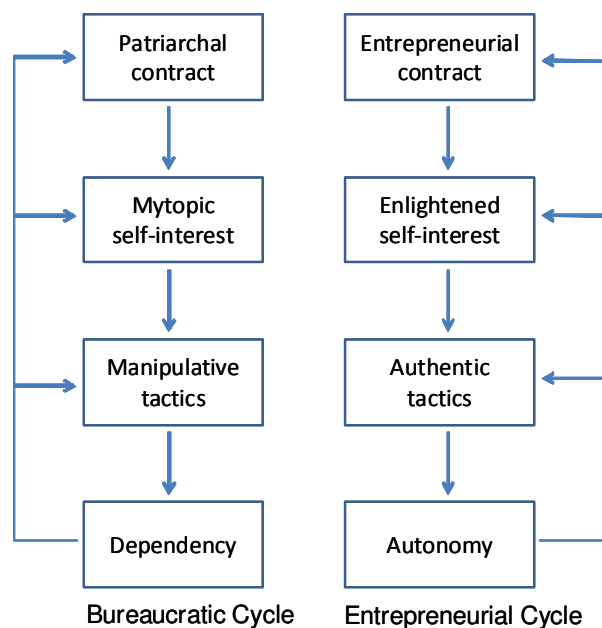


Figure 20: Block's activity flow diagram defining bureaucratic versus entrepreneurial basic orientation of employees (Block 1987:20)

3. Intrapreneurship and the global business environment

As well as the personal orientation of the employees, each element of the entrepreneurial sphere requires the entrepreneurial structures, processes and policies set up by management. An important entrepreneurial management task is thus their own empowerment for an entrepreneurial orientation and the shaping of an organisation which enables employees to tread the same entrepreneurial path.

This would be how employees would take on responsibility for their own activities and for the success of their own business unit or of their own project. Thus, an entrepreneurial organisation achieves passion, energy, enthusiasm and motivation in the fulfilment of tasks and in adapting to unforeseeable events and situations. Aided by learning opportunities and a real contribution to performance and by a combining of the interests of the employee with the interest of the organisation, the employees would avow themselves to the company objectives and act in harmony with the entire organisation.

According to Pinchot (1988), intrapreneuring means the creation of a revolutionary system for the acceleration of innovation within large companies by using individual entrepreneurial talents. Intrapreneurs take on responsibility for the practical implementation of basic innovations within an organisation, realise worthwhile ideas and thus close the innovation gap (see figure 21).

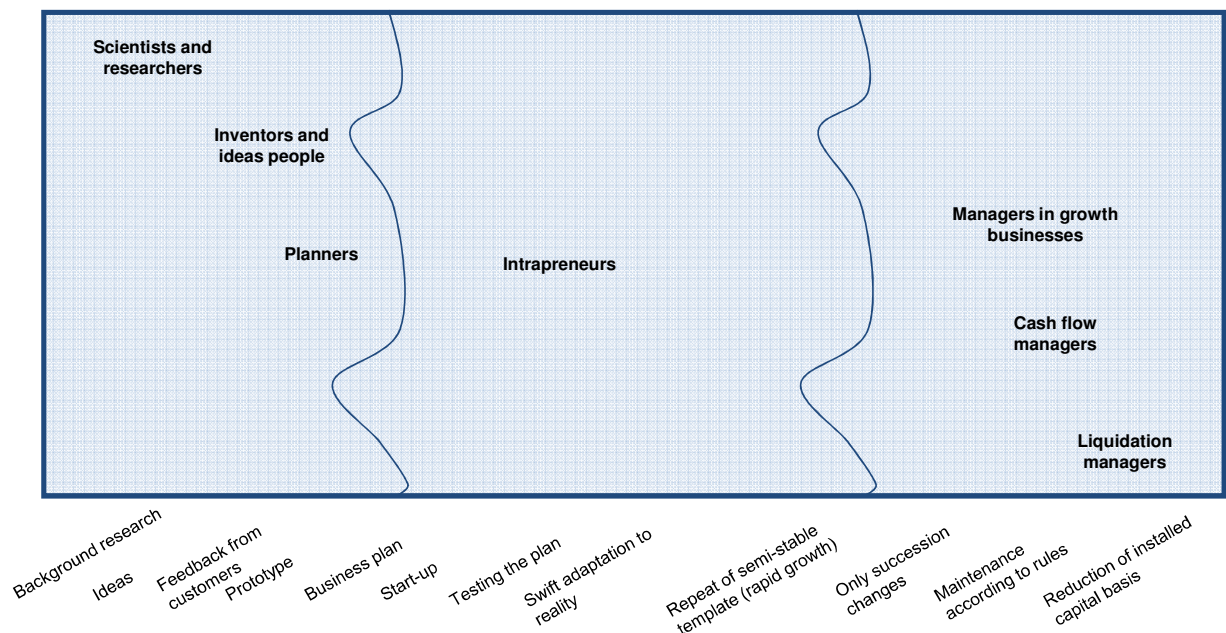


Figure 21: Pinchot's intrapreneurs close the innovation gap (Pinchot 1988:58)

3. Intrapreneurship and the global business environment

These innovations secure the viability of the organisation in an ever-changing business environment. In this way, intrapreneurs bypass the formal systems. They build underground teams and networks. They manage to allocate working time to work on tasks they have set themselves. There are clear boundaries from the rest of the company.

Intrapreneurs integrate technicians and marketing specialists for the development of new products, services, or processes. They realise profits and growth. Pinchot's individualistic approach sees the intrapreneur as being very close to the classical entrepreneur, who due to the advantages of a large-scale organisation prefers to pursue his entrepreneurial leanings within the existing organisation.

The possibility of using production plants, supplier networks, technology, personnel resources and marketing of existing business more than compensates, from the point of view of intrapreneurs, for perceived obstacles often found in bureaucratic systems. Companies can retain entrepreneurial talent by way of intrapreneuring in the organisation. According to Pinchot, entrepreneurial actors are often seen by other employees as money-hungry, empire builders. In reality, however, most of them would only satisfy their own needs. For Pinchot, the needs of intrapreneurs are that the search for innovation is possible, there is (tolerated) authority for action, there is material reward and that successes enable the build up of internal capital for future plans.

Intrapreneuring is said to be the method that brings the spirit of enterprise into large enterprises. This is said to be necessary to combine the benefits of economies of scale with the flexibility of entrepreneurial units, since many tasks are too complex for small companies⁷³. In this way, the large enterprise can also act as an integrated force in a system encompassing the whole company⁷⁴.

⁷³ For a critique of this type of intrapreneurship (big idea) see inter alia Kuhn (2000:34-37).

⁷⁴ According to Pinchot (1988), these can be realised for example by cooperative procurement systems, joint ventures, R&D partnerships, issue of licences, marketing collaborations or outsourcing (see also Baumol 2002b).

3. Intrapreneurship and the global business environment

Entrepreneurial passion of intrapreneurs cannot be replaced by planned innovation processes⁷⁵. Intrapreneurs must have strong conceptual ability and combine them with entrepreneurial action, keeping in mind a permanently changing world. They must know the specific peculiarities of the business sectors and relevant markets, possess management qualities, demonstrate the ability to make quick decisions in unsure circumstances and be able to act independently. Pinchot concludes that companies remain competitive as a result and frustrated intrapreneurs are not driven into self-employment.

According to Pinchot, individual employees become intrapreneurs when circumstances are such that it is an act of volition. Intrapreneurs can come from all functions if the will to create something new is strong enough. Internal attitudes towards intrapreneuring are a function of individual experience and one's life situation. The individual employee asks himself whether he would like to develop the competencies required for intrapreneuring. If the intrapreneur finds himself in unknown territory, he has to be guided by his imagination and ability to judge. Pinchot formulates 10 commandments for successful intrapreneuring (see figure 22).

Intrapreneur's 10 commandments
1. Come to work each day willing to be fired.
2. Elude any orders aimed at stopping your dream.
3. Do any job needed to make your project work, regardless of your job description.
4. Find people to help you.
5. Follow your intuition about people you choose and work only with the best.
6. Work underground as long as you can, publicity triggers corporate immune mechanism.
7. Never bet on a race unless you are running in it.
8. Remember it is easier to ask for forgiveness than to ask for permission.
9. Be true to your goals, but realistic about the ways to achieve them.
10. Honor your sponsors.

Figure 22: Intrapreneur's 10 commandments as per Pinchot (1988:43)

⁷⁵ Collins (2008), who formulated *first who, then what* as the basis for the implementation of entrepreneurial activities, also sees great relevance of personal implementation competencies for successful companies.

3.1.3.2 Concepts on entrepreneurial process, culture and structural leadership

According to Block and MacMillan (1995:3-12,20-32), if organisations in global competition are to survive, they must continuously generate new and successful entrepreneurial activities within the existing organisation. In order to achieve this, organisations cannot simply copy proven recipes but must tread an individual path in order to develop the organisation culture for their long-term effectiveness. As well as a vision that is adequately communicated and a target oriented strategy, Block and MacMillan require the competent management of individual entrepreneurial activities in the spheres of products, markets, technology as well as the entrepreneurial orientation of the whole organisation. Management acquire their entrepreneurial orientation by experience and training and not as biological characteristics. Entrepreneurial management are said to be risk managers but not risk seekers. The entrepreneurial process must be understood as a part of the organisation and attain collective dimensions. The organisation structure has a basic effect on the entrepreneurial orientation of the organisation members. Entrepreneurial opportunities must be pursued with a view to an optimal use of the available resources.

Block and MacMillan (1995:5-12) also define an intrapreneurship process model for the development and realisation of new activities⁷⁶; the model has six systematic steps based on a division of labour. In the first step, a framework for the generation of ideas and a process for the management of entrepreneurial activities is developed. As a second step, entrepreneurial opportunities and the implementation team is identified. Subsequently, in the third step, the planning of entrepreneurial activities is to be concluded and implementation begins. In the implementation stage (fourth step), individual entrepreneurial activities must be monitored and an evaluation takes place which keeps in mind the fundamental entrepreneurial implementation process. In the fifth step, entrepreneurial activity reaches the level of an established business.

⁷⁶ Block and MacMillan (1995:14) define an entrepreneurial activity in opposition to normal activities as new activities that improve the quality, productivity, profit situations or sales. Entrepreneurial activities must be separately organised and pursued by integrated entrepreneurial management from existing businesses.

3. Intrapreneurship and the global business environment

As a sixth step, experiences are evaluated for future entrepreneurial activities and the entire process model, enabling the entrepreneurial organisation to learn from success and failure. All six phases require different competencies to manage the individual entrepreneurial activities from start-up through to established business. Implementation must take place with the respective opportunity and total entrepreneurial organisation in mind. The integration is done by the organisation's management team. The frame of reference⁷⁷ for the management team⁷⁸ of the individual entrepreneurial activity is set using direct entrepreneurial decisions and structural leadership.

In the process, it is said to be important that the entrepreneurial organisation sees the realisation of many entrepreneurial activities as an integral part of the strategy for strengthening long-term viability⁷⁹ and that they promote an entrepreneurial culture. The starting point for entrepreneurial activities should be the present competency base. Evolutionary strategies for the use of existing knowledge for new products and dealing with new markets could be complemented by revolutionary strategies based on the company's own technological developments⁸⁰.

⁷⁷ According to Block and MacMillan (1995:11), included in this are what decisions and what activities in the view of the organisation are desirable and necessary, what structures and processes entrepreneurial activities can promote, how the respective management teams for individual entrepreneurial activities are to be put together, how the organisational connection of the individual entrepreneurial activities should take place, how monitoring and control of the entrepreneurial activities can take place and how information gathering on activities carried out have to be organised to secure organisational learning.

⁷⁸ Block and MacMillan (1995:11) define tasks in the decision phase as the identification, evaluation and description of individual entrepreneurial activities in business plans. In the implementation phase, management and control of individual activities and the learning transfer for future entrepreneurial activities are at the forefront. For the elements of a business plan, see Block and MacMillan (1995:161-193).

⁷⁹ According to Block and MacMillan (1995:72,89,90) entrepreneurial activities together with existing business and external acquisitions determine the basis for growth and innovation. The more turbulent the external business environment is, the more important it is to have continuing entrepreneurial activities to secure viability. It must be established in an entrepreneurial strategy whether only opportunities should be pursued as they arise or whether there should be an active search for new opportunities, how close new business should be to existing business, what portfolio considerations should be considered, how the selection process and implementation should take place in order to achieve a fit between entrepreneurial activities and strategy.

⁸⁰ Block and MacMillan (1995:195-230) distinguish seven basic types of entrepreneurial activities (see chapter 6.4) for achievement of new business: (1) new products for existing markets using existing technology, (2) new products using new technologies for existing markets, (3) use of new technology for existing products in existing markets, (4) conquest of new markets with existing products using existing technologies, (5) conquest of new markets using new technologies with existing products, (6) conquest of new markets with new products using existing technologies, (7) conquest of new markets with new products using new technologies. The less an entrepreneurial organisation wished to accept various practices and rules in comparison with existing business, the more the new business should be like the existing business (see Block and MacMillan 1995:243).

3. Intrapreneurship and the global business environment

According to Block and MacMillan (1995), the internal and external environments are sources for entrepreneurial activities. In particular, changes within the industries and markets dealt with could give indications of future entrepreneurial opportunities.

Wunderer (2006:3-32,49-91,526-543) develops an entrepreneurial management theory with indirect management using business models and direct management by fine-tuning of attitudes. As central starting points of structural management, he names culture, strategy, organisation and qualitative personnel structure. The basic values, behaviour patterns, symbolic action, rituals and layouts of an organisation would also be features of entrepreneurial strategy development, organisation and personnel structure. Wunderer sees a mixture of the internal market and the social network as a configuration for regulation of the future.

Decentralisation, partly autonomous units and a comprehensive market and product orientation promote entrepreneurial thinking and action. Creation and innovation are at the forefront. Personnel selection, development and deployment together with interactive personnel management should mean that as many employees as possible from all levels of the hierarchy and all functions can think and act entrepreneurially as much as possible (see figure 23).

E M P L O Y E E	Influences	What are the goals?			C O - E N T R E P R E N E U R S
	Framework conditions	<p>Company objective : Creating value for viability of the organisation through stakeholder satisfaction</p> <p>Development goal ; Implementing firm strategy through employee's problem -solving , soft skills and action at all levels , in all functions</p> <p>Personalgoals:</p> <p>1. Co -knowing /Co-thinking 3. Co -responsibility 5. Co -developing</p> <p>2. Co -decisions /Co-acting 4. Co -feeling/Co-participation 6. Co -earning /Co-sharing</p>			
	Stakeholder needs	What competencies are necessary ?	What concepts in Leadership and Controlling are efficient ?	What concepts in Human Resources Management are efficient ?	
	Resources	Co-entrepreneurial identification and motivation	Co-entrepreneurial Leadership	Co-entrepreneurial key notes and guiding principles	
	ENVIRONMENT	POTENTIAL	LEADERSHIP AND DEVELOPMENT		



Figure 23: Wunderer's frame of reference for the concept of co-entrepreneurship (Wunderer 2006:21)

3. Intrapreneurship and the global business environment

Wunderer asserts that the advantages of division of labour and collaboration arising from the use of synergies, especially in today's organisation structures, must be linked with internal competition. In terms of implementation, he formulates a co-entrepreneurship development concept which is designed to encourage employees to become entrepreneurs. Entrepreneurial employees create and use knowledge within the framework of their own areas of responsibility and act as entrepreneurs.

As a first element of the development concept, he defines the periphery that determines how far entrepreneurial thinking and action are necessary and possible. The external framework conditions are comprised of the macro context, with its political, economic, enterprise and technical systems, and these, added to the globalisation of markets require a broad based internal entrepreneurship. The shaping of the internal company framework conditions with their cultural, strategic, organisational and qualitative staffing structure factors determines how far co-entrepreneurship can be achieved. The needs of the central relational groups, in particular customers, suppliers, employees, suppliers of capital and the company can be better met with co-entrepreneurship. The deployment of new ideas depends then, to a large extent on the availability of resources.

The second element concerns objectives. The long-term increase in the company's value is defined as the entrepreneurial objective. This can best be achieved by benefits for the central relational groups. In addition, the employees must know, think, decide, act, take responsibility, feel, experience, develop and earn jointly and also be a part of the company. As a consideration for the fulfilment of their tasks in the interests of the organisation, the employees must be given the opportunity of fulfilling work, performance-related remuneration, as well as a share in the company's success. Thus, as many employees as possible should support the company strategy by thinking and acting entrepreneurially (development target). Wunderer defines a long-term, balanced exchange relationship between performance and consideration as a critical success factor⁸¹. The personal requirements for entrepreneurial behaviour are given as the third element.

⁸¹ Wunderer (2006:92-95) examines the limits and potential problems of the transformation of employees into co-entrepreneurs.

3. Intrapreneurship and the global business environment

Key co-entrepreneurial skills for Wunderer are organisational skills, social skills for cooperative and autonomous action as well as, in particular, implementation skills (Wunderer and Bruch 2000) which, together with basic entrepreneurial motivation⁸² determine the entrepreneurial orientation of employees. Thus, Wunderer makes the assumption that personal requirements are distinctly different and distinguishes five employee groups (see also figure 24):

- (1) Co-entrepreneurs as core group of entrepreneurial employees;
- (2) Entrepreneurially motivated employees who do not fully meet the key entrepreneurial qualifications but who support the entrepreneurial activities;
- (3) Entrepreneurially qualified employees who, however, only show a low degree of willingness to support entrepreneurial activities;
- (4) Employees with low entrepreneurial competence (routine employees) who only have a low level of qualification or show low motivation for entrepreneurial behaviour;
- (5) Overstretched and/or demotivated employees who could not or do not want to support entrepreneurial activities.

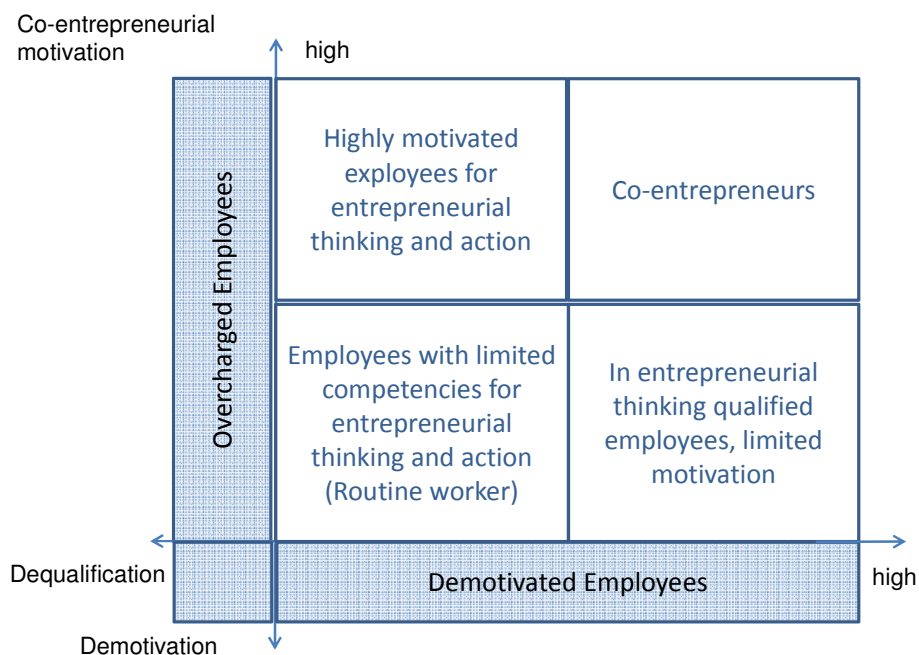


Figure 24: Portfolio approach to co-entrepreneurial competence for employee groups as per Wunderer (2006:63)

⁸² Wunderer (2006:64) describes co-entrepreneurial motivation as a key element of entrepreneurial thinking and action. He defines five motivational factors for this: to use and recognise one's own motivation, commitment to supporting fulfilment of even unpopular tasks, to increase situational motivation, to reduce demotivation via removal of motivational barriers, to promote implementation, for example by personal attribution of success.

3. Intrapreneurship and the global business environment

The fourth element defines the co-entrepreneurial regulation concept. Here, Wunderer sees the regulation of markets in combination with regulation of social networks as having a dominant role. This would then be linked with a decrease of regulation by hierarchies (bureaucracy). The shaping of person-specific and permanent exchange relationships can occur in accordance with the concept of repeated games and thus enable gains in cooperation (Axelrod 1987). Wunderer describes this concept as comprising fair internal competition and entrepreneurial cooperation and also as a social market economy within the organisation.

The individual co-entrepreneurs have to be directed by objectives, performance and revenues (hard factors) as well as values, obligations, feelings and motives (soft factors). As well as a structural dimension (culture, strategy, organisation, personnel structure), entrepreneurial leadership would then have, an interactive dimension (realisation, communication, decision, coordination, motivation, development). Entrepreneurial leadership thus means promoting entrepreneurial behaviour with structural and interactive leadership.

Personnel selection and personnel development to achieve entrepreneurial orientation of employees, groups and organisations are the building blocks of the five elements. Thus, employees have to be selected, deployed and developed in accordance with their entrepreneurial qualification and motivation. In this way, a long-term entrepreneurial culture can ensue and can be considered as the most important lever for intrapreneurship. Intrapreneurship as a long-term investment and strategic core competence opens up, in the medium-term, competitive advantages that are difficult to replicate, as well as development and career potential for staff together with material reward.

Baden-Fuller and Stopford (1994:109-142) see it as a danger that past success leads to organisations not making timely changes in the market. Thus, it is said to be hard for mature companies to react appropriately to risks and even harder to spot opportunities to make sure that crises do not happen. The challenge is to attain a common will for entrepreneurial activities within the organisation. The starting point has to be to develop strategic and organisational innovation that together lead to the organisation taking on entrepreneurial characteristics.

3. Intrapreneurship and the global business environment

Starting with entrepreneurial activities in small teams, the whole organisation must commit itself to entrepreneurial activities and learn from success and failure. The individual actors and teams must follow a holistic orientation and develop cooperation with external network partners outside the company. There has to be an orientation towards future opportunities and adjustments have to be made to changes in the industry; this must be at all levels of the organisation.

Knowledge can be tested and competencies developed using entrepreneurial experiments. By learning in teams, problems can be resolved and opportunities pursued on the authority of individuals. Entrepreneurial teams can be used as an instrument for linking of interests between individual actors and the organisation.

Kuhn (2000) asserts that entrepreneurial success of an organisation is dependent upon entrepreneurial behaviour of people and groups. He supports the thesis that, because of changed entrepreneurial contexts, internal entrepreneurship should be pursued as a collective approach. The more complex and dynamic the business environment is, the more collectively intrapreneurship is to be organised⁸³ (see figure 25).

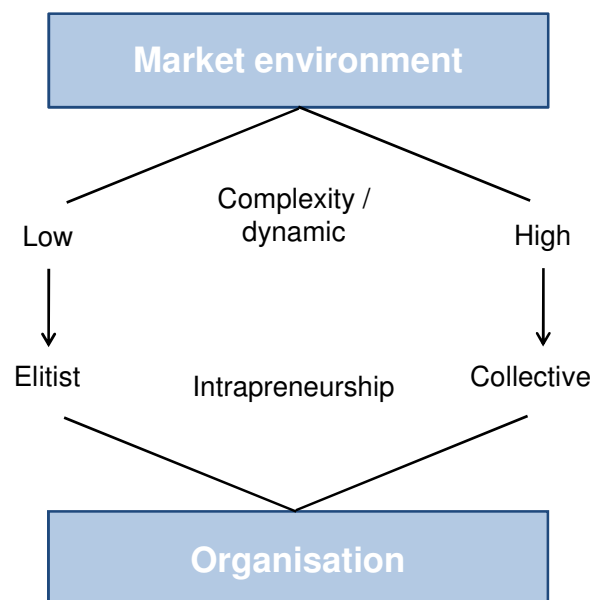


Figure 25: Dependence of development of the internal business environment on the external environment as per Kuhn (2000:68)

⁸³ The position proposed in this thesis is that the more complex and dynamic the business environment is, the stronger the entrepreneurial orientation should be. Thus, the cultural context defines the individualistic versus collectivistic approach to organise holistic intrapreneurship.

3. Intrapreneurship and the global business environment

He defines two basic conditions for the implementation of collective entrepreneurship. Entrepreneurial empowerment by way of entrepreneurial arrangement of work and entrepreneurial training empower the employees to behave in an entrepreneurial way, and entrepreneurial commitment via the development of an entrepreneurial culture and entrepreneurial motivation, commit the employees to behave entrepreneurially (see figure 26).

Kuhn also develops guiding principles for strengthening a decentralised perception of functions and competencies via function and task integration, together with self-regulation and new forms of cooperation and communication. The workplace is said to be the most important place for learning entrepreneurial behaviour. He sees teams working with synergies and using both collective knowledge and collective experience as the ideal of cooperative self-learning. Thus, in principle, all employees can contribute to an increase in entrepreneurial success. If even head-strong employees are to act in the interests of the organisation in situations that cannot be monitored, an appropriate inner obligation to the business and its objectives has to be achieved.

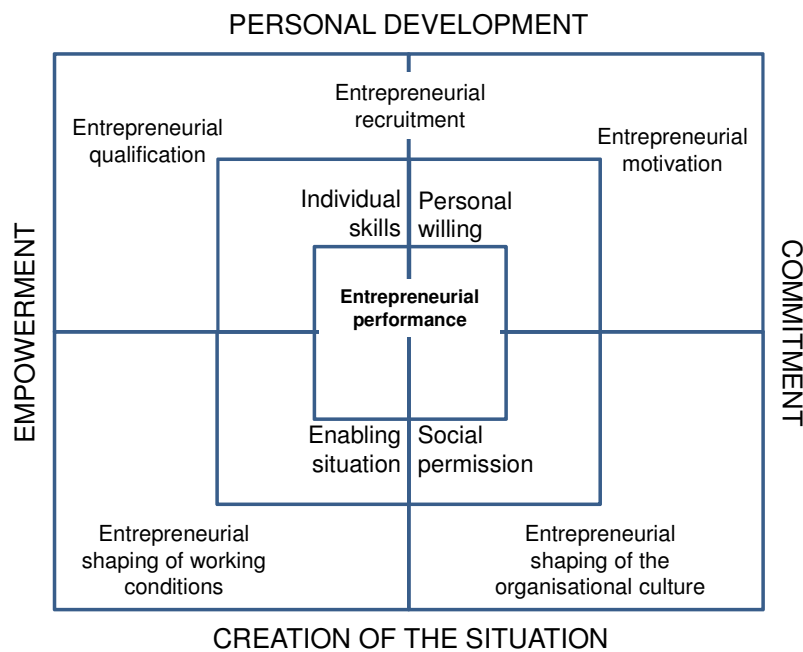


Figure 26: Relational framework for collective entrepreneurship according to Kuhn (2000:88)⁸⁴

⁸⁴ For entrepreneurial work design and entrepreneurial training see Kuhn (2000:90-104), for entrepreneurial culture design and entrepreneurial motivation see Kuhn (2000:117-139).

3. Intrapreneurship and the global business environment

The company culture would be able to influence behaviour in such situations. The use and maintenance of intrinsic motivation is more likely to be successful in achieving entrepreneurial behaviour than the influence of extrinsic motivation via incentive systems. He states that the business must show a commitment in relation to the values and objectives of employees in order to obtain the employees' entrepreneurial commitment to the objectives of the business.

In terms of entrepreneurial performance, the entrepreneurial assurance of success (see figure 27) demands rational development of the internal transformation and value creation process (efficiency directed from within), as well as the systematic monitoring and proactive consideration of changes in the environment of the organisation (effectiveness from outside).

Internal (collective) entrepreneurship would be practically enforced by the momentum of the external environment and can be divided into two central internal groupings. Management (sub-entrepreneurs), with strategic tasks, are thus responsible for long-term effective adjustment to the external environment and the employees (co-entrepreneurs), with operational tasks, provide for continuous innovation and internal company efficiency.

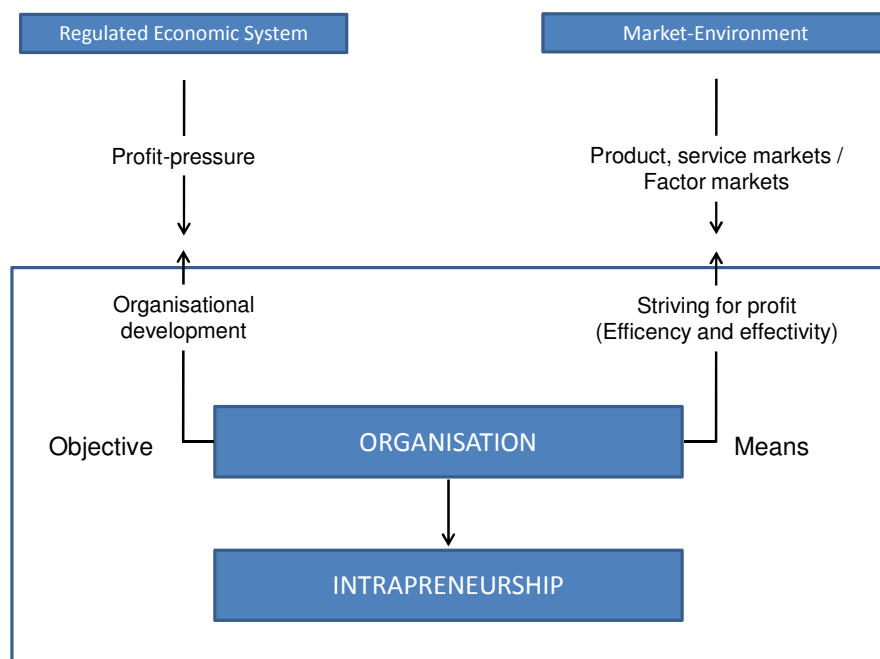


Figure 27: Business, environment and internal entrepreneurship as per to Kuhn (2000:10)

3.1.3.3 Concepts on entrepreneurial top management, strategic leadership and learning

Sathe (2003) states that in global competition, particularly in a time of increasing technological change, the company must develop a stronger entrepreneurial orientation. The starting point here is said to be company strategy. The correct strategy and intrapreneurship would not automatically lead to successful entrepreneurial activities. Top management must also create the right organisational context and take account of the differences between the pursuit of new entrepreneurial opportunities and existing business⁸⁵.

Thus, the regulation of entrepreneurial activities must take into account that pursuing new opportunities involves more and different risks than the pursuit of existing business. The initiation of entrepreneurial activities in existing companies requires different instruments than those in independent company start-ups.

Sathe also defines three entrepreneurial tasks:

- (1) Recognition and definition of entrepreneurial opportunities;
- (2) Motivation and commitment of entrepreneurial actors and provision of the necessary resources for the realisation of opportunities;
- (3) Evaluation and regulation of entrepreneurial activity and the development of new competencies for commercialisation of the activity.

He puts the focus on entrepreneurial activities in particular at the level of individual, decentralised operating units and distinguishes these activities from the pursuit of entrepreneurial activities at the level of the whole organisation⁸⁶. Sathe says that entrepreneurial activities are driven by the business environment⁸⁷, management culture⁸⁸, and the top managers in the business unit⁸⁹ (see figure 28).

⁸⁵ Sathe (2003:123) also speaks here of *good times managers* who pursue new opportunities, and *hard times managers* who attempt to revitalise mature, competitive, declining businesses or those rocked by crisis.

⁸⁶ Sathe (2003:8) calls entrepreneurial activities here mergers and acquisitions, strategic alliances, joint ventures or also central research and development.

⁸⁷ Sathe (2003:20,21,41-59) distinguishes between the external and internal business environment.

⁸⁸ Sathe (2003:21,22,61-79) defines management culture as common beliefs of top managers at the level of the company and the top managers in the business units.

3. Intrapreneurship and the global business environment

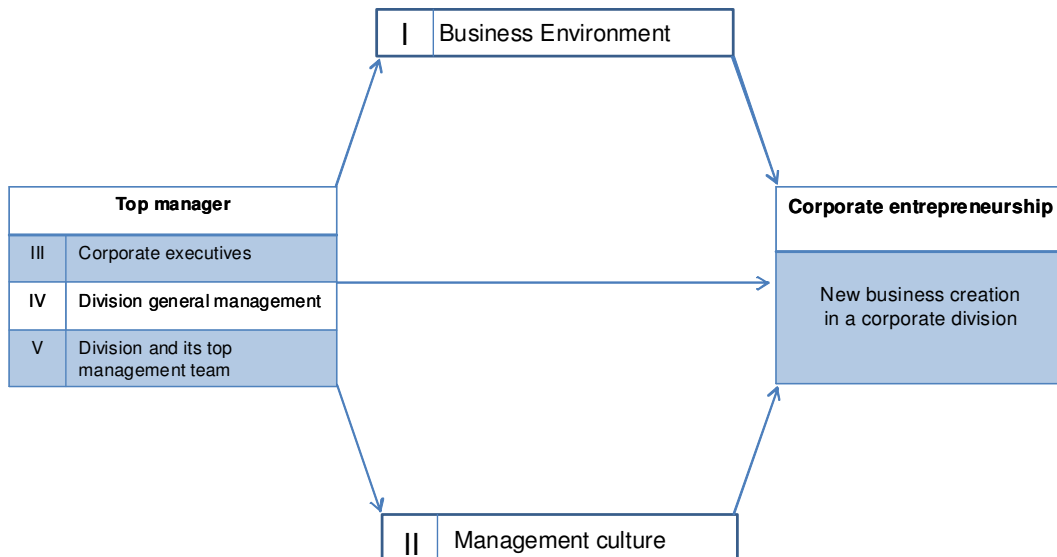


Figure 28: Direct and indirect influence of top managers on entrepreneurial activities according to Sathe (2003:10)

He defines a conceptual framework which names five direct or indirect levers with which entrepreneurial activities can be driven. In turn, these five levers are also cross-linked. As well as the business environment and the management culture being indirect levers for top managers, top managers at the company level, general managers at the level of the business unit and top management teams at the level of the business units are direct levers for the entrepreneurial orientation of a business. In particular, consumer wishes and the pressure of competition are elements from the external environment which call for entrepreneurial activities.

In addition, there are changes in the legal-political framework conditions and technological trends which make new entrepreneurial opportunities possible. The availability of resources, the market situation for existing business and the concern about cannibalisation of existing business by new business are important influences from the internal business environment. Thus, consideration must be given to the future without neglecting the present. If new activities are already being pursued, new opportunities would be more difficult to implement since business that is already growing ties up resources⁹⁰.

⁸⁹ Sathe (2003:9) sees here a direct influence by top management on their activities and behaviour when implementing entrepreneurial opportunities and an indirect influence through the design of interaction with the business environment and through the influence of the management culture.

⁹⁰ Sathe (2003:58) establishes that entrepreneurial activities do not follow resources, but rather that the resources are allocated to attractive entrepreneurial activities.

Sathe (2003) names product and process innovations as internal drivers for new entrepreneurial activities. He asserts that monetary incentives must not be at the forefront when promoting entrepreneurial activities, but rather the development of a supportive entrepreneurial management culture. This would then be a guide for top management. At the same time, a culture has to be developed which is tolerant of entrepreneurial activities failing and which uses the resultant potential for learning. Equally, an incentive scheme that is perceived as unfair could have a negative influence on employee motivation and endanger successful collaboration.

The philosophy of top managers in the company determines whether a few large entrepreneurial opportunities are pursued within the organisation or whether many small entrepreneurial activities at the level of the business unit determine the entrepreneurial orientation. Fundamentally, it should however be possible to pursue both philosophies: Intrapreneurs at the level of the company are then responsible for the large entrepreneurial activities and for maintaining an ongoing strategic dialogue in the place of rigid and fixed strategic planning. Intrapreneurs at the level of the business division⁹¹ would then pursue the smaller opportunities⁹².

The general manager of a business division must convince his staff to adopt the vision and strategy of creating new entrepreneurial opportunities, motivate them and prepare them for the tasks that are needed. Within business divisions that organised as autonomous units, top management teams must seek out the most attractive opportunities and systematically realise them⁹³. Furthermore, there must be cooperation across the board between business divisions in order to develop further the core competencies of the whole organisation and to pursue entrepreneurial opportunities that cannot be realised by individual business divisions.

⁹¹ Sathe (2003:149-165) defines personal requirements of the general manager at the business division level for example as a more outward intuitive orientation directed towards customers and competitors with well-established knowledge of the industry and with good relations with top managers at the level of the company.

⁹² Sathe (2003:172) names here, for example, new products for existing markets, existing and new products for extended markets or also new products for emerging markets.

⁹³ Sathe (2003:226) also describes a phase concept with six steps: business concept, feasibility analysis, business and product development, test production, product standardisation, business operation.

3. Intrapreneurship and the global business environment

According to Hentze et al (2005:501), intrapreneurship can be seen from the point of view of strategic management as complementary to the rational, analytical and methodical approaches of economics. Because of today's necessity for a variety of innovation and change processes within organisations, a greater spirit of enterprise and entrepreneurial action is increasingly required from large and established companies. Intrapreneurship as a leadership concept should lead to an increase in innovation in situations where there is increasing complexity in the business environment; previously this was inhibited by hierarchical structures.

Thus, from the viewpoint of large companies, intrapreneurship can be interpreted as a basic approach for galvanising change in sluggish organisation structures. Within the company, there is a particular focus on creativity and entrepreneurial initiative, willingness to take risks and ability to motivate, together with the experience and intuition of the entrepreneurial actors. A target when fast tracking the implementation of entrepreneurial opportunities could be to combine the innovation potential of large companies with the entrepreneurial competencies of small units.

In addition, to assist restructuring, there must be a dynamic and systems-based approach in which the boundaries created by central management become clear. Entrepreneurial leadership means developing structures and processes in such a way as to make use of self-monitoring potential within the organisation.

According to Thornberry (2006), entrepreneurial managers drive the development of the entrepreneurial organisation by identifying, developing and implementing new external and internal entrepreneurial opportunities. An entrepreneurial orientation and entrepreneurial competencies can be learned. Bureaucratic hurdles can be mastered or avoided so that the organisation and entrepreneurial managers can benefit. Especially in established organisations, the one-sided focus on the optimisation of existing business (doing things the right way) can be supplemented by an additional focus on the generation of new entrepreneurial opportunities (doing the right things).

3. Intrapreneurship and the global business environment

Thornberry (2006) states that, in a turbulent business environment that is difficult to predict, the only starting point for the identification of opportunities and risks can be an analysis of the competition or scenario planning. The continuous search for opportunities that are offered by a dynamic and chaotic business environment is more important than inflexible long-term strategic plans.

Thus, planning processes must definitely be able to respond to unexpected entrepreneurial opportunities. The levers for this are entrepreneurial managers at all levels of the organisation, since entrepreneurial opportunities can emerge everywhere. These managers must view their management and leadership tasks with an entrepreneurial eye at all times.

The development of entrepreneurial opportunities must be understood as a dynamic process, in that learning through environmental conditions and in particular, through potential customers, new technologies and market developments lead to a necessary change in how the opportunity is perceived. Thus, as well as identifying entrepreneurial activities, entrepreneurial managers also have to shape them to fit the market and provide the necessary material and personnel resources. This can be easier if the entrepreneurial opportunity lies within the entrepreneurial strategy and the existing core competencies.

Thornberry⁹⁴ describes certain characteristics of entrepreneurial management. These must be, for example, operationally strong, be able to work in uncertain and ambiguous environments, know boundaries and involve employees with complementary skills, change situations and want to create things, develop a great passion for entrepreneurial activities and be able to pursue these tenaciously with urgency and resilience. They must believe in success *with a smile on their face*, possess or at least learn entrepreneurial talent.

According to Thornberry, entrepreneurial managers can play various roles (see figure 29).

⁹⁴ For the ten characteristics see Thornberry (2006:46-57)

3. Intrapreneurship and the global business environment

	Internal	External
Activist	Miners (Operational)	Explorers (Market)
Catalyst	Accelerators (Unit)	Integrators (Enterprise)

Figure 29: Focus and roles of entrepreneurial management according to Thornberry (2006:60)

Activists identify new internal (e.g. process innovations) or external (e.g. product innovations) opportunities. Catalysts create an internal business environment which promotes entrepreneurial activities within business divisions or within the organisation as a whole⁹⁵.

Thornberry (2006:205-219) gives various ways of developing an entrepreneurial organisation. For example, entrepreneurial organisation units can be created or entrepreneurial managers can be deployed as missionaries inside the organisation. Incentive systems can reward managers for entrepreneurial activities and formal processes can help where the manager's personality is not naturally entrepreneurial.

Maucher (2007) gives a guideline for entrepreneurial success. He distinguishes between the classical manager and the classical entrepreneur (see table 2) and asserts that management requires both entrepreneurial and management qualities⁹⁶. Entrepreneurial decisions are then based on experience, information, analyses and intuition.

⁹⁵ *Integrator* as organisation architects, according to Thornberry (2006) first create an entrepreneurial strategy to then design the resources, structures and processes with the aim of achieving an entrepreneurial orientation in the organisation.

⁹⁶ See also Pearce et al (1997), Luchsinger and Bagby (2001). Stevenson and Gumpert (1998) distinguish a *promoter* with an entrepreneurial focus from an *administrator* with an administrative focus. The promoter or entrepreneur firstly asks about the possibility and then the necessary resources, the administrator first looks at the existing resources, structures and securing scope for creativity. At the level of the organisation, there then results either a culture of innovation or an administrative culture.

3. Intrapreneurship and the global business environment

The Manager	The (corporate) entrepreneur
...above all sees his tasks in the organisation	... above all sees entrepreneurial opportunities
...makes administration and optimisation in the organisation	... is more of a strategy and company developer
...has special skills	... has charisma and enthusiasm
...does forecasts and planning (planning horizon is more short term)	... has imagination, visions of the future of the company and above all thinks long term
...protects against risk with checklists and figures	... takes risks into account and has courage
...works with analyses, target-setting and measures	...works with simple concepts and basic ideas that he follows doggedly
...makes decisions with rational assessment of pros and cons	... relies on intuition in difficult situations where rationality alone is not enough
... has special management qualities	... is a leader

Table 2: Management and entrepreneurial qualities according to Maucher (2007:12,13)

The entrepreneurial alignment of a company must be checked from time to time, keeping in mind the ownership structure⁹⁷, the portfolio⁹⁸, the operating range and size⁹⁹, the risks¹⁰⁰ and the company politics¹⁰¹. Entrepreneurial organisations must be bold and set themselves apart from the competition with creative ideas and solutions. Internal growth can occur with existing products and in existing markets and can also be achieved with new products and entry into markets in new countries. A balance between conflicting viewpoints is necessary for the entrepreneurial success of an organisation. Maucher (2007:29) names seven fields in this respect:

- Long-term versus short-term aspects¹⁰²;
- Centralisation versus decentralisation;
- Marketing versus controlling (spending or saving);
- Diversification versus focusing;

⁹⁷ Here Maucher (2007:16-19) distinguishes in particular between family companies and publicly listed companies and public companies and trusts.

⁹⁸ Maucher (2007:20) stated that a certain diversification is more successful in the long-term than too strong a focus on the current core business. Thus, it is possible to better provide against risks and follow trends. Orientation towards the future means investing in potential and creating know how and the right management.

⁹⁹ According to Maucher (2007:22) greater internationalisation and growth are superior to local restriction without growth.

¹⁰⁰ Maucher (2007:23) states that it is necessary to take risks to secure the future. Large companies with many products and action fields in many countries could carry easier risks than companies with only one or fewer products.

¹⁰¹ Principles about the general alignment must be formulated in company policy. Maucher (2007:23-26) demands a strong orientation to people, to long-term success and to decentralised structures.

¹⁰² Abell (1993) emphasises the necessity to connect strategies for a successful present (use of existing competencies and resources for entrepreneurial opportunities) with strategies for a successful future development (transformation and change to be able to use future entrepreneurial opportunities).

3. Intrapreneurship and the global business environment

- Necessity of complying with rules and regulations versus allowing individual room for manoeuvre;
- Performance and competition orientation versus social responsibility and social protection;
- National and cultural identity of the organisation versus international demands and worldwide activities.

The structure of the organisation should be decentralised by using project groups, networks, and centre of excellence¹⁰³. Entrepreneurial managers have to be courageous, able to learn and sensitive to innovations. In particular, they must develop an understanding for other countries and cultures and a vision of the future, they must create a climate of innovation and make decisions and think in context. Management teams have to add to their competencies and strengths and stand unreservedly by the company culture. The competitiveness of an organisation must be strengthened by many small innovations and innovation thrusts. In addition, creativity potential should be promoted more through staff selection. The ability to innovate can be enhanced by transferring entrepreneurial responsibility to smaller, independent company units. Research and evaluation of demand are thus the basis for creating ideas. If a positive climate in the business environment is to be attained, then a market-oriented product development must ensue within a context of credible marketing and professional public relations.

3.1.3.4 Concepts on viable entrepreneurial communities and individual entrepreneurial action

In Joyce's view (2008) the role of intrapreneurship is seen as developing adaptability and resistance of teams and employees as the key for entrepreneurial success and the survival of companies. By using cooperative intelligence and collective experience, organisations can build viable communities. Joyce defines cooperative intelligence as having eight elements:

¹⁰³ Company units within the organisation as a whole take on strategic mandates to increase the competitiveness of the transnational value creation network. *Centre of Excellence* takes on, for example, strategic leadership when working out strategic concepts for certain company divisions – see, for example, Holtbrügge and Welge (2010:148-151).

3. Intrapreneurship and the global business environment

- Discovering, checking and changing of individual and collective basic assumptions about the reality and correct configuration of useful assumptions about the world in order to increase resistance and adaptability of a team or an organisation¹⁰⁴;
- Perception of reality from different perspectives to ease cooperation and use of energy deriving from groups and networks for the achievement of common goals and one's own goals¹⁰⁵;
- Self control and controlling one's own feelings as a requirement of personal resistance and for a self-determined choice of a mental model¹⁰⁶;
- Communication as a basis for the creation of harmony and cooperation in the group or organisation and for the information exchange needed to shape the future¹⁰⁷;
- Functional interaction and collective relations within two-way alternate dependent relations to bind the actors to their organisation, to develop a sense of community and two-way alternate information about changes in the business environment and possible reactions to this¹⁰⁸;

¹⁰⁴ Rampe (2005) prescribes seven pillars of resilience for dealing with adverse circumstances: optimism as a basis for conquering crisis and conflict; acceptance of the situation; orientation to finding solutions; relinquishing the role of victim and consciousness of own strengths; taking on of responsibility for one's own actions; network orientation as source of power; planning for the future and development of alternatives to increase flexibility.

¹⁰⁵ According to Maturana and Varela (2009:19-36), each act of individual cognition creates a world which involves the cognitive person. The starting point is then necessarily the operational effectiveness of the creature in its area of existence. If this individual phenomenon of cognition is superseded, the world must be created in a collective cognition process. Mutual experience then determines how the world is seen. By reflection, we can then recognise how we recognise things. The creation of a world can be seen as a starting point for the generation of ideas. If one agrees with Maturana and Varela, the mutual recognition and determination of a mutual mental model can be said to be entrepreneurial activities. This world picture then determines the interaction of the organisation with the business environment and the discovery process for entrepreneurial opportunities and risks.

¹⁰⁶ According to Collins (2008:155-183), a culture of discipline in combination with entrepreneurial thinking and action is the key for higher performance and sustainable success.

¹⁰⁷ Brown (2005) describes a dialogue process for the use of multiple perspectives and the collective intelligence of groups so that common pictures of the future, new and practicable ideas or community knowledge and learning are developed. The dialogue process contains seven basic design elements: (1) Clarification of context and purpose of the conversation; (2) Creation of a stimulating and friendly atmosphere; (3) Presentation of the key questions which are to be discussed by joint endeavours; (4) Encouragement of all those involved to participate actively; (5) Use of the diversity of the participants and perspectives and focusing on mutual aims; (6) Discovery of templates, insights and deeper issues; (7) Formulation and retention of collective insights, common knowledge and of plans for action and for the future.

¹⁰⁸ Scharmer (2009) stresses the power of the actors' deep sources of inspiration and of collective thinking when shaping the future.

3. Intrapreneurship and the global business environment

- Entrepreneurial adaptation and shaping of the future by internally developed creative solutions and application of creativity to practical problems¹⁰⁹;
- Every individual makes an operationally strong and sensible contribution to the whole, so that the dynamic between individualism and collectivism is used productively¹¹⁰;
- The team learns collectively from every new situation and interaction within the business environment and also from each other¹¹¹.

According to Kotter (2009:193-196), a company culture characterised by a sense of urgency can be identified as a source of entrepreneurial thinking and action. Every individual employee can then seize good opportunities and keep an attentive look out for risks in the business environment. Thus, it is necessary to have a realistic assessment of external events and a love of reaction, meaning urgent action. There must be a consistent distinction of the important from the unimportant in order to achieve exclusive concentration on matters of the highest priorities. Necessary changes must be implemented as quickly as possible. These management qualities would drive change forward independently of hierarchical positions. Therefore, the basic position of this approach is a collectivist one.

¹⁰⁹ Micic (2007:115-153) analyses as many future opportunities and action options as possible within his model for entrepreneurial management of the future using his *green future spectacles*. He defines four further future spectacles to analyse future developments and to identify future entrepreneurial opportunities: with the *blue spectacles for the future*, the probable development of the business environment is examined, the *yellow future spectacles* define the long-term direction of the organisation, the *red future spectacles* identify possible surprises and the *violet future spectacles* define action so that the desired future can be achieved. The future spectacles serve as a thinking tool and template for the design of projects for the future.

¹¹⁰ Senge et al (2004:3-15) describe the relationship between an organisation and its members from the view of the living system. The members together build the whole system collectively with its own social identity. The dichotomy between the individual and the collective is eliminated. They stress the necessity of discovering and understanding mental models to achieve collective thinking and thus see new ideas. This often also requires a pause together with a sensitivity for the whole in order to be able to achieve a new direction.

¹¹¹ According to Raelin (2008:70-81,83-123), collective learning processes when adapting the organisation to changes in the business environment are at the forefront together with individual learning. Learning in careers, deceleration and reflection about work practices and continuous organisational learning through knowledge generation, knowledge distribution and knowledge use enables the transformation of the organisation. Changes in the business environment require adaptations with work practices (single-loop learning), learning dialogues and learning transfers between various contexts (double-loop learning) as well as a checking of the mental models in the organisation to date (triple-loop learning). Every viable organisation must develop a culture for organisational learning, design a continuous process with discovery and experimentation and learn from success and failure. Creativity and learning are closely related according to this work-based learning theory and central success factors of an entrepreneurial learning organisation.

3. Intrapreneurship and the global business environment

The feeling of urgency for continuous change can be seen as a fundamental element of entrepreneurial survival strategy. Kotter (2009:13-31) states that this basic principle can be applied virtually unchanged to different cultural groups. He points to the feeling for urgency bringing an invaluable advantage for survival in turbulent times in comparison to what he describes as the alternative of self-content (insistence on the status quo and lack of attention to opportunities and risks) and misunderstood feelings of urgency (hectic and disorganised action). The driver for urgent action is said to be the inner conviction of the actors that new opportunities and new risks will develop continuously. Opportunities must be spotted, communicated and actively dealt with by monitoring internal and external environments. Employees from all levels of the company can see and process opportunities and risks everywhere. Therefore, they contribute to the creation and conservation of valuable competitive advantages. With its feeling for urgency, a company can recognise what is changing in the global environment. The correct internal changes, for example new working methods, new business models or new products can be set up against the background of external change.

According to Kotter's illustration, there are eight steps for overcoming the entrepreneurial challenges of change successfully:

- To awaken the feeling of urgency in as many employees as possible and to maintain it;
- To build a management team that can get things done;
- To develop objectives and strategies together;
- To achieve a sense of urgency at all levels of the company via communication;
- To give entrepreneurial teams sufficient room for manouver and decision-making competencies;
- The first short-term successes should keep the sceptics happy;
- To continuously implement and develop the change process;
- To anchor the necessary changes permanently in the entrepreneurial structures, systems and company culture.

Individual actors who are able to give a kick-start to development are often the starting point for achieving real urgency¹¹². Opportunities can be immediately seized and dangers averted at the right time by the systematic consideration of external events and the gathering and evaluation of information from customer contacts and also from external information sources (for example, competitors or technological innovations and trends). The evaluation of entrepreneurial activities should occur with the focus on the long-term. In this context, Kotter speaks of patience being an urgent necessity which should be a priority during the implementation stage¹¹³.

Kohlöffel and Rosche (2009) propose a people-oriented approach to the development of entrepreneurial competencies. They talk of life and career situations as playing fields and the actors¹¹⁴, for example, as playmakers, sponsors or co-players. Thus, the players would be increasingly active on several playing fields simultaneously, i.e. act in different career situations and experience totally different roles in each of them. These play situations are characterised by more or less intensive forms of competition or by cooperation with other players. For the existence and the survival of the company's own business, effective strategies must be developed and implemented; the important success factors are the ability to analyse for discovery and evaluation of opportunities and risks, a feeling for actions and reactions in the environment, as well as the entrepreneurial know-how to be able, in turn, to react in a target-oriented way.

Entrepreneurial behaviour must be set up for the long-term, develop attractive ideas in the present, fix resources, select playing fields, take account of environmental change and incorporate the behaviour of and relationships to other players. Entrepreneurial actors set themselves apart with extraordinary inner drive, momentum and desire to develop things that Kohlöffel and Rosche (2009) describe as *drive* (see figure 30). Players with *drive* have a feel for development, opportunities and risks. They develop ideas and consistently realise opportunities.

¹¹² Gladwell (2002) describes the principle of the *Tipping Point*, according to which a small push can lead to large-scale changes.

¹¹³ For implementation competencies see Wunderer and Bruch (2000).

¹¹⁴ Kohlöffel and Rosche (2009:110-128) name 19 possible roles: playmaker, player, play leader, star player, impulse giver, free-rider, spoilsport, outside player, rebel, opinion maker, referee, decider, coach, substitute player, scout, sponsor, fan, media representative, spectator.

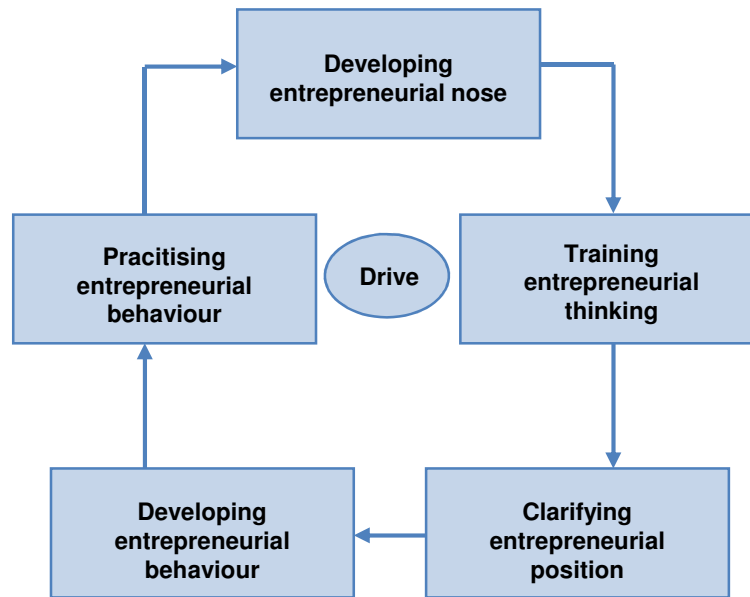


Figure 30: Drive model for entrepreneurial orientation of actors and teams according to Kohlöffel and Rosche (2009:22)

The drive model contains five elements. Firstly, an entrepreneurial feel for people, situations and trends must be developed and the associated opportunities and risks recognised. There must also be an openness for new (uncertain) paths and responses, situations and problems must be thoroughly examined from different perspectives and the rational and emotional behaviour of co-players and opponents must be taken into account. On top of this, entrepreneurial employees would develop a creative and innovative environment. The second element describes how entrepreneurial thinking can be trained. What is required here is networked and forward-looking thinking in systems, scenarios and considering options¹¹⁵.

The third element relates to the clarification of entrepreneurial positions as a starting point for the development of options. The fourth element is the attainment of entrepreneurial behaviour through the development and implementation of ideas, the constitution of rules and order, entrepreneurial learning and the development of relationships. The important feature of the fifth element is collaboration in the attainment of entrepreneurial targets.

¹¹⁵ Kohlöffel and Rosche (2009:64) name the following in this context as elements for the generation of new customer benefits; new technology, materials, procedures; new products, performances, solutions; new business, new business types; new rules of the game in business; new value creation chains; new competition positions, new market shares; new regional structures, new countries; new networks, relationships and communication forms.

Kohlöffel and Rosche (2009) consider entrepreneurial activities from the point of view individual employees who are active in internal playing fields, as well as from the perspective of management who are in charge of business in markets which are external to the company¹¹⁶. The appropriate playing fields for business ideas have to be selected. Learning from one's own entrepreneurial activities and those of others must be supplemented by learning that takes account of the future. Also, experienced players can pass on valuable experience to younger colleagues.

The management orientated theoretical concepts of intrapreneurship at the micro level¹¹⁷ make a further contribution to providing a holistic picture of the role of intrapreneurship (e.g. focus on continuous improvements and new opportunities / entrepreneurial processes, Top-Management and spirit of enterprise / culture as drivers). In chapter 3.1.4 the focus is further extended to the changed global context and the implications for the role of intrapreneurship in a global business arena.

3.1.4 Intrapreneurship and the changing global context

This chapter will, to some extent, look further into the role of intrapreneurship to show some key factors for entrepreneurial organisations in the changing global context. Entrepreneurial action for organisational success means taking decisions about internationalisation and the processes of an organisation in the context of globalisation (see Zahra and Garvis 2000). Which countries and locations are interesting for production, research and development? Which markets should be won over through exporting? Which locations should be importing? The literature gives a great deal of economic and behaviour oriented explanations (Dülfer 1997) as a theoretical justification of the internationalisation of companies. For example, Vernon's (1966) market theoretical product life-cycle theory (see figure 31) already sketches the global picture (see also Vernon and Wells 1991:82-86, Rugman and Collinson 2006:164-165, Morrison 2006:323-324, Sheth and Sisodia 2006:1-230, Fuchs and Apfelthaler 2009:74-81), according to which products are firstly produced and developed in a strongly innovative domestic environment. Subsequently, there is an export phase in which there is entry into a foreign market.

¹¹⁶ Kohlöffel and Rosche (2009:157-170) see the individual actors as human capital entrepreneurs who themselves take responsibility for their own future.

¹¹⁷ see table 1

3. Intrapreneurship and the global business environment

Huse and Gabrielsson (2004) demonstrate in their empirical study that a strong entrepreneurial orientation raises expectations of an increase in international activities. When seeking competitive advantages, Senge (2003) requires that learning is quicker than the competition and that learning potential at all levels of the organisation is tapped. At the individual and organisational level, adaptive and creative learning must occur. The individual actor is the central unit of action of an organisation such that individual learning has to be combined with collective learning. Responsibility for this must be assumed at headquarters. It is for management to develop learning processes and experiments.

At the same time, mental models of perceptions of the world should be uncovered, questioned and redeveloped with the future in mind. Organisations should promote innovative and creative skills and pursue adaptation to a changed business environment by exploration and advocacy, i.e. the best arguments should win the day and not just be rammed through. Basic structures, cause-effect relationships and possible leverages can be uncovered and used on the basis of systems archetypes¹¹⁸ (Senge 2006:389-400).

The disciplines of the learning organisation¹¹⁹ can help in achieving a holistic orientation, making important entrepreneurial decisions and in thinking through the consequences of them. The growth boundaries¹²⁰ of the business or individual business units can, for example, be analysed, avoid delays in problem-solving and identify levers for problem-solving. Thus, continuing to develop existing products may lead to delays in dealing with problems, while development of new products or the conquest of new markets can act as a lever for the viability of the organisation and, thus, as a fundamental problem-solver. With analysis of feedback, time delays can be recognised and be prevented by the interconnection of individual and common visions.

¹¹⁸ Senge (2006:389-400,422) point out, that the archetypes are often called generic structures and describes the following systems archetypes (structures): Balancing Process with delay; Limits to Growth; Shifting the burden; Eroding goals; Escalation; Success to the successful; Tragedy of the Commons; Fixes that fail; Growth and Underinvestment.

¹¹⁹ Senge (2003:75-167,171-332) describes systems thinking, personal mastery, mental models, the common vision and team learning as the five cornerstones of the learning organisation.

¹²⁰ According to Senge (2003:457) the removal of the cause of growth restriction can be defined as an entrepreneurial task.

3. Intrapreneurship and the global business environment

Senge (2006) sees entrepreneurial managers as researchers and designers who are seeking a better understanding of the organisation system and internal and external forces of change, and who wish to recognise the effects of their own actions on the overall system¹²¹. The design of local learning processes by decentralised management can help to understand trends and contexts. Top management have then to take over the development of the structure and culture. In this way, a common vision can be pursued whilst at the same time solving everyday problems.

De Geus (2002) proposes key factors for viable entrepreneurial organisations. Firstly, a global view of the business environment has to be taken and harmonious relations between the organisation and the external environment have to be developed by adapting and learning. Within the organisation, a strong integrated identity and community must be developed and the viability of the organisation as a whole must be pursued as a top priority. There must be a tolerance of decentralised activities and entrepreneurial experiments and they be supported with the organisation's own financial means. Thus, constructive relations within the organisation and with external partners are used and the company's own development is guided effectively. If the organisation wishes to maintain harmonious relations with a changing environment, it must learn effectively, develop a knowledge base and continuously adapt the internal structures and operations.

It is precisely the risks and crises from the external business environment that can highlight new entrepreneurial opportunities. Entrepreneurial organisations seize such opportunities and make the changes and reallocation of resources necessary within the organisation. Viable entrepreneurial organisations search for signals in the external business environment and in so doing, use earlier experience so that entrepreneurial activities can be seized at an early stage. In addition, they develop potential options¹²² for hypothetical future events in the business environment. The more such future scenarios are developed, the more it is likely that the signals of the external environment described by de Geus are uncovered.

¹²¹ Senge (2003:513) states that, for the whole to function, the individuals have also to omit (or do) something that would have been advantageous (disadvantageous) for him or his division.

¹²² De Geus (2002:22-37) describes these scenarios as *reminders of the future*.

3. Intrapreneurship and the global business environment

According to de Geus (2002) entrepreneurial organisations develop stories about feasible futures on the basis of identified drivers of change for the preparation of entrepreneurial decisions. Making entrepreneurial decisions is in itself a learning process again which improves the viability of the organisation. The entrepreneurial organisation develops itself into a whole with its own historical experiences and sub-systems which are then again open to the environment. De Geus states that the aims and values of the individual actors have to be harmonised with those of the organisation. This can be achieved through recruitment and personnel development. In turbulent business environments, viable entrepreneurial organisations must enable decentralised room for manoeuvre for potential innovation so that the entire organisation becomes adaptable and innovative and entrepreneurial strategies can emerge from decentralised entrepreneurial activities. Central regulation of decentralised activities occurs then through contextualisation. The common value system and the long-term orientation of cooperation between the organisation and its members make it possible for the entrepreneurial organisation and the entrepreneurial actors to have target-oriented development via learning processes in symbiosis with a dynamic business environment.

According to Trompenaars and Hampden-Turner (1998), the influence of culture¹²³ when designing entrepreneurial activities is an absolute must. Activities that work in one culture are often not successful in another cultural context. Global companies would normally wish to have global harmonisation of organisation design, systems and processes. However, it is said to be better to adapt the organisation to local conditions. Therefore, culture has to be considered as a part of the general business environment when taking entrepreneurial decisions. Thus, *what* and *how* are both important questions in entrepreneurial activities. Analytical thinking can be applied to technical questions, for example, all over the world, but not to human interaction¹²⁴. In some cultures, the analytical thinking model works because the actors have an analytical way of thinking. In other cultures with other thinking and action orientations, such a way of thinking often fails. Due to internationalisation, more of a knowledge model rather than a cultural one is required. Culture is the context in which everything happens.

¹²³ Culture is thus the way and means that a group understands and interprets the world.

¹²⁴ Trompenaars and Hampden-Turner (1998:4) add to this: *when in Rome do as the Romans*.

Therefore, it is not necessary to place knowledge *above* culture (Hofstede 2001), but rather to have knowledge *for* a variety of cultures (Trompenaars and Wooliams 2003). International activities and structures make it possible, then, for the organisation to make use of the advantages of various cultures (and to avoid disadvantages). Trompenaars (2007) also describes the role of culture in innovation and the performance of individual actors, teams and organisations. He asserts that the creation of a support culture by managers is particularly necessary if long-term entrepreneurial successes arising from creativity and innovation are to be achieved. Here, it is important to develop the interests of the organisation together with the needs of the individual actors by making use of synergies. In order to create an innovative culture, it is important in entrepreneurial teams that the actors operate using complementary competencies so that they are able to implement creative ideas. The individual actors and teams must then practice a form of cooperation which supports the aims of the whole business using the interactions developed.

Trompenaars describes how individual creativity can be increased (Trompenaars 2007:9-73), names central roles for innovative teams (Trompenaars 2007:75-178)¹²⁵ and develops interaction models which help the organisation to implement innovation (Trompenaars 2007:179-261,263-269)¹²⁶. Thus, an integral culture of innovation must be attained via adaptation and flexibility, tasks and targets, structures and reliability, as well as loyalty and self-commitment. Birkinshaw (2000) examines the contribution of managers in foreign subsidiaries to the entrepreneurial orientation of globally active companies. The focus of his analysis are managers in foreign subsidiaries who, together with top management at the parent company, use entrepreneurial activities to drive structural and strategic change in the interests of the organisation as a whole.

¹²⁵ As well as the necessary diversity of team members – according to Belbin (1996), the following team roles can be defined: idea finder, idea designer, resource finder, coordinator, specialist, critic, implementer, finisher, team worker - it is particularly necessary to take account of the tension between these roles.

¹²⁶ In the organisation's development and growth process, the various dilemmas have to be resolved. For this, a dilemma way of thinking has to be developed and the innovation process must have four components: observation of cultural differences within the organisation, respect for these differences, resolution of dilemmas related to culture and innovation, realisation of entrepreneurial activities on the basis of mutual values and the connection of different standpoints within the organisation as a whole.

3. Intrapreneurship and the global business environment

The foreign subsidiary can identify entrepreneurial opportunities in local, global and internal markets and entrepreneurial activities to react to changes in the business environment. He distinguishes between internal and external entrepreneurial initiatives (Birkinshaw 2000:11,64-77). External initiatives create new products or markets. Internal initiatives optimise activities and resource allocation within the whole network of the global business. In both cases, internal agents are at the fore in the subsidiaries when it comes to change arising from changed environmental conditions within the global company as opposed to change driven by top management. Birkinshaw names two fundamental orientations of organisations in implementing entrepreneurial activities. In the focussed approach, management and entrepreneurship are seen as different processes. The development of new entrepreneurial opportunities occurs then either in a department for new entrepreneurial activities or in a strictly administration-oriented research and development.

In the broad approach, basically every employee has competencies for management tasks and for entrepreneurial tasks. According to this concept, entrepreneurial orientation of staff and an entrepreneurial culture play a central role. Here, all employees would have a latent dual focus on ongoing tasks and on the identification and implementation of new opportunities. With this, there is a danger that management tasks will displace entrepreneurial tasks on an everyday level. Birkinshaw states that both approaches should be seen as complementary. Existing business must be carried out profitably just as new business ideas have to be realised.

The leader of the entrepreneurial subsidiary would thus not only have operational responsibility for current business but also for entrepreneurial opportunities that arise. Birkinshaw also develops a conceptual framework with three sorts of entrepreneurial initiatives (see figure 32). In local market initiatives (local for local), local customers are offered new products or services. If the customer-base is extended on a global scale, then global market initiatives arise. Through this, the subsidiary develops new entrepreneurial activities for the whole organisation as well as for other subsidiaries (see also Ihrig and Knyphausen 2009). Internal entrepreneurial initiatives by subsidiaries contribute to increases in efficiency by a reconfiguration of existing operations within the company network.

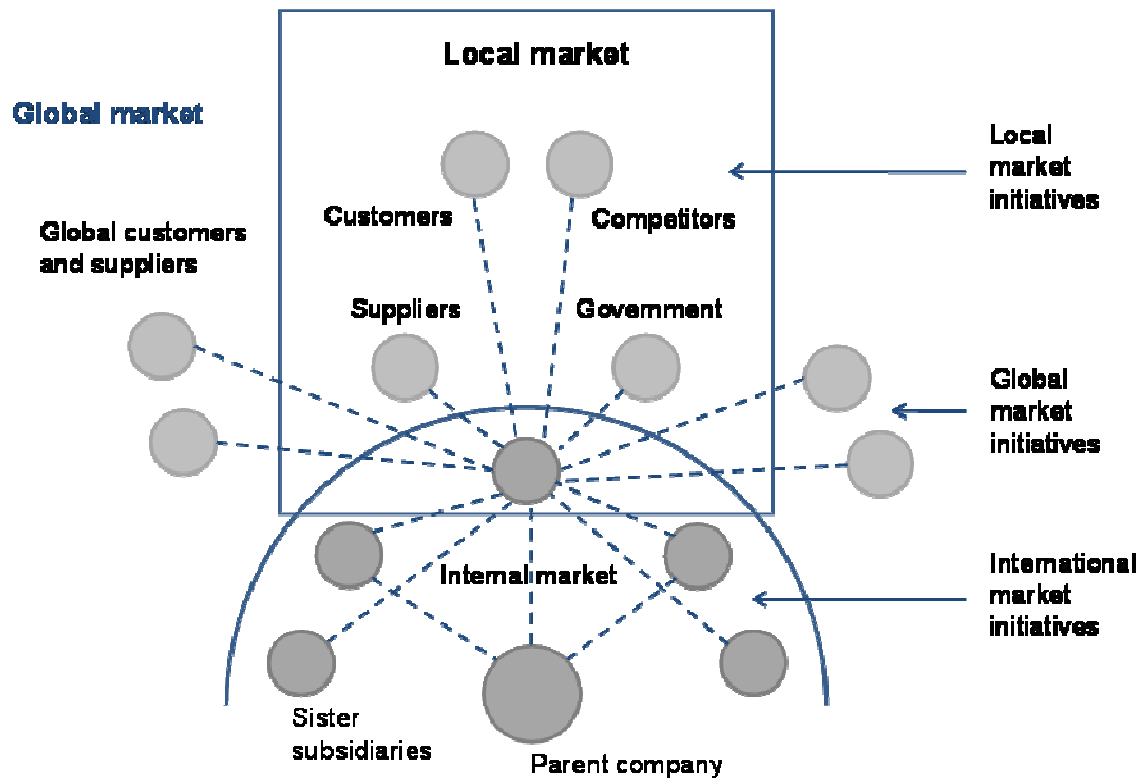


Figure 32: Conceptual model for generation of entrepreneurial initiatives of national subsidiaries according to Birkinshaw (2000:21)

Birkinshaw asserts that, for internal initiatives, it is necessary to have a close connection between the subsidiary and the parent company but that this could impede external initiatives. In any event, the subsidiary must be seen as an entrepreneurial actor and not as an instrument of the parent company. The head of the entrepreneurial subsidiary must be prepared to lobby top management on behalf of the subsidiary for entrepreneurial initiatives.

Top management, on the other hand, have to develop an incentive system that ensures the subsidiary manager doesn't pursue his own interests at the cost of the organisation as a whole¹²⁷. Furthermore, the nature of the business environment is relevant in terms of whether internal or external initiatives are a priority. Traditional, capital intensive industries with high fixed costs and a stable environment tend to require internal initiatives for efficiency increases, while knowledge-based industries with higher market and environmental dynamics tend to require external initiatives and a high degree of autonomy for the subsidiary.

¹²⁷ In this context, Birkinshaw (2000:131,132) refers in particular to the danger that managers in subsidiaries may invest too much in building their own empires.

3. Intrapreneurship and the global business environment

If the production processes are tested and standardised sufficiently, production will take place at good value international locations and there is a subsequent import phase in the country of origin. In Vernon's product life-cycle theory, an outline is given of the fundamental global entrepreneurial decision-making parameters. Individual organisations have to approach the design tasks that are decisive for the future success of the organisation within the context of globalisation proactively and make their own specific entrepreneurial decisions concerning entrepreneurial activities in accordance with actual opportunities and risks.

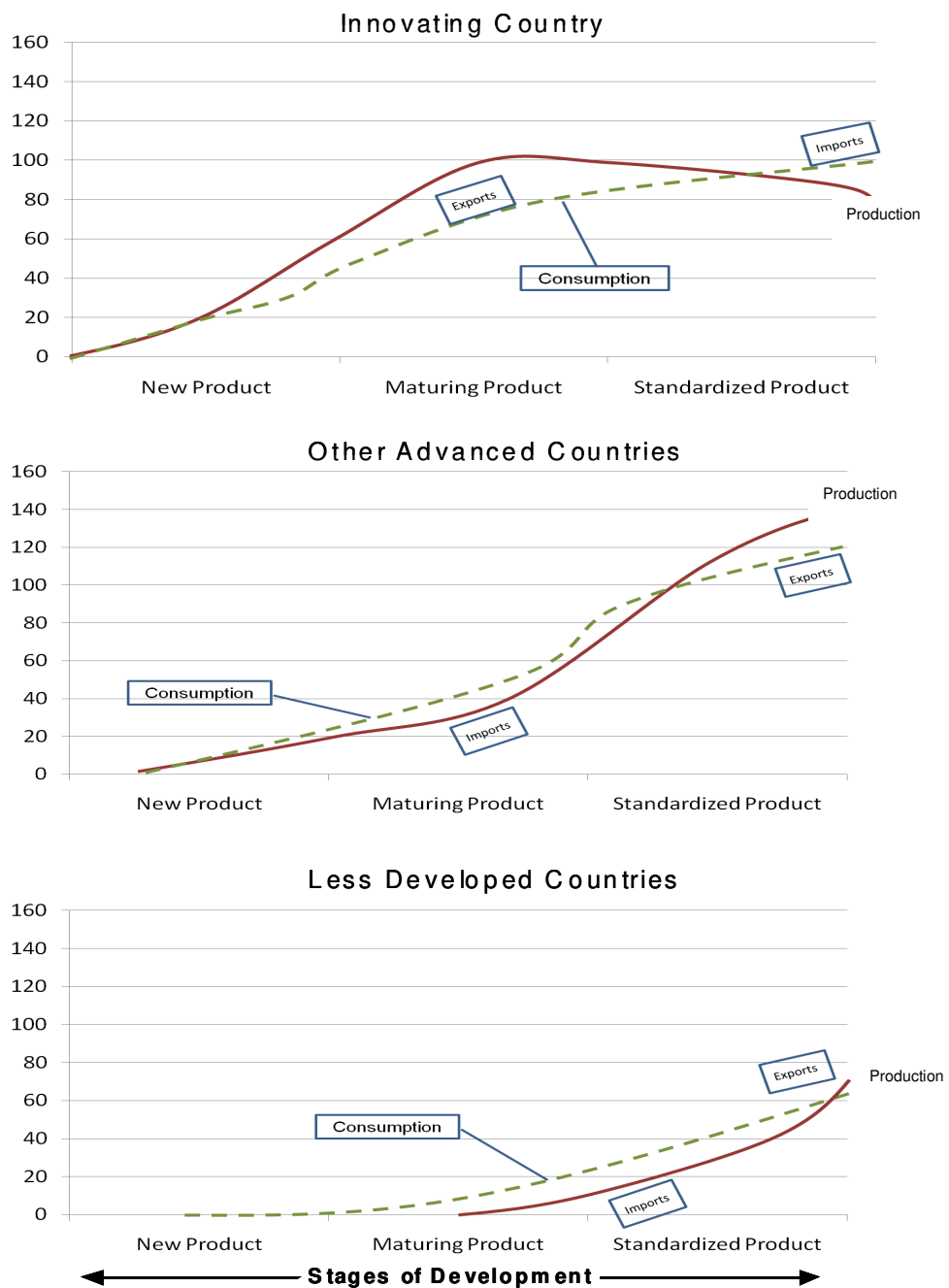


Figure 31: Product life-cycle theory according to Vernon and Wells (1991:85)

3. Intrapreneurship and the global business environment

Zahra and George (2002) analyse a concept for international entrepreneurial activities and the strategies, organisational and environmental key factors necessary for this. They name international expansion by entering foreign markets as a central, international entrepreneurial activity. At the level of the business, top management must examine the relationship between entrepreneurial activities and the international business environment.

The business environment thus plays an important role for the realisation of entrepreneurial activities. In particular, national cultures, institutional framework conditions and the existence of available innovation clusters would have an influence on entrepreneurial activities. They create a connection between the internationalisation process of a business and the pursuit of opportunities by the organisation. The focus is on innovative, proactive realisation of opportunities and encountering risks when entering international markets. International entrepreneurial activities create opportunities for learning activities which, according to Zahra and George (2002), improve the knowledge base of the entrepreneurial organisation. The analysis of the international business environment and monitoring of international locations (see Stam 2007) and foreign markets makes it possible to pursue international entrepreneurial activities. Accordingly, information gathering skills are required so that international opportunities in international markets can be identified.

Zahra and George (2002) present a model (see figure 33) with factors that support international entrepreneurial activities. They name the organisational factors as being abilities of top management teams, company resources and company-specific characteristics, such as company size and locations. In terms of strategic factors, ability plays a role; for example, how well a business can transfer competencies such as product processes into the international market or how well cultural differences can be used productively. In terms of environmental factors, they name, in particular, effective competitiveness, growth opportunities, potential for economies of scale and how attractive the sector is. All of the factors would support international entrepreneurial activities in the various business environments (Zahra and George 2002:276) and influence the number of markets considered or the intensity with which new markets can be conquered.

3. Intrapreneurship and the global business environment

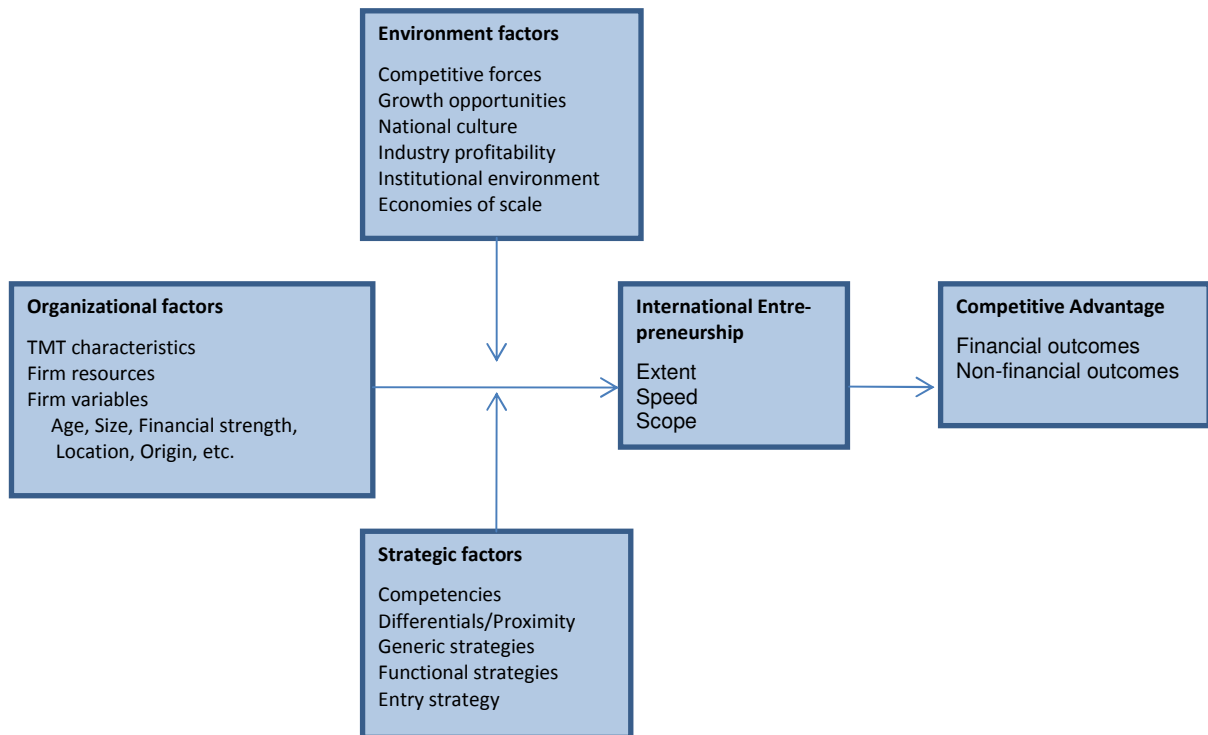


Figure 33: Integrated model for international intrapreneurship according to Zahra and George (2002:276)¹²⁸

Hitt et al (2005:406-424)¹²⁹ consider intrapreneurship from a strategic perspective. Entrepreneurial opportunities and competitive advantages must be pursued simultaneously by individual actors and the organisation as a whole if companies are to hold their own in a globally competitive market. Due to the uncertainty and complexity of the competitive environment, it is difficult for organisations to predict future developments in the global business environment, so it is necessary to follow a flexible strategy which offers alternatives. Therefore, resources and abilities should be developed which permit proactive activities or adaptation to dynamic environments. Strategic activities for the development and exploitation of current competitive advantages must be combined with entrepreneurial activities that are able to establish future competitive advantages (Hitt et al 2002:2,3)¹³⁰.

¹²⁸ Zahra and George (2002:280) see a fundamental and important research task in the examination of environmental factors that influence the internationalisation of entrepreneurial organisations. Equally, the contribution of international entrepreneurial activities to organisational learning is to be researched further.

¹²⁹ They describe this intrapreneurship approach as strategic entrepreneurship. The strategic and entrepreneurial perspectives are combined in such a way that values are created by the implementation of an entrepreneurial strategy.

¹³⁰ Entrepreneurial (the creation of new goods and services) and strategic activities (creation of competitive advantages with the new goods and services) would in so doing build a complementary relationship.

3. Intrapreneurship and the global business environment

In addition to this, entrepreneurial opportunities must be identified in an uncertain business environment and innovations have to be realised as the main result of the entrepreneurial process via strategic company plans¹³¹. An entrepreneurial orientation of this kind is said to be an important source of competitive advantage at the macroeconomic and microeconomic level, particularly in turbulent and very competitive environments. In order to be able to use the entrepreneurial opportunities identified, organisations must develop the characteristics and competencies required for this¹³². Indeed, in large and established organisations, it is also possible to create synergies from various, individual entrepreneurial activities.

In order to identify entrepreneurial opportunities in the international business environment, there must be a detailed analysis. Different country cultures would establish differing levels of entrepreneurial orientation. Overall, a balance between individual desire to take initiatives and collective willingness to work together for the realisation of innovations has to be attained. With increasing globalisation, a growing number of entrepreneurial activities on a global scale would be realised immediately (born global) and use social and business networks (Vasilchenko and Morish 2011). Drivers of this are top managers with international experience. With regard to entrepreneurial activities, there should be a distinction between innovations that bring small improvements to existing products and radical innovations which represent technological breakthroughs and generate new knowledge. Radical innovations are rare, but when they occur they mostly have market and technological risks attached. Entrepreneurial activities can have their origin either in current strategy and structure (top-down process) or be initiated by autonomous product champions with entrepreneurial vision (bottom-up process). In either case, effective implementation must be achieved in order to attain successful market access.

¹³¹ As external strategies for the realisation of innovations, Hitt et al (2005:419-421) name and describe the pursuit of cooperation with other organisations in order to integrate their knowledge and resources into the implementation of entrepreneurial activities and also the acquisition of other organisations in order to gain access to their innovations. The significance of alliances and networks for the development of entrepreneurial opportunities is described by Cooper (2002). Against this background, the creation of synergies between cooperating organisations becomes the focus.

¹³² Changes in the business environment limit the life cycle of core competencies and thus competitive advantages. Accordingly, company-specific knowledge that is difficult to imitate must be newly developed repeatedly and transferred over into new competitive advantages. Knowledge about use of new technology or new markets must be used for new entrepreneurial activities and current knowledge for current activities.

It is also necessary to have effective interaction, coordination and communication if knowledge and skills are to be used productively for innovation beyond departmental parameters. Because international markets offer many entrepreneurial opportunities, if they want to generate knowledge, entrepreneurial organisations should enter global markets and use new technology and management concepts from other countries within the organisation. Which international markets are chosen would be dependent particularly on the general business environment, the competitive situation and the national culture (Hitt et al 2002:10).

The concepts with regard to the changing global context give further implications for the role of intrapreneurship (e.g. international entrepreneurial activities, entrepreneurial initiatives from subsidiaries, learning and adaptation in different cultural contexts). On the basis of the analysed theoretical concepts of intrapreneurship in this chapter, it is possible via theoretical exploration to derive design elements for holistic intrapreneurship in a global business environment to integrate the various aspects into a coherent framework (see chapter 3.1.5).

3.1.5 Conclusion: Design elements of holistic intrapreneurship

Various central aspects for the determination and description of the role of intrapreneurship can be identified from the literature survey (chapter 3.1). Reflecting this, the fundamental role of intrapreneurship is defined by the identification and pursuit of opportunities and risks (e.g. Drucker 1985, Zahra et al 2002, Hitt et al 2002, Ireland et al 2009) together with the use of company resources for entrepreneurial opportunities (e.g. Hamel and Prahalad 1994, Penrose 1995) that secure competitiveness and viability (e.g. Guth and Ginsberg 1990, De Geus 2002). The various literature sources define different main themes in terms of the process, implementation and design of intrapreneurship. Some approaches demand a collective effort (e.g. Wunderer 2006, Joyce 2008) with a holistic orientation (e.g. Senge 2003), others see strong entrepreneurial personalities (e.g. Kanter 1983, Pinchot 1988) as the driving force for intrapreneurship (see also Bouchard and Basso 2011).

3. Intrapreneurship and the global business environment

Numerous approaches focus on the internal design of the entrepreneurial organisation (e.g. Covin and Slevin 1991), others put the emphasis on the entrepreneurial strategy fields of innovation, adaptation and optimisation (e.g. Abell 1993, Schumpeter 2006, Weick and Sutcliffe 2007, Morris et al 2008), while others see the action fields of products, markets and technology (e. g. Vernon 1966, Block and MacMillan 1995, Birkinshaw 2000) as being central (see also Roininen and Ylinenpää 2009). In all of this, it is clear that entrepreneurial activities should not only be pursued in new businesses, but also in existing businesses if the viability of the entrepreneurial organisation in a global context is to be secured. To summarize and synthesize, nine central design elements of intrapreneurship (Platzek et al 2011a) as a theoretical construct are identified and deduced in the literature research¹³³ (see figure 34) to define holistic intrapreneurship in this thesis.

<p>Element 1: Entrepreneurial task Identify and set up opportunities and risks in existing and new businesses</p>	<p>Element 2: External entrepreneurial operation fields Analyse general macro environment, local and global factor and product markets (micro environment) as sources of opportunities</p>	<p>Element 3: Entrepreneurial organisation design Analyse and develop entrepreneurial vision, mission and strategy, structure and culture, resources and competencies</p>
<p>Element 4: Entrepreneurial strategy fields innovation adaptation optimisation agreement</p>	<p>Element 5: Entrepreneurial decision fields define buy-side in-side sell-side</p>	<p>Element 6: Entrepreneurial action fields process product market technology</p>
<p>Element 7: Orientation towards viability Pursue short and long term potential Make use of <i>life cycle thinking</i> and positioning as mature organisation: Continuous renewal, adjustment of organisation boundaries</p>	<p>Element 8: Global orientation Global playing fields Global strategies Global and local perspectives Use of cultural differences and learning from global activities</p>	<p>Element 9: Holistic orientation Identify system structures and development models, understand and use harmonisation of objectives and interests within the organisation Symbiosis with environment Internal and external synergies</p>

Figure 34: Nine central design elements for holistic intrapreneurship¹³⁴

¹³³ The different aspects of the role of intrapreneurship are summarised in the appendix. The nine design elements for holistic intrapreneurship are identified in a qualitative theory based exploration via reflection, comparison, and integration of the implications for the role of intrapreneurship from the section 3.1.1 (elements 1,3,4,5), section 3.1.2 (elements 1,2,6,9), section 3.1.3 (elements 3,7), and section 3.1.4 (elements 7,8). Thus, the nine design elements define a new coherent framework to relate the different concepts from literature.

¹³⁴ The design concept presented with nine design elements for holistic intrapreneurship represents the conclusions from the literature study on the role of intrapreneurship and the theoretical concepts on intrapreneurship analysed there (see chapter 3.1).

3. Intrapreneurship and the global business environment

The starting point and first element is a definition of the entrepreneurial task: Entrepreneurial organisations must identify and process opportunities and risks in the internal and external business environment. Here, strong implementation skills are important if entrepreneurial activities are to be realised in existing and new businesses using both existing and future resources and competencies.

The second element defines the entrepreneurial fields of operation in the external business environment: entrepreneurial opportunities and risks can be identified in both the macro and micro environment. In particular, changes in the local and global business and factor markets are sources of opportunities and risks.

The third element is the internal business environment. The entrepreneurial design of the organisation impacts upon its entrepreneurial orientation. The entrepreneurial dynamic of an organisation is determined by the entrepreneurial strategy, structure and culture, as well as by the entrepreneurial actors, the resources and competencies. Flexibility to increase adaptability and innovation, as well as stability in production in order to increase efficiency are quoted as targets to help implementation and adaptation of the entrepreneurial vision and mission. This is achieved through decentralised responsibility, initiative and self-monitoring simultaneously with central coordination and planning.

The fourth element explicitly specifies the three entrepreneurial strategy fields as innovation, adaptation and optimisation. Entrepreneurial decision fields are the fifth element and relate to the buy-side (input), the sell-side (output) and the in-side (throughput). The sixth element comprises the entrepreneurial action fields of product, market and technology.

The remaining elements determine the entrepreneurial alignment of the organisation. Orientation towards viability is the seventh element and requires the pursuit of short-term and long-term success potential.

3. Intrapreneurship and the global business environment

In this process, when entrepreneurial decisions are taken, the life cycles of the organisation (Wright 1989:51-55)¹³⁵ as well as the products, markets and technologies are taken into account. By carrying out entrepreneurial activities, a continuous renewal of the organisation (Wright 1989:141)¹³⁶ is achieved and the boundaries and networks of the organisation are continuously adjusted. The eighth element is global orientation (Bartlett and Ghoshal 2002:281-299)¹³⁷, which widens the field of play for entrepreneurial activities and takes into consideration the global dynamics of the markets and cultural differences in terms of how opportunities and risks are identified and processed. Subsidiaries in various countries can be the agents of global entrepreneurial activities. The ninth element, holistic orientation (see Jackson 2006, O'Connor and McDermott 2006)¹³⁸, makes it possible to have internal and external synergies, internal harmony between the individual actors and the organisation, as well as a symbiosis of the entrepreneurial organisation with the external environment. Common mental models and scenarios strengthen collaboration and adaptation within the organisation (Bleicher 2005)¹³⁹.

¹³⁵ Wright (1989) describes the life cycle of an organisation as being in four phases: formative stage, mature stage, ageing stage and demise stage. At the start of the life cycle there is an informal, adaptable entrepreneurial spirit present. Only in the mature stage is this accompanied by the development of efficient, formal internal structures, an increase in decentralised responsibility and the establishment of central functions. In the mature stage, bureaucratic efficiency prevails and the spirit of enterprise is lost. In the fourth stage, a strong inward orientation and loss of the ability to react to changes in the external business environment are a threat to the viability of the organisation. Orientation to viability subsequently requires a well-balanced mixture of efficiency and bureaucracy on the one hand, and a spirit of enterprise and innovation on the other. This is achieved when the organisation is approaching the mature stage.

¹³⁶ According to Wright (1989) a renewal is required if either the internal configuration has developed in an inconsistent way or the symbiosis with the external environment has been destroyed.

¹³⁷ Bartlett and Ghoshal (2002) state that consideration of opportunities and risks in the global business environment requires global and local perspectives. Accordingly, a global orientation requires global competitiveness and efficiency (global integration and coordination) combined with local adaptability, as well as learning and innovation on a global level.

¹³⁸ According to O'Connor and McDermott (2006) a holistic orientation requires a way of thinking that sees the system as a whole with the parts working together. In this way, models that determine future systems can be identified and long-term effects of activities can be examined. Understanding the structure of the system makes it possible to influence the system. Thus, it is possible to develop creative and efficient problem solving.

¹³⁹ According to Bleicher (2005), adaptations to new global, structural and economic trends require team spirit, a mutually held mission and vision together with mutual recognition and trust in the collaborative relationship. Thus, it is possible to achieve innovation and change in dynamic and unstable environments through orientation and the desire to discover in the individual actors. He stresses here the organisation's own evolutionary development dynamic which is integrated into holistic change via the company culture. In addition, managers have to recognise whole contexts and interdependencies in thinking and dialogue processes with employees and achieve flexibility in structures and behaviour, as well as proactive ideas.

Global, holistic and sustainable orientation lends support to the entrepreneurial alignment of the organisation. In order to carry out the entrepreneurial task, it is necessary to examine the external business environment to identify entrepreneurial opportunities and risks and also to shape the internal business environment so that entrepreneurial strategies, decisions and activities can be implemented. Thus, it can be seen that it is necessary for an entrepreneurial organisation to consider the internal and external business environment in a systematic and uniform way and also to take account of the interactions between the organisation and the environment so that opportunities and risks can be identified and dealt with. The next two chapters take a detailed look at this.

3.2 Business Environment: Characterisation, Segments, Analysis

In the previous chapter 3.1 it was clear from the literature pertaining to the role of intrapreneurship that entrepreneurial organisations must systematically identify opportunities and risks from the external business environment whilst paying attention to current and future resources and competencies. If there is to be a proactive implementation of the selected opportunities and if threats are to be dealt with, adjustments have to be made within the internal business environment. An understanding of the internal and external business environment is extremely significant for entrepreneurial organisations. It is against this background that the following chapter 3.2 examines some fundamental aspects of understanding the business environment. For orientation, there are firstly some basic hints for environmental analysis and a short illustration of a process model for the environmental analysis as an exemplary illustration of the connection between the external environmental analysis and the internal determination of the strategic position that results from the internal and external environmental analysis. Following this introduction to the analysis of the total view of an environment analysis, the business environment is holistically described in chapter 3.2.1, as is the cultural context of global operational fields. The areas of analysis for the business environment are then outlined in chapter 3.2.2.

The analysis of the relationships between the organisation and the environment can be carried out from two perspectives (Fahey and Narayanan 1986:46-50, Bea and Haas 2005:87-89, Louw 2006:22-29)¹⁴⁰. The inside-out approach looks at the external environment from within the organisation. The outside-in approach (Malik 2008)¹⁴¹ looks firstly at the external environment and from there at the business. Both perspectives help an organisation to identify the internal adjustments necessary for changing external framework conditions. They also help to reflect on entrepreneurial strategies, decisions and activities.

According to Chandler (1962)¹⁴², Mintzberg (1993)¹⁴³ and Ansoff (2007)¹⁴⁴, an environment-strategy-structure approach should be adopted in order to achieve a *fit* between the environment and organisation strategy, especially if it is to be in tune with the company structure and the company culture. In what follows, this approach serves as a guide in terms of systemising the fundamental relationship between the environment and the organisation so as to make it possible to examine the entrepreneurial issues of an organisation within the context of the relevant environment. Johnson and Scholes (1993:75-111)¹⁴⁵ pursue an outside-in approach and specify a five-step model for the way forward. Firstly, there must be a characterisation of the business environment which relates to networks and complexity, dynamics, uncertainty and diversity.

¹⁴⁰ See Fahey and Narayanan (1986) which require an integration of both approaches; Bea and Haas (2005) trace the historical perspective from the inside-out approach up to the outside-in approach; Louw and Venter (2006) describe a framework for connecting the inside-out perspective with the internal environment and the outside-in perspective with the external environment.

¹⁴¹ Malik (2008) states that an inside-outside-inside perspective is necessary. It appears sensible to consider the external business environment that is relevant for the business when adopting an outside-in approach. This implicitly requires firstly the adoption of an in-perspective before the external business environment is analysed. With such a focus on the relevant business environment, it is also possible to speak of an implicit inside-outside-inside perspective.

¹⁴² Chandler (1962) demands that the strategy framework must follow and that entrepreneurial opportunities can be deduced from developments in the business environment and then pursued within decentralised structures. An entrepreneurial organisation must continuously reorganise.

¹⁴³ Mintzberg (1993) proposes the necessity of internal harmony as well as consistency in relation to the external organisation situation.

¹⁴⁴ Ansoff (2007) makes explicit reference to Chandler.

¹⁴⁵ Lynch (1997:87-22) defines six basic analytical steps: (1) Observation of environmental features to learn whether predictions about development are possible; (2) Examination of the general business environment to understand events and relationships and to identify relevant influences. (3) Analysis of success factors in the industry; (4) Analysis of industry competition; (5) Analysis of competitors; (6) Analysis of customers.

3. Intrapreneurship and the global business environment

As a second step, general influences on the business environment are identified and examined taking the past and the future into account. After an analysis of the competitive environment, it is possible to attain an intermediate position whereby there is an understanding of the business environment and to identify relevant trends and important influences. The fourth step is to investigate the strategic position of the organisation in relation to the competition and customers using a structural analysis. In so doing, as well as examining one's own market position, the current and future attractiveness of the market segments in question has to be examined. It is not only the market position in the business market that has to be focused on, but also strategic positioning in the factor market. The fifth step then enables identification of entrepreneurial opportunities and risks. The implementation of entrepreneurial opportunities and dealing with risks displays the strategic position (see figure 35).



Figure 35: Process model for analysis of environment as per Johnson and Scholes (1993:76)

The analysis of the business environment must be combined with an analysis of the business resources. This systematic process enables the organisation to sharpen its view of the external business environment within which an organisation operates. Due to growing uncertainty in the business environment, it is more and more necessary to think strategically as well (Johnson and Scholes 1993:111)¹⁴⁶.

¹⁴⁶ Johnson and Scholes (1993) point out in this context the relevance of organisation culture, organisation structure and the quality of personnel management for successful adaptation of the organisation to changes in the external business environment.

3.2.1 Concepts for describing the business environment

For the development of a strategic position through entrepreneurial activities and the examination of the role of intrapreneurship, it is necessary to have a holistic understanding of the global and dynamic business environment. Chapter 3.2.1, gives a first look at the characteristics of the relevant business environment (see chapter 3.2.1.1), the whole business environment and the cooperation of the individual components (see chapter 3.2.1.2), and also the cultural peculiarities in the global operational fields (see chapter 3.2.1.3) so that the action field of the entrepreneurial organisation can be explored thoroughly. Secondly, the enquiry takes a look at the individual components and dimensions of the business environment as areas of analysis (see chapter 3.2.2) so that the entrepreneurial action field can be described alternating between consideration of the whole and consideration of the individual components of the business environment.

3.2.1.1 Nature of the business environment

Companies must stand their ground in different environments as well as select their strategic positions depending upon the nature of the environment. Changes in the business environment must be met with adaptations and reactions from within the organisation at a number of different levels. The relevant environmental characteristics will determine the necessity, type and effect of entrepreneurial activities (Sathe 2003:41-52). A diagnosis of the nature of the environment in terms of input and output is thus an important requirement for determining the required entrepreneurial intensity (Morris et al 2008:69-76)¹⁴⁷ and the entrepreneurial activities to be selected. In particular, characterisation of the business environment may take place in accordance with the availability of resources or the total prevailing complexity and dynamics in relation to changes and characteristics of products, market structures or available technology. For Aldrich (2008), it is critical that every organisational change takes the internal characteristics of the organisation and the external environmental characteristics into account.

¹⁴⁷ Morris et al (2008) define the entrepreneurial intensity of an organisation bearing in mind the frequency and scope or degree of entrepreneurial activities. These can vary in the course of time and are at a higher level in turbulent environments to secure viability and growth.

3. Intrapreneurship and the global business environment

In addition, he proposes an evolutionary model (Population Ecology Model) and postulates that defining the selection unit is an important issue. These could be individual organisation routines and competencies, batches of routines and competencies, organisations or even sectors (populations). He defines the organisation as the central actor. Aldrich asserts that the intensity of entrepreneurial action varies in different business environments. If one is to pursue his evolutionary perspective, organisations within the business environment must consider in a global context the other organisations as well as the collective effects of the actions of all organisations in a sector. The central focus here is on the business environment as the resource controller. Accordingly, the business environment can be characterised by considering the availability of resources.

According to Aldrich (2008:56-74), six environmental dimensions can be defined which have a particular influence on the availability of resources:

- First dimension: the environment capacity defines how well companies can cover their resource requirement in the defined environment. The wealth of resources attracts other companies. Paucity of resources leads to disaffection or to a more efficient use of resources.
- Second dimension: the degree of homogeneity of the environment defines the degree of differentiation of the firm's marketable products and services.
- Third dimension: the degree of environmental stability determines to what extent companies can optimise and establish their organisation structures and routines when dealing with the business environment.
- Fourth dimension: The concentration of resource distribution within the environment determines whether it is possible to learn from how resources were generated historically, in other words, the development of better strategies for generating resources.
- Fifth dimension: The degree of achievement by protected areas defines how far individual companies can fall back on a protected area when generating resources.
- Sixth dimension: The degree of environmental turbulence, defined by the strength of increased networking within the environment, determines the degree of predictability of changes and how far the future can be planned.

3. Intrapreneurship and the global business environment

Aldrich (2008:70,71) states that the six dimensions for analysing environment types in accordance with Emery and Trist (1965) can be combined into four environment types (see figure 36). Using these four environment types, it is possible to identify opportunities and dangers of resource shortages when generating resources.

Bea and Haas (2005:90)¹⁴⁸ define four types of environment using the criteria of complexity (number and diversity of the elements of a business environment and its interdependence) and dynamic (changes of the elements and their interdependence in the course of time): (1) simple static conditions, (2) simple dynamic conditions, (3) complex static conditions, (4) complex dynamic conditions. The phenomenon of uncertainty (see e. g. Kar and Duin 2004) follows then from the complexity and dynamic (see figure 37).

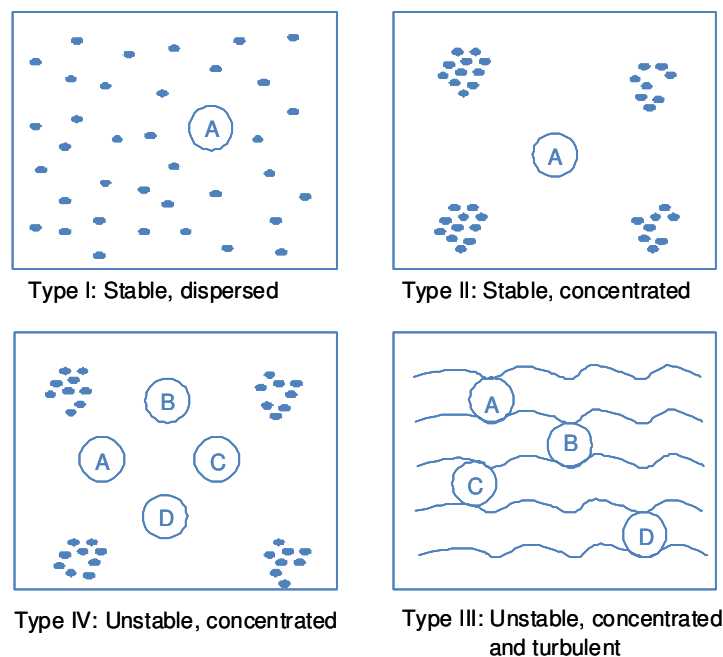


Figure 36: Resource distribution in different environment types as per Aldrich (2008:71)

¹⁴⁸ Khandwalla (1977:333-341) names five features of the external business environment: turbulence, hostility, diversity, technical complexity, restrictiveness. A turbulent business environment offers many entrepreneurial opportunities and risks and demands intensive information gathering about the changes in the business environment. A hostile business environment in times of crisis leads to a greater standardisation of production and to more centralisation. Diversity leads to different local (differentiated) structure with coordination problems and efficiency losses due redundant structures and activities. Within the organisation sub-cultures demand active coordination and integration. Technical complexity leads to long-term planning and commitments together with automation and the use of IT in production. Many restrictions in the business environment shrink strategic options, but enable optimisation taking into account the additional conditions. According to Khandwalla, entrepreneurial organisations have to simultaneously take into account the various effective environmental characteristics.

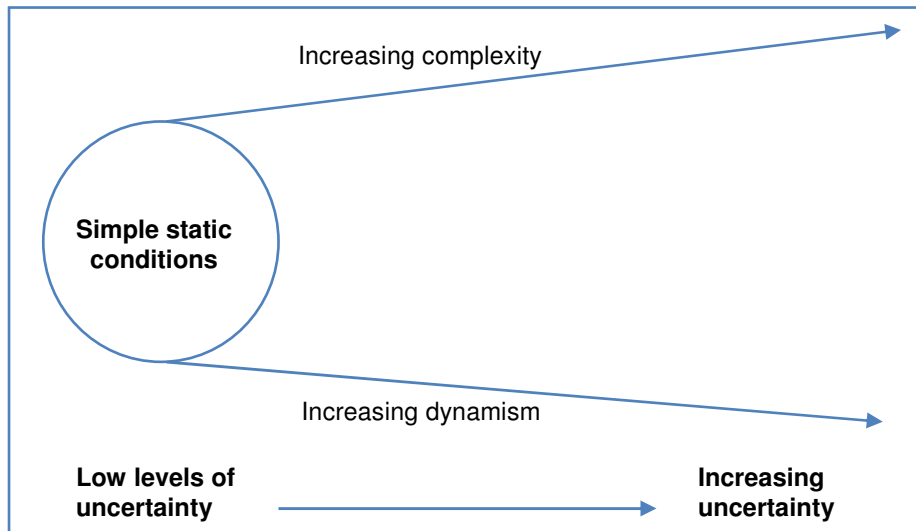


Figure 37: Increasing uncertainty with increasing complexity and dynamic as per Johnson and Scholes (1993:78)

Ansoff (2007:29-43) presents a historical perspective on the development of the business environment and notes that there was a significant increase in complexity and dynamic of change as long as three decades ago. The change in the business environment is characterised by a move away from historical perspectives. Companies had to set themselves challenges with new technologies, new competitors, new consumer preferences and new business challenges. Much of the relevant change thereby had its origin from outside of the sector itself and was difficult to foresee. He defines five different levels of environmental turbulence:

- (1) Stable environment (mature sector) with mature, defined products and little change in technology and market structure;
- (2) Reactive environment (sector in early phase of growth) with little adaptation of products, little change in technology and moderate shifting of market structure, expansion in known markets;
- (3) Anticipative environment (sector in late stage of growth) with product innovations based on known technology, little shift in market structure;
- (4) Researched environment (sector in search of direction) with new product concepts, application of new technology, expansion in foreign markets;
- (5) Creative environment (sector in change) with new, innovative products, technological breakthroughs, large shifts in the market structure, creation of new markets.

If one starts from the position of a newly-founded sector with a high degree of competition and growth dynamic, lots of innovation and therefore high turbulence, a maturing of the sector would result in less turbulent environmental situations with lower growth, stagnation or a decline. Individual happenings in the business environment, for example as a result of technological progress and globalisation, could then overlay this natural pattern and tend to lead to an overall increase in environmental turbulence. The various environments each require different reactions from the organisation and thus this also accounts for differing necessities and intensities for entrepreneurial activities and innovation (Ansoff 2007:23)¹⁴⁹.

Most globally active organisations must assert themselves in business environments that are turbulent, unstable, driven by technology and difficult to predict¹⁵⁰. In such a complex, dynamic and competitive environment, purely analytical company management can often be of only limited value (Winzker 2006:5, Grant and Nippa 2006:649).

For an entrepreneurial organisation, a key strategic task therefore, is to systematically examine and characterise the business environment in question as far as possible with a holistic approach so that relevant environment segments and opportunities and risks can be identified and also in order to be able to determine suitable actions based on the company's own competencies and available resources (Bea and Haas 2005:86-110).

As part of the process, there must be a systematic prioritising of potential entrepreneurial activities so as not to select too many or too few opportunities than are necessary for securing the future (Daniels et al 2007:416). As well as a general characterisation of the environment, an entrepreneurial organisation must therefore systematically specify and analyse the relevant segments of the business environment. The following chapter gives some indications of what the components of the business environment are.

¹⁴⁹ Ansoff (2007) demands an extension of the microeconomic behaviour model based on systematic, psychological and sociological argumentation as a central behaviour assumption, but confirms the fundamental striving for self interest of the *environment-serving organisation* for the security of the long-term viability of the organisation in interplay with the environment.

¹⁵⁰ The historical development of the business environment is described by inter alia Ansoff (2007:29-39); Besanko et al (2007:43-73); Chandler (2004).

3.2.1.2 Specification of the business environment

The literature contains various approaches to the specification or classification of the environment of an organisation¹⁵¹. One useful type of analysis (Worthington and Britton 2000:6, Palmer and Hartley 2002:5) defines a distinction between external factors in the general environment (macro environment)¹⁵² and external factors in the operational environment (micro environment)¹⁵³ which tend to have an effect on a firm (see figure 38).

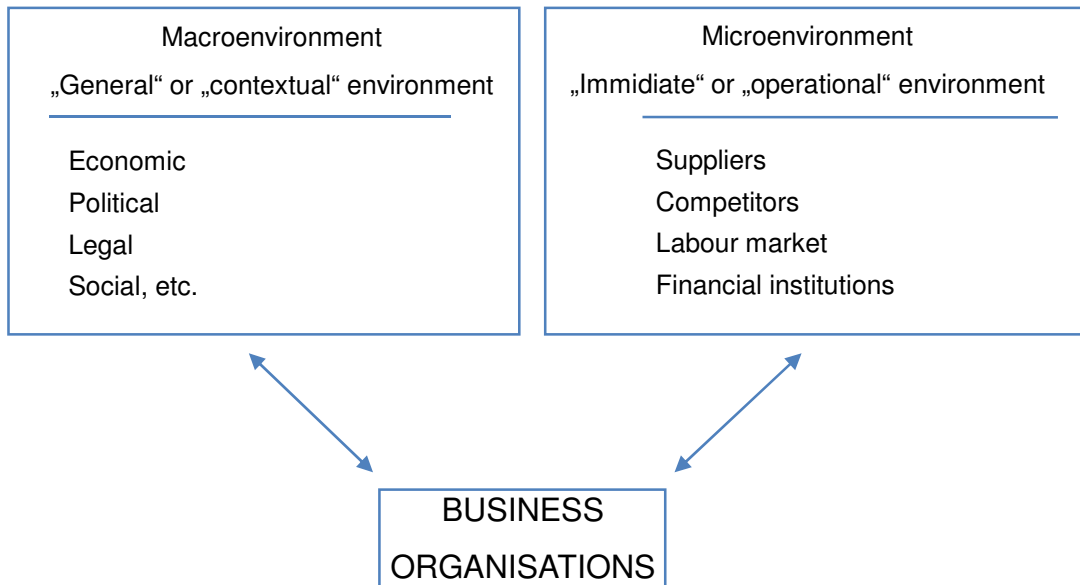


Figure 38: Two levels of the business environment according to Worthington and Britton (2000:6)

Events in the macro environment can more directly influence organisations or indirectly influence them in that they influence the micro environment. The micro environment, in turn, has a more direct effect on the organisation (see figure 39).

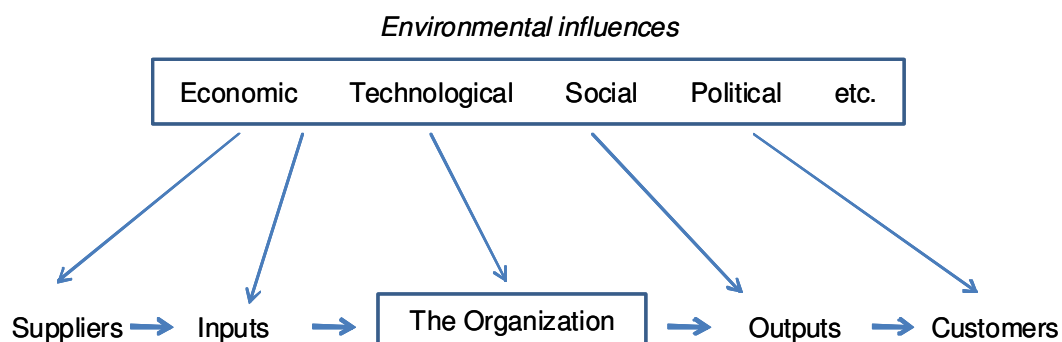


Figure 39: Organisation and business environment as per Palmer and Hartley (2002:5)

¹⁵¹ Andrews (1987:35-39) includes technology, ecology, economy, industry, society and politics as components. Changes in these areas would bring new opportunities and risks.

¹⁵² This macro environment is also described as the global business environment.

¹⁵³ The micro environment is also often described as a company and industry-specific environment.

3. Intrapreneurship and the global business environment

Kerr and Littlefield (1974:7-58) take into account the environmental analysis together with the general economic climate¹⁵⁴ and the market dimension¹⁵⁵ when defining further relevant areas; these are the technological dimension, the international dimension, the internal company dimension and the legal, ethical and social dimensions. The technological environment has a particular influence on the production of new and existing products, their distribution and forms of communication. With an eye on the increasing significance of the international dimension of entrepreneurial activities, the differences in the various national environments should in particular be taken into consideration. The organisation structure, the cost structure as well as the harmonisation of the organisation's objectives with the individual objectives of the actors are cited as the central internal company design areas. When it comes to the legal dimension, the legal situation regarding competition is said to be of particular importance. The ethical and social dimension also defines the framework for market communication. Overall, Kerr and Littlefield emphasise the necessity of placing human needs at the forefront when dealing with the market in an entrepreneurial way. In their analysis of environment classification (see figure 40), they make reference to Dawsen (1969).

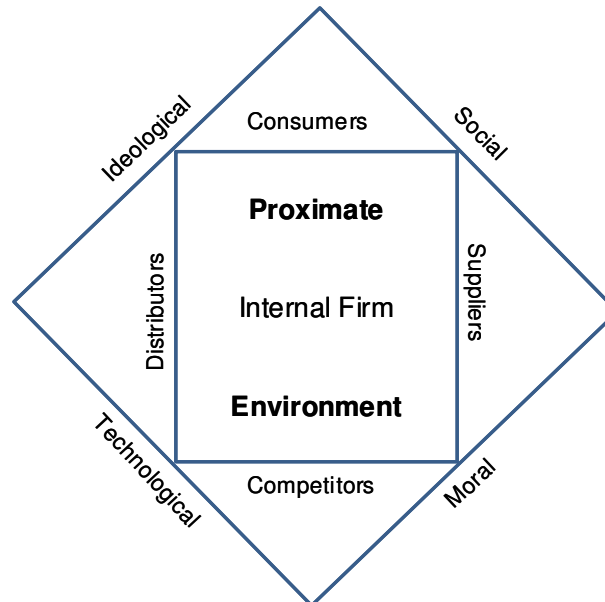


Figure 40: Business environment according to Dawsen (1969:32, quoted from Kerr and Littlefield 1974:46)

¹⁵⁴ Kerr and Littlefield (1974:8) name, for example, political economy, economic stability and the income situation, training standards, capital accumulation as well as quantitative and qualitative employee potential, interdependence between private and public economy and ability to deal with change in both areas.

¹⁵⁵ Kerr and Littlefield (1974:10-13) cite central elements to include the market structure and consumer behaviour.

3. Intrapreneurship and the global business environment

Within the entrepreneurial organisation, the individual actors should wish to and be allowed to act entrepreneurially. Within the indirect proximate environment, the entrepreneurial organisation must achieve a balance in its relationship to customers, competitors, suppliers and distributors. In the relationship with the external business environment (ultimate environment), entrepreneurial organisations must operate in a way that takes account of the existing internal needs and values of companies. Drivers of the external environment dynamic are, in particular, technical progress, the improved production efficiency associated with this, an increased intensity of competition in the sector, changing values along with changed consumer wishes. Inside the organisation, human resources management takes on greater significance ¹⁵⁶.

Weinshall (1977:383-428) states that, as well as the competitive environment, the individual national business environments are also particularly relevant for the success of entrepreneurial activities in the areas of products, services, markets and technology. International companies would also be able to enter new and attractive foreign markets with their products. In addition, five relevant environment systems in the respective national business environment have to be analysed in order to make a judgment of the attractiveness of a country.

In the labour market system, the availability of management and workers is said to be of particular significance. In respect of the capital markets, a country has to be judged in terms of the availability of capital for investment. An important factor for market attractiveness in the consumer goods market is the purchasing power of consumers. The acceptance and availability of modern technology also define how attractive a location (a country) is in terms of social structure, cultural values and the political framework. According to Weinshall, these five general environment systems together form the total competitive environment of an organisation (see figure 41).

¹⁵⁶ See also Tyson (1995), who describes the effects of changes in the external business environment on human resources management.

3. Intrapreneurship and the global business environment

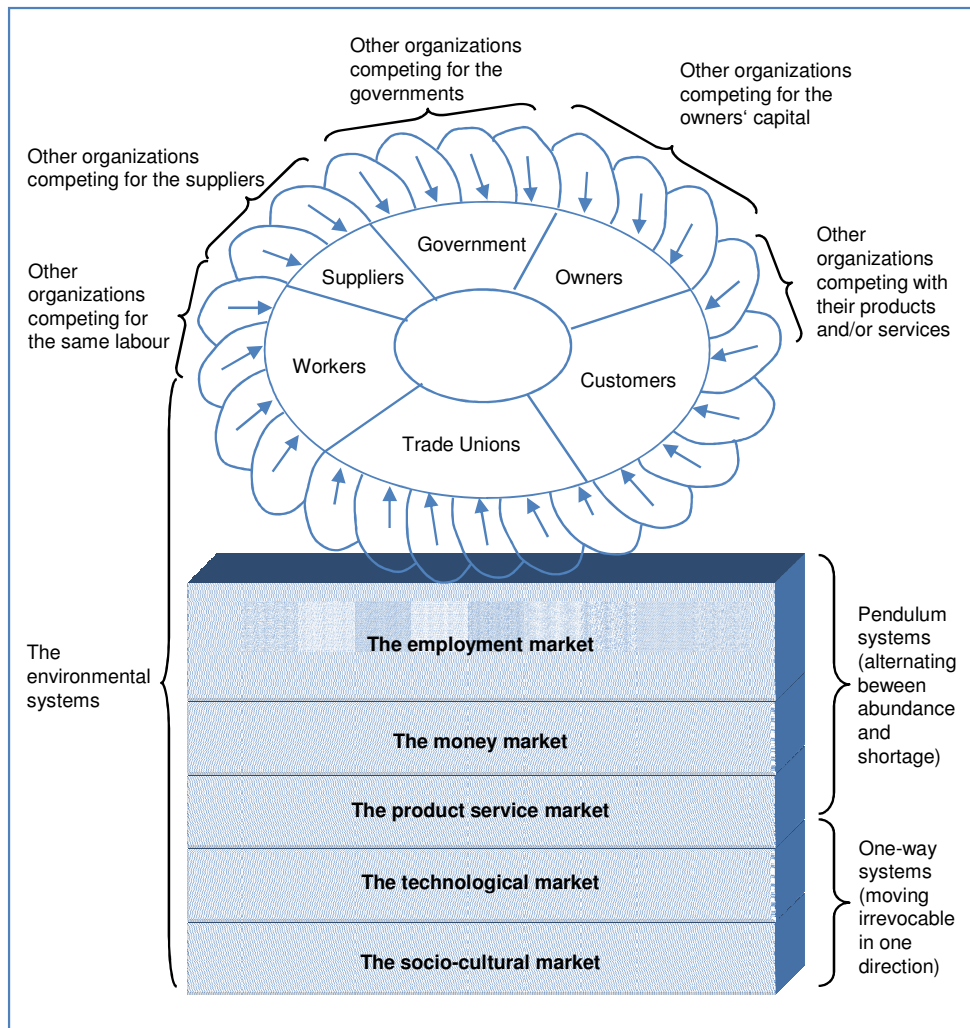


Figure 41: Business environment as per Weinshall (1977:390)

Fayerweather (1978:79-98) distinguishes basically between the (political) economical system and the social system in his description of the national business environment. These two systems both interact in turn with the company system. Global companies would act as intercultural agents of change and influence the international business environment, with the specific country cultures themselves influencing the company cultures. The social system, like the economic system, would be steered by the political system, whilst the economic system in turn would control resource allocation and economic activities. All actors, then, would have individual positions and roles in the various sub-systems. The social system and therefore, also individual actions would be dictated by the value system of a company¹⁵⁷.

¹⁵⁷ Fayerweather (1978:84-93) sees the value system as being the result of other societal sub-systems. The central question here is the way in which a society goes about competition and co-operation.

3. Intrapreneurship and the global business environment

The company system as part of the total system would then take on the function of making available within the economic system certain of the population's goods or services. The economic system would be closely linked to the social sub-system (see figure 42) such that the entrepreneurial decisions of the organisation inevitably take account of the various country-specific environmental elements and the social orientations. Thus, entrepreneurial activities of international companies might be successful if they harmonise with the orientation of the local community and, at the same time, can make a contribution to the development of the community. It is precisely this use of cultural differences for innovation that can establish entrepreneurial opportunities in international markets¹⁵⁸.

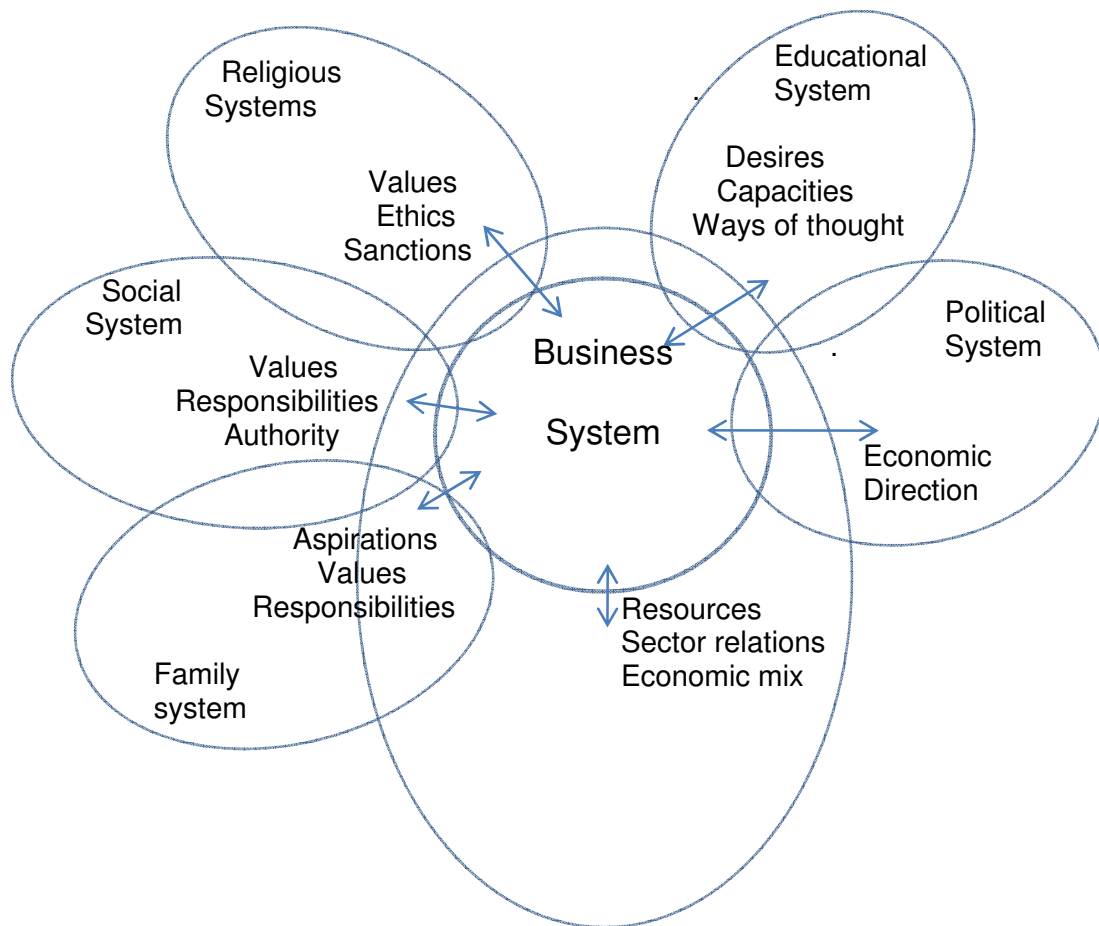


Figure 42: Interaction of systems in a society as per Fayerweather (1978:83)

¹⁵⁸ Fayerweather (1978:96-98) argues for an active adaptation of entrepreneurial activities to local markets based on one's own strengths and not for a strict acceptance of local conventions when entering foreign markets. In this way, the competitiveness of the organisation can increase and at the same time, this can make a contribution to the development of the local community. Entrepreneurial organisations must, therefore, firstly understand the local market and local customers in order to be able to use their strengths in entrepreneurial activities for specific adaptations to the foreign market and its own company systems (see also Fayerweather 1970:19-29).

3. Intrapreneurship and the global business environment

For Fahey and Narayanan (1986:27) companies must firstly understand current and potential changes in the respective business environment within geographical areas and secondly, for the purpose of strategic decisions, they must identify relevant information from the three-tier system of the general environment, the sector environment and the task environment (see figure 43) and thirdly, they have to learn and impart strategic thinking by way of an analysis of the relevant business environment.

Ulrich and Probst (1991:50-56) define the business environment as having a kind of circular interdependency with the company. With this, they emphasise the indispensable interdependency in terms of information. As well as the economic dimension with market relations, they define the social, technological and ecological dimensions of the business environment whereby the company can be seen as a part of the superordinate social system (see figure 44). Ulrich and Probst propose the state, customers, competitors, providers of capital, suppliers and employees as being institutions in the business environment¹⁵⁹.

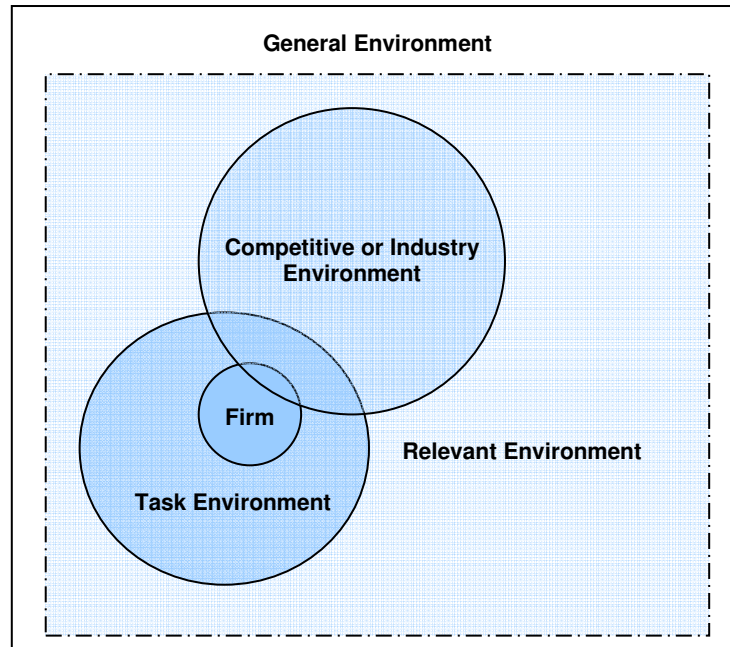


Figure 43: Company and business environment as per Fahey and Narayanan (1986:27)

¹⁵⁹ Malik (2008:201) explicitly includes the media as institutions and points out that the dimensions (he calls these spheres) and institutions for the respective examination are modular (and depending on the purpose, can be structured more steeply). Institutions and spheres would alternate to complement themselves and the change of system perspectives is eased by the intended redundancy such that the relevant developments in the environment can be more easily discovered.

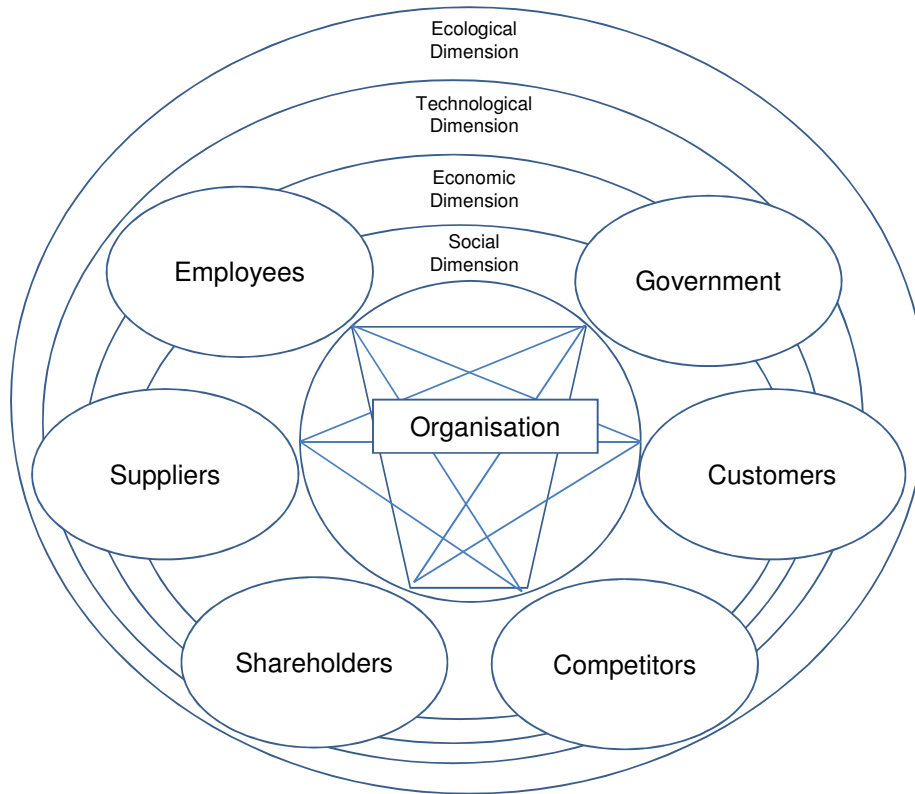


Figure 44: Institutions and dimensions of the business environment according to Ulrich and Probst (1991:54)

Ulrich and Probst (1991:195-221) observe the effects of the business environment of strategic action fields for entrepreneurial activities via an environment influence matrix. In this process, entrepreneurial activities must firstly be sought after and judged with creative thinking within a creative process, so that entrepreneurial decisions can be taken for tangible actions with an overall entrepreneurial strategy in mind. Problems and opportunities can be identified via the perception and assessment of the reality and checked by taking the resource needs and the company's own potential into account.

Within this process, entrepreneurial strategies and activities in various scenarios within the different potential future framework conditions are to be taken into consideration. The relationship between the relevant framework conditions and the alternative entrepreneurial actions can be analysed systematically using a matrix (see figure 45).

3. Intrapreneurship and the global business environment

Strategic fields \ Environmental factors	Business cycle	Exchange rates	Regulations	Technological Development	Ethics and Society		
Product Development	1	1	2	3	3		
Mergers & Acquisitions	2	3	2	3	1	1	
Manufacturing processes	1	1	2	3	2	1	
Entry new markets	3	3	3	1	1	0	
Finance	2	3	1	0	0	1	
Human Resources	3	0	1	2	3	2	
Joint-Venture						3	

Figure 45: Environment influence matrix as per Ulrich and Probst (1991:205)

The key environmental factors determine the degree of influence on the entrepreneurial action fields and the measures for implementation of a defined entrepreneurial strategy. With such a matrix, the intensity of influence¹⁶⁰ of the environmental factors on individual fields of action or in total can be assessed and documented. By doing this, it becomes clear how far individual action fields are influenced by the various environmental factors¹⁶¹.

In this way, the chances of success of alternative entrepreneurial strategies and activities can be checked in conjunction with influencing factors from the business environment within a systematic process that has access to the available experience and specialist knowledge in an organisation; also environmental factors that are critical for success¹⁶² can be identified taking into account various scenarios concerning their potential development.

¹⁶⁰ In the example, the following scale is defined: 0 = no influence; 1 = little influence; 2 = big influence; 3 = very big influence.

¹⁶¹ A high number of lines means that the action field is strongly influenced by the business environment and alternative environment scenarios should be examined more closely in order to evaluate the chances of success in different future scenarios.

¹⁶² A high number of columns means that success of entrepreneurial strategy strongly depends on future development of environmental factors.

3. Intrapreneurship and the global business environment

Thus, Ulrich and Probst provide a clear and easy-to-use instrument for describing the environment, whilst at the same time keeping the effect of the individual environmental factors on strategic entrepreneurial activities in mind.

Tepstra and David (1991:223-231) classify the external business environment into three sectors. The Eco-system as a physical environment is defined here as natural resources, climate, geography as well as natural plants and animals. The company's task environment is described here as the business and market structures, the competitive situation, the available technology, suppliers, customers and partners. The corporate environment is comprised of social relations, language, welfare and the infrastructure, together with the legal system and the political system. These three sectors form the environment for the internal business environment of national and international organisations (see figure 46). The internal business environment is a function of the company strategy, the organisation structure, the company systems and the company culture. The physical environment can then be illustrated as a natural environment within the corporate environment.

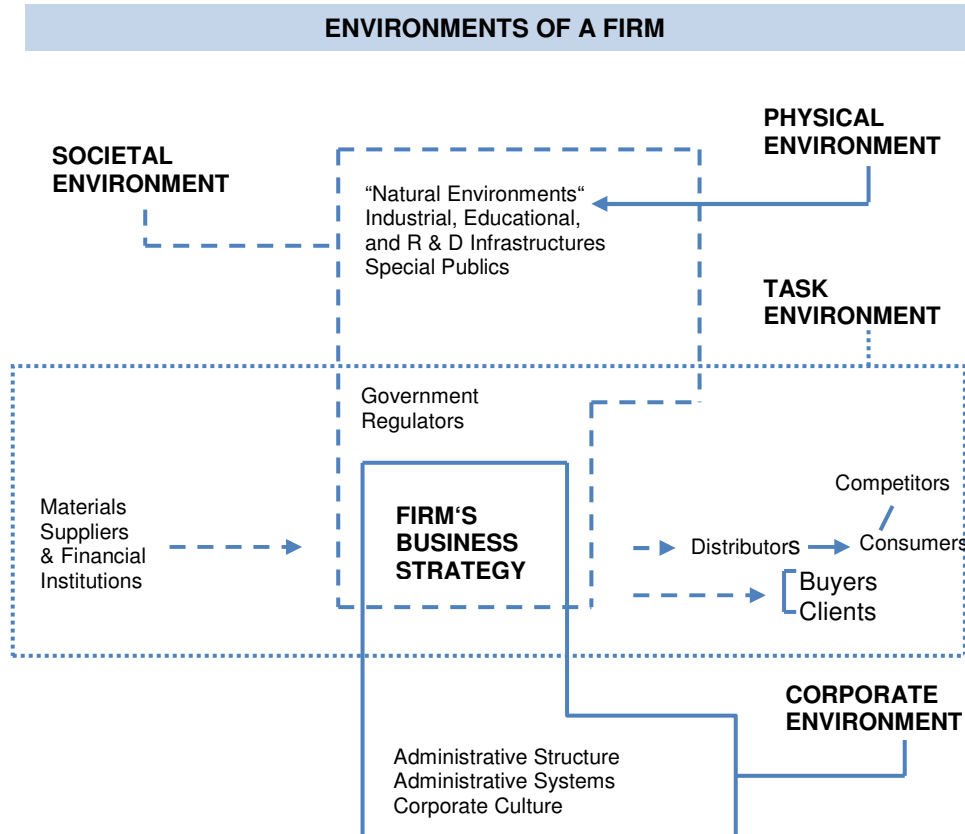


Figure 46: Business environment according to Tepstra and David (1991:224)

3. Intrapreneurship and the global business environment

Global companies realise internal and external entrepreneurial activities at home and abroad and thus operate in culturally different surroundings. They have to operate a globally entrepreneurial strategy and in so doing, take into account international trade, finance, currency and political systems when implementing entrepreneurial activities.

With his layer model (see figure 47), Dülfer (1997:248-270) provides a conceptual framework describing environmental effects on the business; the purpose is to show the adjustments that need to be made to unknown, natural and cultural conditions within the context of global, entrepreneurial initiatives. As a first step, there must be a structural analysis of the task environment. Here, the organisation as a whole and individual actors in the organisation enter into an interaction with the external partners in the task environment. A second step could include an analysis of the natural and cultural environmental influences that impact upon the behaviour of the actors.

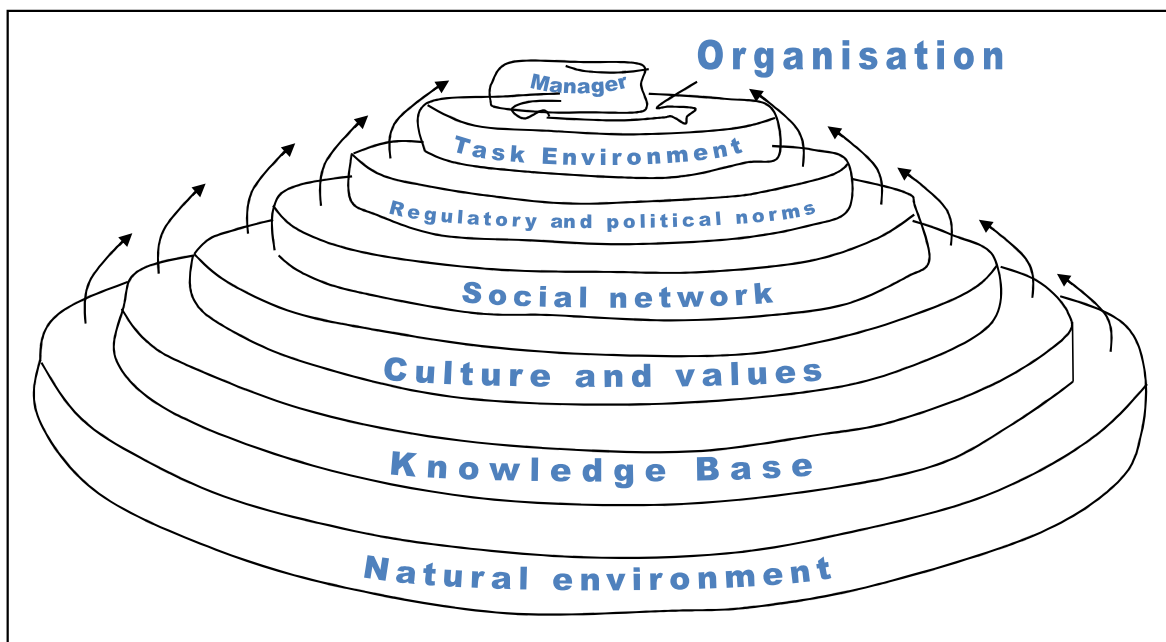


Figure 47: Layer model for considering the environment as per Dülfer (1997:261)

The task environment then develops the external business environment using the natural and cultural framework conditions. The influencing relationships and feedback between the individual layers and thus the networking of the business environment is made clear by Dülfer with a vertical cut through the layer model (see figure 48).

3. Intrapreneurship and the global business environment

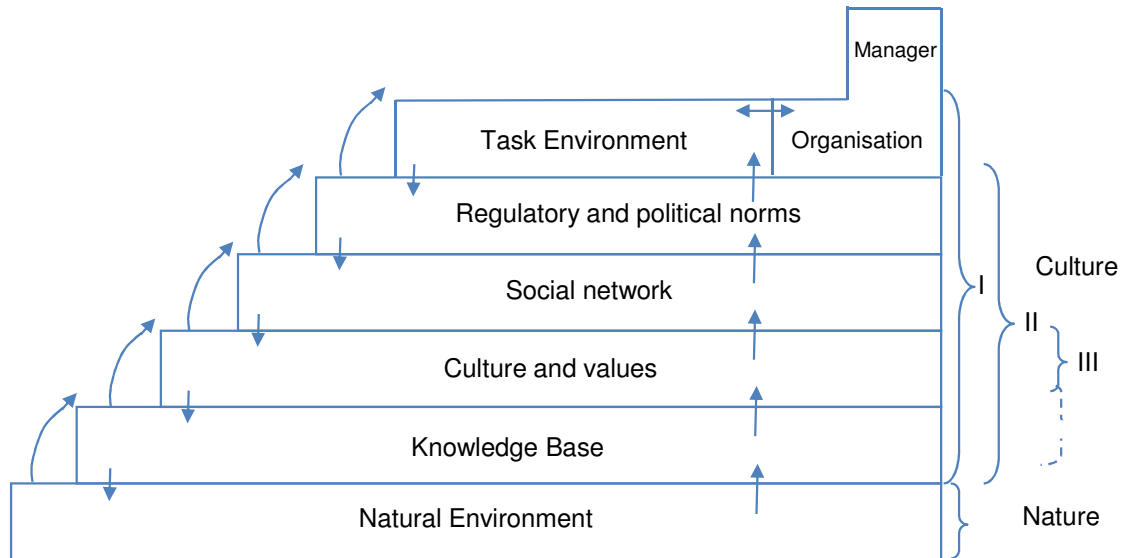


Figure 48: Vertical cut in the layer model as per Dülfer (1997:261)

The company director or manager, the providers of capital, possible cooperation partners and employees are central figures in the internal company system (see figure 49).

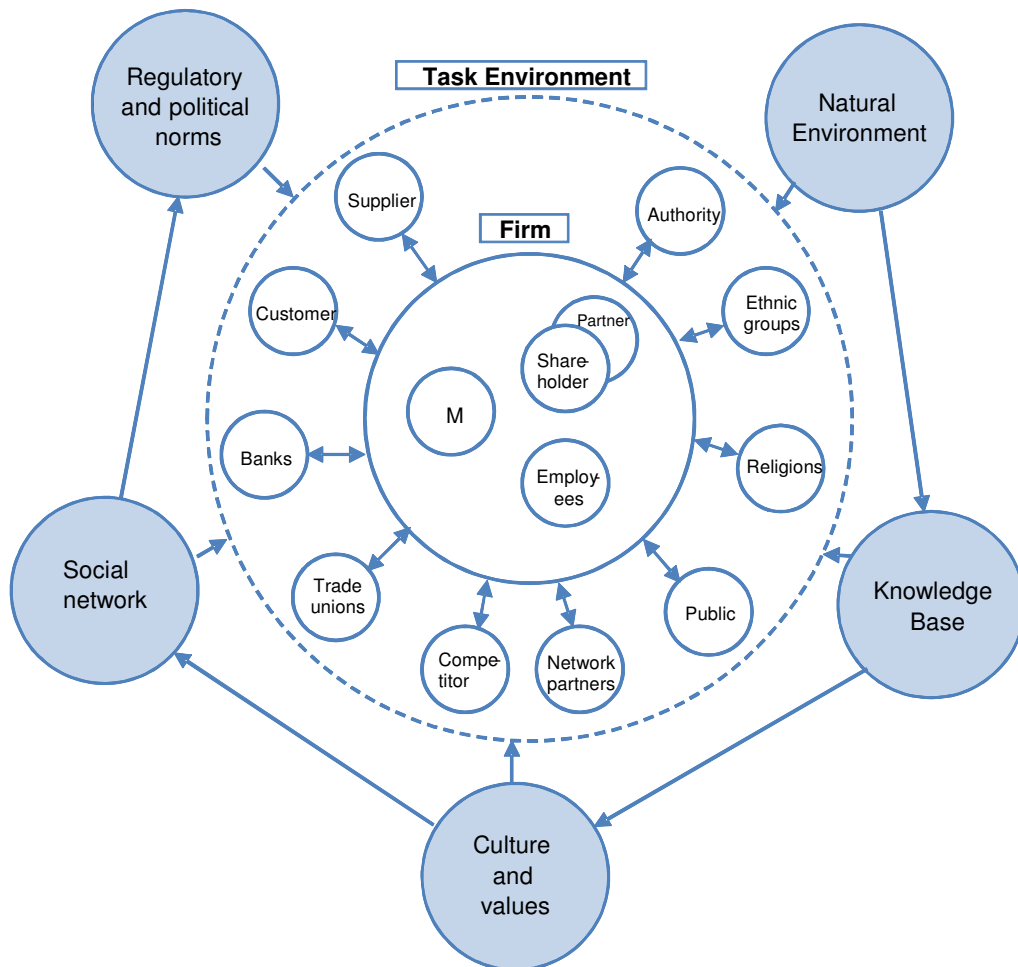


Figure 49: Simultaneous influence of the natural and cultural framework conditions on the task environment and the business according to Dülfer (1997:262)

3. Intrapreneurship and the global business environment

Suppliers and customers, banks and unions, competitors and network partners, official authorities and public, as well as religious or ethnic authorities, are given as external interaction partners in the task environment of a particular country. Other natural (ecological) and cultural environmental elements, such as the legal-political norms, social relationships and links, culturally restricted values and the degree of recognition of reality and technology all then have an effect on the task environment and a direct effect on the business¹⁶³.

According to Hitt et al (2005:38-41), companies must first understand the six segments of the general business environment, keeping in mind the sector and the companies operating therein and they must recognise developments at an early stage. Furthermore, entrepreneurial organisations must use the factors that directly impact on the sector for their own positioning and must also analyse the competition. In so doing, their activities, intentions, and reactions must be identified and taken into consideration in their own decision-making (see figure 50).

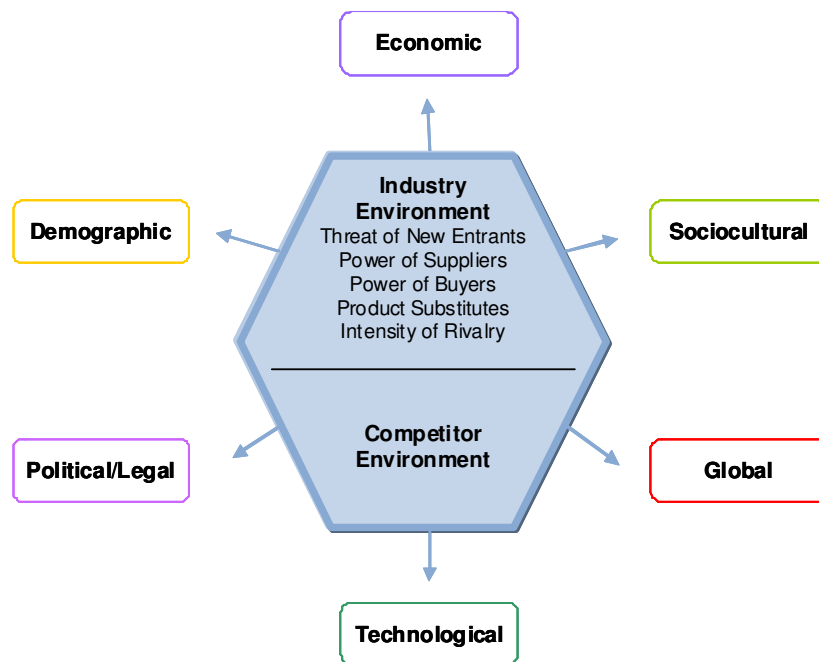


Figure 50: Segments of the external business environment according to Hitt et al (2005:39)

¹⁶³ Dülfer (1997:257) calls these further environmental elements the global environment. Because he does not mean the globally active framework conditions with this term, but rather he just wants to use a collective term for the remaining environmental elements, the label global environment is not applied here. Even Dülfer himself considers the description of the remaining environment as global environment as being problematic.

3. Intrapreneurship and the global business environment

Palmer and Hartley (2002:4-29) propose three central elements of the business environment (see figure 51). The organisations and actors in the business environment who directly influence the activities of an organisation are identified as a micro environment. Also part of the micro environment are competitors, sales partners, customers or suppliers and other stakeholders. The elements that indirectly influence the organisation are identified as the macro environment. Of particular note is that the general trends and happenings from the macro environment influence the relationships of the organisation with the micro environment. The internal business environment determines the ability of an organisation to respond to entrepreneurial opportunities and risks. In particular, structures, processes and motivated actors shape the internal business environment.

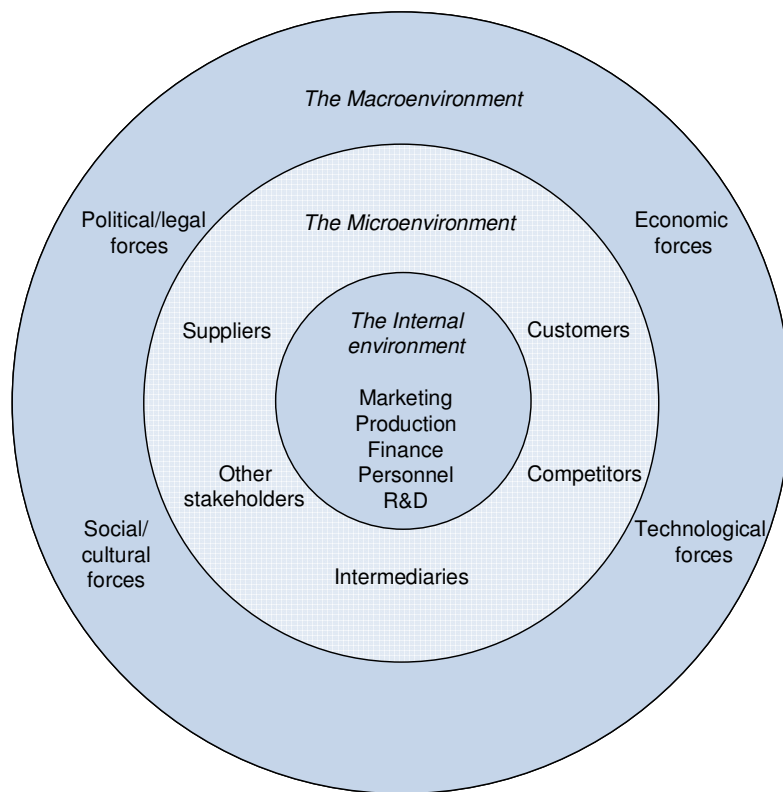


Figure 51: Internal business environment, micro environment and macro environment as central elements of the business environment according to Palmer and Hartley (2002:5)

Morrison (2006) uses the internal business environment as a starting point to describe the connection of an organisation to the external international business environment (see figure 52). This external business environment comprises various dimensions which contain, in particular, socio-cultural, economic, political, legal and technological factors.

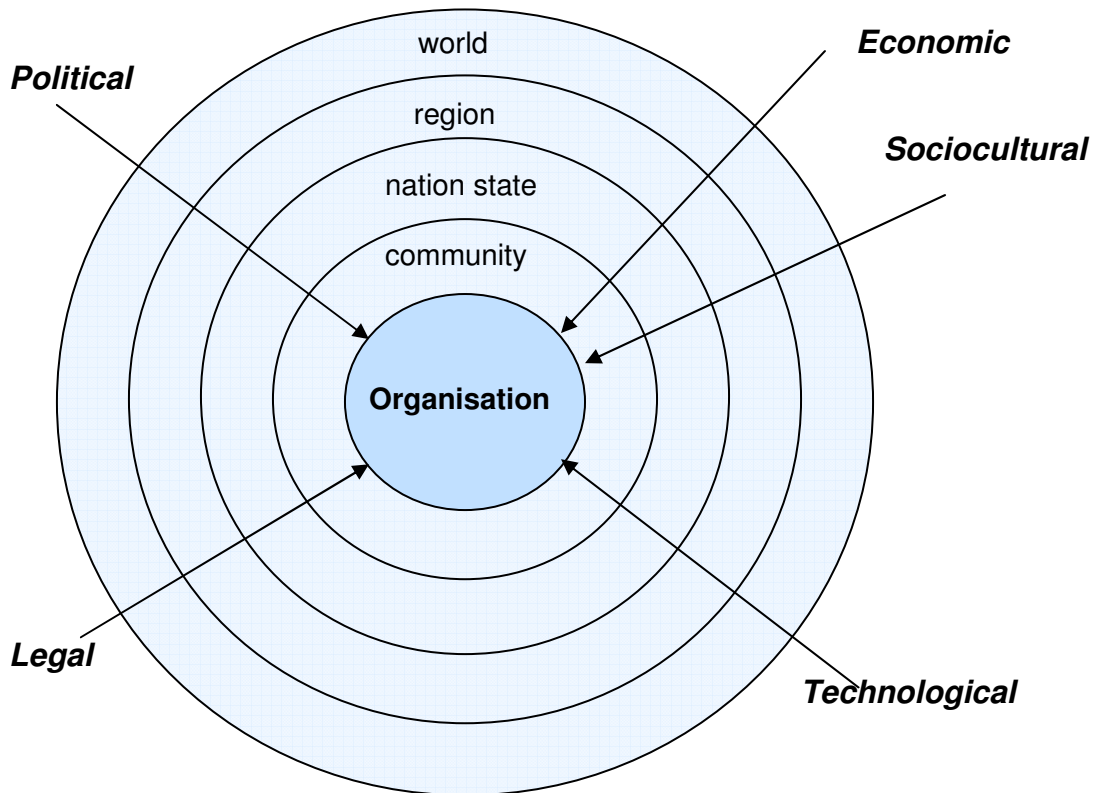


Figure 52: Organisation and international business environment as per Morrison (2006:4)

Since the entrepreneurial activities of a globally active company no longer relate only to operational fields domestically, international aspects and forces must increasingly be taken into account when considering the external factors of the business environment which, in turn, would interact with national and local factors. The networking of the organisation with the business environment exists, therefore, at various geographical levels.

The various concepts for specifying the business environment provide an initial overview of the environmental components which may serve as the subject matter of an entrepreneurial analysis for the identification of opportunities and risks. Furthermore, they provide important tips for carrying out a systematic analysis of the business environment.

The global context of the business environment is the justification for referring to cultural aspects when examining the role of intrapreneurship in a global economy. Also, in the next chapter 3.2.1.3, we shall examine the cultural context of entrepreneurial decisions and activities.

3.2.1.3 Cultural Context

Taking on board the trend of extending company operations and market activities beyond national boundaries (Dess and Lumpkin 2003:51), globally active companies must take into consideration and make use of the respective cultural context in their entrepreneurial decision-making (Dülfer 1997:217)¹⁶⁴. Intercultural communication and cooperation support international entrepreneurial activities (Schuster and Copeland 2006:7-19)¹⁶⁵. Differing national cultures must be examined bearing in mind the differences from one's own local culture and in relation to the organisation's culture (Hofstede 2001:440-445).

Trompenaars and Hampden-Turner (1998) assert that the way in which something functions cannot easily be transferred into another cultural context¹⁶⁶. Thus, there is no one best way for management and organisations. Firstly, one's own culture and cultural differences have to be understood in general before global and local aspects of the culture from the viewpoint of internationally active organisations can be analysed and used for entrepreneurial decisions¹⁶⁷.

Thus, the balancing of company-specific standardisation in the design of the organisation or in the systems and processes on the one hand, and the appropriate adjustment to local peculiarities on the other, become the focus of the entrepreneurial organisation. The successful realisation of international entrepreneurial activities requires a deep knowledge of the cultural template, i.e. particularly about the way in which actors resolve problems and dilemmas (Trompenaars and Wooliams 2003:30)¹⁶⁸.

¹⁶⁴ Dülfer (1997) states that consideration of natural and cultural environmental influences in international company activities is in practice often neglected and in academic approaches, very much neglected.

¹⁶⁵ According to Schuster and Copeland (2006) differing views of the world and various assumptions about desirable behaviour are often the cause of misunderstanding in intercultural communication.

¹⁶⁶ Dülfer (1997:221) speaks in this context of the degree of foreignness of the host country environment: the decision-maker cannot recognise or identify the contentual effects of present and future environmental influences.

¹⁶⁷ If this argumentation is to be espoused when examining the role of intrapreneurship, then it follows that this role should be seen as independent of culture in various international fields of operation.

¹⁶⁸ Trompenaars and Wooliams (2003) define a dilemma as a situation in which it is necessary to choose between two good and desirable situations.

3. Intrapreneurship and the global business environment

Trompenaars and Hampden-Turner (1998:8-11) give seven dimensions (in three topic areas¹⁶⁹) for identifying and classifying classifications of cultural differences on a national level:

1st dimension (Trompenaars and Hampden-Turner 1998:38-50): cultures in which rules and procedures are complied with consistently in order to achieve equality within the system and consistency of central control (universalism), as against cultures in which rules serve as a guideline which, where necessary, are adapted in actual situations so that consideration can be given to relationships and in order to avoid inhibitive bureaucracy (particularism).

2nd dimension (Trompenaars and Hampden-Turner 1998:58-69): cultures in which the individual actors see themselves principally as independent individuals who act with other actors for common targets as a means to achieve their own targets (individualism), as against cultures in which the individual actors see themselves principally as part of a group that pursues common targets¹⁷⁰ (communitarianism).

3rd dimension (Trompenaars and Hampden-Turner 1998:78-81): cultures in which emotions are shown (affective) as against cultures in which emotions are not shown and objectivity dominates (neutral).

¹⁶⁹ The three topic areas are dealings with other actors (1st to 5th dimension), dealings with time (6th dimension), and dealings with the environment (7th dimension).

¹⁷⁰ Such cultural orientation accords with the African UBUNTU philosophy (see for example, Mbigi 2005:67-77). According to this philosophy, man only becomes man as a result of inter human relations and mankind should be considered as a interwoven whole. With this orientation, the success of the group is super ordinate to the success of the individual. The feeling of community and a common purpose is transferred into a management concept for teams by Lundin and Nelson (2010). Within this, recognition through respect, trust and openness are at the fore before material reward comes into being. Based on this African value, Mbigi (2005), developed a management concept that recognises the independence of actors and striving for mutual harmony and which stands in direct contrast to authoritarian concepts. Thus, he suggests that African managers should successfully combine global management concepts with their own cultural roots. Cultural strengths (e.g. focus on market innovations in North America, focus on technological innovations in western Europe, focus on process innovations in Asia, focus on solidarity and cooperation in Africa) should be supplemented by strengthening the less strong orientations so that the holistic orientation required in global competition can become effective with specific characteristics. For a brief introduction to African management philosophy, see Werner (2007b). Rensburg (2007) demands learning from different cultures and world images so that visions and growth can be enabled.

3. Intrapreneurship and the global business environment

4th dimension (Trompenaars and Hampden-Turner 1998:92-104): cultures in which aspects and tasks that are fundamental for the business are priorities (specific) as against cultures in which multiple personal relationships and context play an additional important role (diffuse).

5th dimension (Trompenaars and Hampden-Turner 1998:106-122): cultures in which what is achieved and performance are in the forefront (achievement), as against cultures in which status (e.g. through birth, relationships, age, education) are main factors when evaluating people (ascription).

6th dimension (Trompenaars and Hampden-Turner 1998:125-144): cultures in which orientation to the future is given a high weighting as against cultures that are highly oriented to what was achieved in the past, versus cultures who focus on the present (sequential versus synchronic).

7th dimension (Trompenaars and Hampden-Turner 1998:151-160): cultures in which the effect of the natural environment on actors is at the forefront (external control, organic nature) as against cultures in which the effect of actors on the natural environment is at the forefront (internal control, mechanism nature).

In their discussion about the 7th dimension, Trompenaars and Hampden-Turner (1998:149-153) assert that a modern view of the relationship between actors or the organisation and the environment (cybernetic nature) should have, as a starting point, a concept of a viable system in which agreement should be reached on the two basic control concepts of internal and external control. The interaction between organisation and environment is then at the forefront. In terms of viability, a decisive factor is how well an organisation uses external niches and conditions when interacting with the business environment and how well they can adapt to customers, market forces and new technology.

Organisations can indeed act in the environment but cannot really control it in a way that the environment has a formative effect on the organisation. It is thus a question of achieving an advantageous *fit* of the strategy to the internal and external business environment.

3. Intrapreneurship and the global business environment

This occurs, for example, when a strategy that has developed or merely has an internal focus is adapted in accordance with external effectiveness or developed further. The necessary outward oriented approach is said to be a matter of course for some cultures (e.g. Japan or Singapore), whilst other cultures (e.g. USA and Western Europe) have to learn how to systematically analyse the external business environment. The pursuit of entrepreneurial activities is based, on the other hand, on a strong inner orientation. Cultures without this orientation have to learn an entrepreneurial culture (Low 2006), even when there is already a strong external orientation. The interplay between internal and external orientation is thus key in the pursuit of entrepreneurial activities (see figure 53).

The role of intrapreneurship and in particular its design, must therefore be seen and defined as culture-specific. Today's business environment requires both orientations to be effective, if possible, thus giving a balanced culture. A strong internal entrepreneurial orientation should therefore be combined with an external orientation that is geared to adapt to changes in the international business environment. With this, cultural differences must be seen and considered if entrepreneurial opportunities are to be identified and if consistent entrepreneurial decisions are to be taken (see Ambos and Schlegelmilch 2008). In so doing, the second dimension (individualism versus communitarianism) and the sixth dimension (sequential versus synchronic) must be allocated greater importance.

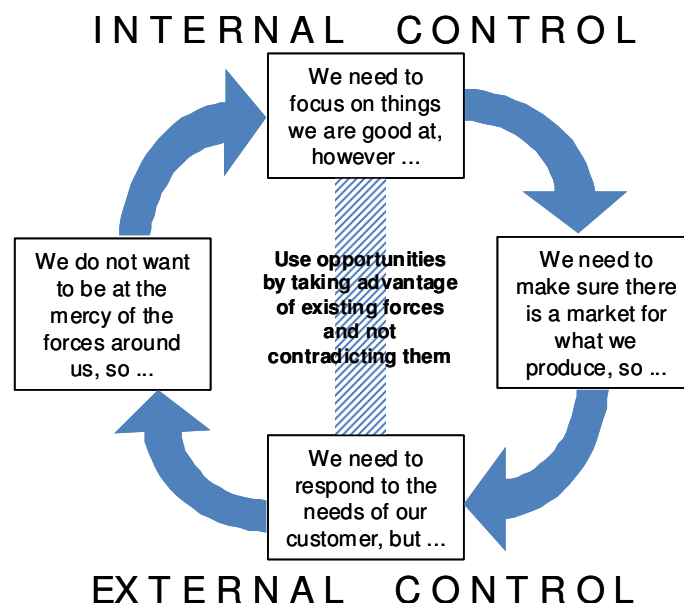


Figure 53: Internal and external control of the relationship between the organisation and the environment as per Trompenaars and Hampden-Turner (1998:157)

Hofstede (2001)¹⁷¹ specifies a value system with five dimensions which pervade the mental programmes of the actors:

- 1st dimension: degree of acceptance from less influential members of an organisation or company for the existence of unfair distribution of power (power distance).
- 2nd dimension: extent to which members of an organisation or company feel unhappy with unstructured, new, unknown or unexpected situations (uncertainty avoidance).
- 3rd dimension: positioning of members of an organisation or company as between individualism and collectivism.
- 4th dimension: orientation of members of an organisation or company as between hard, unaccommodating and soft positions (masculinity versus femininity).
- 5th dimension: short-term versus long-term orientation of the members of an organisation or company¹⁷².

All country-specific cultural contexts can thus be described by placing them within these five dimensions. Hofstede shows in his empirical studies that these cultural dimensions are influenced by geographical, economic, demographic and political indicators. In time, it can be seen that there is a change of values worldwide, but a convergence between the countries is not evident. He asserts that, alongside national cultures, organisation cultures moulded by company founders and significant management members are effective. In addition to the cultural environment of their domestic environment, internationally active organisations must take their international locations into account.

¹⁷¹ Werner (2007a:29-30,36-42) uses the five dimensions to explain differences in organisation cultures. With globalisation in mind, the significance of an ethical culture grows and the use of cultural differences becomes more important.

¹⁷² Javidan (2007) states, on the basis of a world wide empirical study, that, at the individual level, there is a positive attitude to orientation towards the future. At the level of the company, there are, however, big differences in how strongly behaviour is oriented towards the future. He ascertains that the stronger the orientation to the future of local managers, the greater is national competitiveness and the degree of innovation. He identifies a fundamental context between innovation and long-term orientation. The study shows that Singapore, Switzerland, Holland and Malaysia are the most future-oriented, whereas Russia, Argentina, Poland and Hungary are the least future-oriented. Approximately in the middle of the scale are Germany, Taiwan, Korea and Ireland together with (with less competitiveness) China, Brasil, Indonesia, Mexico, South Africa and India.

3. Intrapreneurship and the global business environment

Through this, the necessary cultural *fit* can be achieved. In particular, if the dependence of local suppliers is high and the employees are unionised, a significant regional adjustment is necessary. Differences in uncertainty avoidance (2nd dimension) are said to be not easy to overcome. Overall, cultural differences in an ever increasingly integrated global economy are an important source for the achievement of competitive advantages. Since the various cultural characteristics bring advantages or disadvantages subject to the specific company situation (see table 3), it is important to take these cultural characteristics into account (see Russell 2004) when making entrepreneurial decisions within the context of strategic planning and when making decisions about international locations.

In the area of human resource management, Hofstede identifies some basic findings. In terms of collegial working, for example, differences in the first and third dimensions (power distance, individualism versus collectivism) would create problems in cooperation. The regional culture that results from the company culture and the national culture must be brought into equilibrium with the company strategy, structure and control. Depending on the business environment, the geographical coordination with the specific culture of the regional business unit or structural coordination would be dominant. This would lead to patchwork structures within the international organisation which would follow in the direction of market requirements.

Power distance small Acceptance of responsibility	Power distance large Discipline
Uncertainty avoidance weak Basic innovations	Uncertainty avoidance strong Precision
Collectivism Employee commitment	Individualism Management mobility
Femininity Personal service Custom-made products Agriculture Food Biochemistry	Masculinity Mass production Efficiency Heavy industry Chemistry Bulk chemistry
Short-term orientation Fast adaptation	Long-term orientation Development of new markets

Table 3: Competitive advantages based on cultural differences as per Hofstede (2001:443)

3. Intrapreneurship and the global business environment

To have entrepreneurial success, effective managers acting as agents of culture are key requirements: The entrepreneurial manager of the business units in the various countries must have the ability to be able to work successfully in two cultures (bicultural), i.e. in the culture of the regional business unit which is characterised by the national culture on site and in the culture of the organisation as a whole, which is in turn characterised by the home culture.

According to Hofstede (2001), within the organisation as a whole, what he calls *corporate diplomats* should help to hold the international organisation together. The agents of culture can then also initiate new entrepreneurial activities in the various countries. In terms of intrapreneurship, the fifth dimension (time horizon) appears more than any to be highly relevant when taking entrepreneurial decisions for securing long term viability.

Trompenaars and Woolliams (2003) examine cultural differences and use Trompenaars and Hampden-Turner's seven classifying bi-polar descriptions above as a starting point for the definition of dilemmas¹⁷³. They argue that these dilemmas can be resolved gainfully both on the individual level and the organisational level by the integration of cultural differences. According to this approach, cultural differences must be seen, respected and reconciled together, i.e. the question has to be asked as to how cultural differences can be used in entrepreneurial activities, for example within alliances. Cultures can be analysed on the three levels of explicit culture (visible behaviour, language, clothes etc.), norms and values (common orientation) and implicit culture (fundamental internalised assumptions, routines and methods). Different cultural orientations and views of the world must be respected and one's own mental models and cultural pre-dispositions recognised in order to be able to use cultural differences. Centralising versus decentralising of dilemmas can be resolved for example, by the centralisation of higher-ranking information and coordination on the one hand, and by the decentralisation of activities on the basis of local information on the other.

¹⁷³ Trompenaars and Woolliams (2003:31,32) use the seven dimension culture model to define (1) Universalism-Particularism, (2) Individualism-Communitarianism, (3) Neutral-Affective, (4) Specific-Diffuse, (5) Achievement-Ascription, (6) Sequential-Synchronic, (7) Internal-External Control, the corresponding dilemma situations. For example, both of the dilemma positions of two countries or organisations can be illustrated on this continuum.

3. Intrapreneurship and the global business environment

General rules and standards (universalism) attempt to define an optimal global way and thus ignore cultural differences, whilst local adaptations (particularism) attempt a full adaptation and thereby abandon the company's own cultural orientation and the achievement of cost advantages from economies of scale. Compromises situated in the middle are often not a good solution. The strengths of the two different cultural characteristics should rather be used simultaneously. Thus, the company's own orientation (universalistic global approach) can be the starting point for harmonisation with local adjustment (multi-local approach).

Thus, regional specialisation within the global organisation can be taken on by management (leadership). This convergence process is executed in a spiral fashion (see figure 54). In this way, local knowledge can also be used for improving global standard systems. From a range of solutions and ideas based on existing diversity, the best solutions can be implemented systematically and improvements and innovations can be achieved. In order to achieve this, dilemmas must be resolved both from the perspective of individual managers and at the level of the whole organisation. Culture is said to be not an additional element of the environment in the same way as, for example, the political or technological segment, but rather it pervades (as a contextual environment) the entire relationship between the organisation and the business environment.

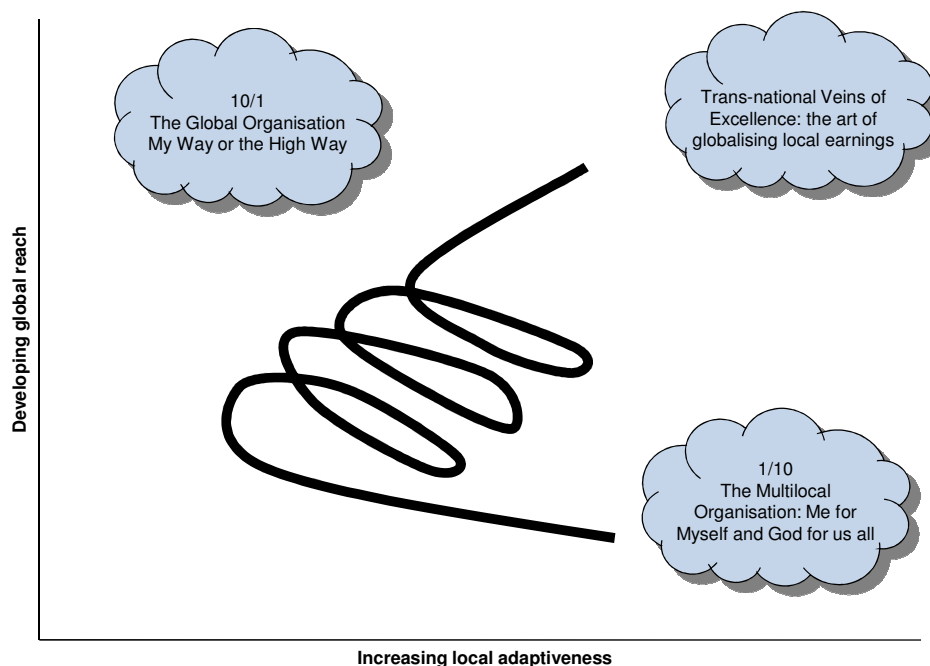


Figure 54: Use of local knowledge for improvement of global corporation as per Trompenaars and Woolliams (2003:41)

3. Intrapreneurship and the global business environment

Schuster and Copeland (2006) propose a model which places cultural groups on a continuum with the three basic elements that are fundamental for entrepreneurial decisions; task, time and relationship (see figure 55)¹⁷⁴. Thus, it is possible to determine similarities to or differences from other cultural groups.

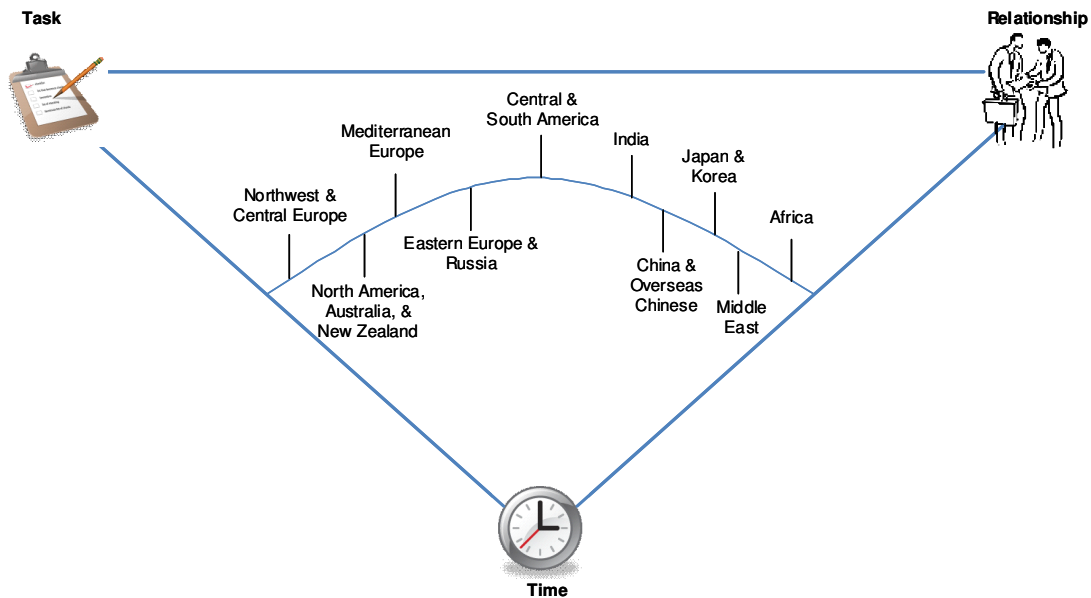


Figure 55: Model for classification of cultures as per Schuster and Copeland (2006:13)

¹⁷⁴ Business practices in North-West and Central Europe are said to be task-oriented, formal and time-structured. Because of their European origins, the orientation in North America, Australia and New Zealand is similar. Mediterranean Europe, on the other hand, is said to be more person-oriented and more flexible in terms of time. Relationships can consolidate task fulfilment. In eastern Europe and Russia, there is a sharper focus on an informal task fulfilment that can provide a basis for intrapreneuring as per Pinchot. In South and Central America, the relationship orientation is more important. Information is shared and individual relationships are developed. In India, it is said to be difficult for outsiders to do business. A lot of time has to be invested in building relationships. In so doing, one has to take into consideration the interdependence between the economy, politics and social networks within regions and industries. Within the regions, there are also local informal systems at work. The complexity of the business environment is also increased by reason of the large social differences within the country. In China, the process of achieving goals is often said to be more important than the goal itself. Various views and philosophies can exist at the same time in such a way that there can be different interpretations of the truth. Self respect and prestige play a big role and accordingly, relationships pervade the business environment. In Japan and South Korea, there is a strong link between the economy and politics and a high acceptance of permanent change. This openness to change and adaptation when carrying out individual activities goes hand in hand with a holistic view and a long-term time horizon. Accordingly, cooperation within networks has a high value. In the Middle East, personal (familial) relationships have a fundamental influence on business activities. In such a business environment, doors must first be opened before relationships can be established. In North Africa, there are cultural similarities to Mediterranean Europe as well as to the Middle East. Some countries in southern, western and northern Africa also have European cultural roots. In many countries, there is a *big man* tradition and a strong (regional) network orientation. The diversity of cultural groups really excludes the idea that there can be one universal best way for entrepreneurial management in all economic regions.

3. Intrapreneurship and the global business environment

Cultures on the left-hand side of the continuum invest a lot of time in task fulfilment, whilst cultures on the right-hand side invest a lot of time in business relationships. The model is helpful in a general way in terms of reflecting over the necessary adjustments to business practices of various cultures and implementing changes to company systems. The global business practices model (see table 4) makes it possible to compare specific cultural elements as between cultural groups. In so doing, it is possible to see the effects of a batch of basic structural elements (roles of the government, legal and hierarchical system), process elements (approach to time, separation of work and private life) and communication elements (views, ways of thinking, communication style) on business practices.

It is possible to classify structure elements according to the degree of freedom of the market, the prevalent legal system or the status system in place. For the process element, the use of, planning of and philosophy regarding time are at the fore. Communication elements are characterised by the relevant view of the world in various cultures. Thus, cultures distinguish themselves by the universal or pragmatic (situational or individual) perception of reality, by the mode of written communication (words, symbols), by the way of oral communication (direct, respectful) and by the way of thinking (formal-logical, heuristic). Using the model as a base, Schuster and Copeland (2006) believe the world view can be better understood and taken on board when carrying out entrepreneurial activities and making entrepreneurial decisions. Cultural aspects of the business environment are highly relevant for the design of intrapreneurship in a global context. In particular, individualistic or more so the collectivist basic orientation of entrepreneurial actors and their attitudes to change must be allowed for (Abraham 1997). When analysing the business environment, various cultural characteristics can lead to the actors either placing their focus more on the internal business environment or more on the external one. However, to strengthen entrepreneurial orientation, both areas must be in focus so that the weaker orientations can be compensated for by the design of the company culture or the definition of learning fields (see chapter 6.4). According to Baumol (2004), national growth policy can stimulate the natural spirit of enterprise. Cultural differences can also establish entrepreneurial opportunities such that the cultural context as part of the interaction of the entrepreneurial organisation with the external business environment can have a significant influence.

3. Intrapreneurship and the global business environment

Areas of World	Gov't	Law	Hier.	Privacy	Punct.	Flow	Truth	Words	Style	Logic
Northwest & Central Europe	Grey		Grey							
North America, Australia, & NZ										Grey
Mediterranean Europe	Grey	Grey			Grey	Grey			Grey	
Eastern Europe & Russia	Grey	Grey	Grey		Grey	Grey	Grey	Grey		Grey
South & Central America	Grey	Grey	Black	Black	Grey	Grey	Grey	Grey	Grey	Grey
India	Grey	Grey	Black	Black	Grey	Grey	Black	Grey	Grey	Grey
China & Overseas Chinese	Black	Grey	Grey	Black	Black	Black	Black	Black	Black	Black
Japan & Korea	Grey	Grey	Black	Black	White	Black	Black	Black	Black	Grey
Middle East	Black	Grey	Black	Black	Black	Black	Black	Black	Black	Black
Africa	Black	Grey	Black	Black	Black	Black	Grey	Black	Black	Black

Role of Government: White = the government sets parameters and constraints to create the environment for doing business. Black = Direct involvement of government in business as a business partner.
Rule of Law: White = Reliance on systems and procedures. Black = Pragmatism or situational considerations.
Sens of Hierarchy: White = Assumption of equality. Black = Assumption of status difference.
View of Privacy: White = Business and private matters are separate. Black = Business and private matters are all part of one reality.
Punctuality: White = Fixed time. Black = Flexible or "rubber" time.
Flow of Activities: White = Time works in a linear fashion. Black = Time works in a cyclical fashion.
Truth: White = Universal truth. Black = Many truths exist at once.
Words: White = Words have explicit meanings. Black = Words have implicit meanings.
Style: White = Communication is direct and forthright. Black = Communication is indirect.
Logic: White = Formal deductive reasoning. Black = Alternative heuristic.

Table 4: Model to describe culture specific business practices as per Schuster and Copeland (2006:31)

Following the holistic specification of the business environment in chapter 3.2.1, a systematic consideration of the individual areas of analysis follows in chapter 3.2.2. Through this, it is possible develop further insights to help understand the business environment as a landscape for opportunities and risks.

3.2.2 Areas of analysis

When analysing the business environment, various areas of analysis can be determined arriving at a structure. Keeping in mind the interaction and possibility of mutual influence and taking into consideration the literature examined so far, a classification of three areas of analysis is presented:

- The first area of analysis (see chapter 3.2.2.1) relates to the macro environment, i.e. the general business environment;
- The second area of analysis (see chapter 3.2.2.2) relates to the specific micro environment with tasks, industry and competitive environment;
- The third area of analysis (see chapter 3.2.2.4) relates to the internal business environment.

Bearing in mind the entrepreneurial organisation's local and global operational fields, it becomes clear that the analysis of the business environment must take account of various levels of analysis (see chapter 3.2.2.6) as well as cultural aspects. The networking of components within the internal and external business environment (see chapter 3.2.2.3), as well as the interaction between them (see chapter 3.2.2.5) on various geographical systems levels, paints a picture of a complex business environment.

In what follows, a number of analytical frameworks are presented which are helpful for a systematic analysis of the business environment.

3.2.2.1 Framework of analysis for the general macro environment

The PEST¹⁷⁵ analysis (Palmer and Hartley 2002:484, Morrison 2006:30,31, Worthington and Britton 2000:452, Holzhauser 2007:184)¹⁷⁶ is a framework often used in theory and practice for the systematic identification of future opportunities and risks in the general business environment (see figure 56).

The general business environment is classified, using an analytical construct, into the areas of political and legal situations and trends, economic situations and trends, social and societal or socio-cultural situations and trends and technological situations and trends. In so doing, various information and knowledge sources are used in the analysis¹⁷⁷.

Using a systematic evaluation of the information collected, entrepreneurial opportunities and risks can be identified and effects of the general business environment on the relevant sectors, competition and task environments can be analysed.

¹⁷⁵ To remember the four areas **P**olitical, **E**conomic, **S**ocial and **T**echnical it is used the acronym PEST.

¹⁷⁶ Occasionally, the acronym STEP is used as an aide-memoire

¹⁷⁷ For the analysis of the economic situation and trends, apart from a range of open information in statistically relevant institutions, there are also professional services such as www.globalinsight.com or www.economistintelligenceunit.com.

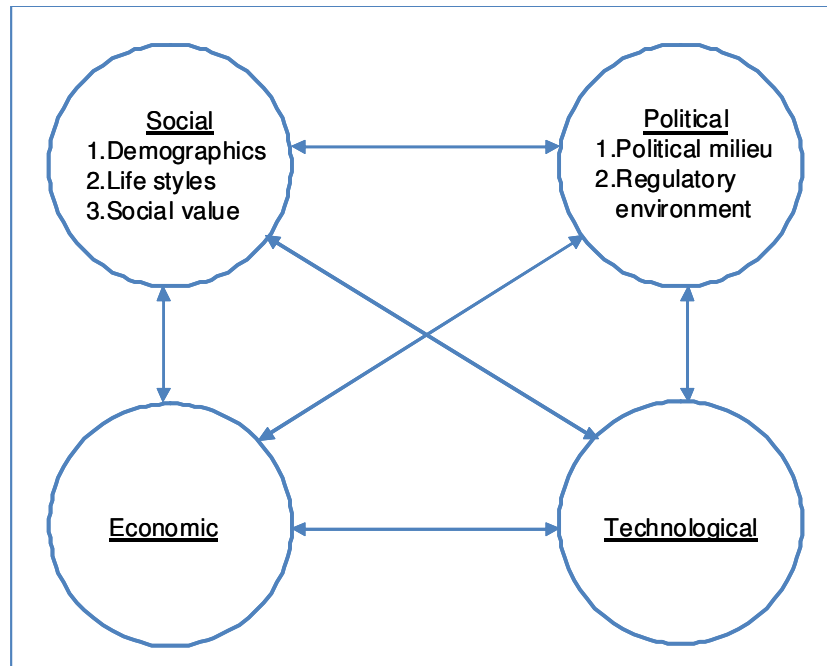


Figure 56: Model of the macro environment as per Fahey and Narayanan (1986:29)

According to Fahey and Narayanan (1986:28,29), the general business environment can have a direct influence on the company or an indirect effect by its influence on the industry environment, which in turn has an effect on the task environment. Against this background, Fahey and Narayanan propose that the general environment (macro environment) should firstly be analysed for its own sake, as well as within the framework of the development of company strategies in the organisation.

At the same time, current and future developments in the segments have to be analysed, entrepreneurial ideas collected and entrepreneurial activities undertaken. Thus, the organisation can adapt to the changed business environment outside of its own sector and achieve organisational learning.

According to Porter (1991), the national conditions (factor conditions; demand conditions; related and supporting industries; firm strategy, structure and rivalry) determine the competitiveness of the industry and the organisations. Entrepreneurial organisations identify and pursue business opportunities from the national conditions with a special focus on the specific micro environment (see the following section).

3.2.2.2 Analytical framework for the specific micro environment

As well as the general business environment¹⁷⁸ (macro environment), the specific business environment (micro environment) must also be analysed. It is possible to identify further entrepreneurial opportunities and risks as well as evaluate opportunities and risks from the general business environment too, using a systematic observation of the task environment with customers and suppliers, the industry and competition environment with competitors and the industrial structure. The involvement of these three search fields of the specific business environment is sometimes referred to in the literature by the acronym SCEPTIC¹⁷⁹ (Haines 1998:48)¹⁸⁰. The three sub areas of the micro environment are illustrated briefly in the following three paragraphs.

Porter (2004a:3-33) provides a framework for the analysis of the industry and competition environment. Thus, it is possible to take into account the relevant factors that have an influence on the competitive situation in an industry (Porter 2004a:126-155)¹⁸¹. Companies must continuously observe changes in their sector and observe their competitors' strategies in order to be able to determine their own competitive position and entrepreneurial activities. Using the framework of the five competitive forces in an industry¹⁸² (see figure 57), the evolution of the sector and various industry sector types can also be examined. Competitive strategies make it possible for companies to respond systematically to opportunities and risks.

¹⁷⁸ See chapter 3.2.2.1

¹⁷⁹ To remember the four areas **P**olitical, **E**conomic, **S**ocial and **T**echnical of the macro environment and the three areas **C**ustomers, **I**ndustry and **C**ompetition of the micro environment it is used the acronym SCEPTIC.

¹⁸⁰ Using the acronym PITO and bearing in mind the individual actors within an organisation, Haines (1998:48) describes four personal areas that must be taken into account with changes in the business environment. The personal area (P) with body, spirit and soul, the interpersonal area (I) with family, friends and colleagues, the team area (T) with partners, community and department, and the area of the whole organisation (O) with job, career and wealth.

¹⁸¹ Porter (2004a) asserts that companies within a sector have differing strategy options, e.g. because they differ in their strengths and weaknesses or have gained differing experiences historically. Therefore, one sector can be distributed into various strategic groups. The five competitive forces would then have an effect in differing ways on the various strategic groups.

¹⁸² According to Porter (2008), the five forces determine the industry's long-run profit potential. To identify opportunities and risks, the following attributes of an industry come into further investigation: Industry growth rate; Technology and Innovations in an industry; Government policies which affect the industry; Complimentary products and services.

3. Intrapreneurship and the global business environment

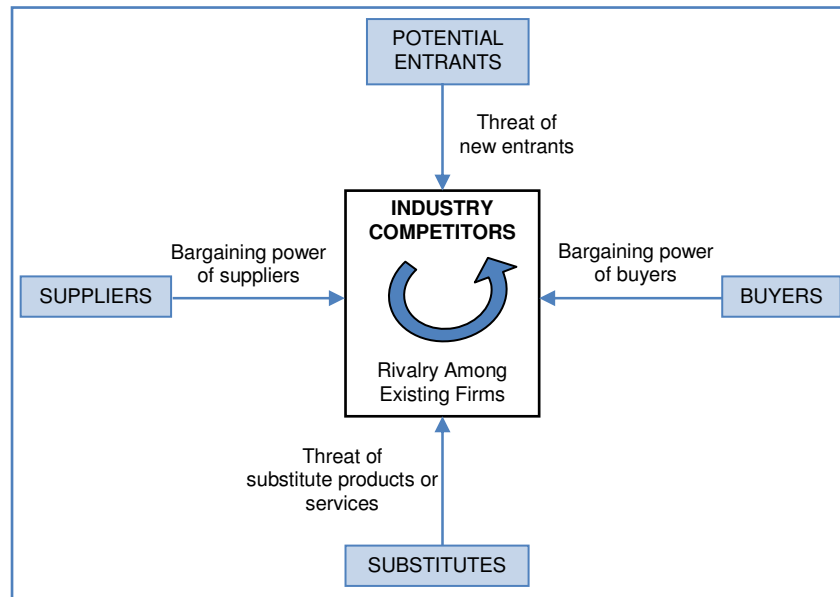


Figure 57: Five competitive forces of an industry as per Porter (2004a:4)

Through analysing the competitive forces, an organisation can evaluate its own strengths and weaknesses in relation to the industry as a whole, strive for suitable positioning and seek to influence the competitive forces to its own advantage. Furthermore, changes to the competitive forces can be anticipated and used for the pursuit of entrepreneurial opportunities by adopting a new direction.

Porter (2004a:34-46) also defines three generic competitive strategies. Cost leadership can be pursued strategically by using economies of scale and learning curve effects together with cost efficiency. Product differentiation via, for example, image building, unique technology or customer service can be pursued as a second central competitive strategy. Porter names focussing on certain purchaser groups, product segments or geographical markets as a third strategy option. The pursuit of the various basic strategies requires different leadership styles and organisation cultures during the implementation stage¹⁸³.

Against this background, entrepreneurial organisations can select an industry as an action field, take up and, in time, improve upon their positioning within the sector or within a strategic group or also they can establish sectors or strategic groups within an industry.

¹⁸³ According to Ireland (2009), the pursuit of an entrepreneurial strategy vision can also be described as a basic strategy option.

3. Intrapreneurship and the global business environment

Along with McGahan (2004) entrepreneurial organisations have to understand the nature of industry change to exploit industry evolution and to detect new emerging industries. Porter (2004a:156-188) states that the evolution of the industrial structure is driven by investment decisions of established and new companies. In this process, the following dynamic processes are at work:

- Growth of the sector (with the influencing variables of demographic development, changes in consumer preferences, changes in substitute goods and ability to engage buyers following market saturation);
- Changes in buyer groups and learning processes of buyers;
- Reduction of uncertainty within the sector due to learning processes;
- Diffusion of knowledge and experience within the industry;
- Potential for achieving economies of scale and change in costs for input factors;
- Innovation with products, processes and in marketing;
- Structural change in adjacent industries and changes in politics;
- Market entry and market exits.

Porter (2004a:189-298) distinguishes five industrial structures:

- (1) Fragmented industries in which no business has market power, i.e. has a significant market share or meaningful production volume, there are few barriers to market entry, no economies of scale or learning curve effects can be achieved and there are high transport and storage costs;
- (2) New industries that have come about through new products or changed framework conditions and in which viable entrepreneurial opportunities (e.g. new products, new markets, new technologies) exist but, in turn, exhibit a high degree of uncertainty when implemented;
- (3) Industries in transition from high growth to maturity, in which intensive, increasingly international competition for market share is dominant, profits are declining and adaptations within the organisation are necessary in terms of management and strategic direction;
- (4) Shrinking industries in which market demand is declining, e.g. due to technological substitution, demographic developments or new consumer preferences;
- (5) Global industries in which competitors compete globally and in various national markets take advantage of differences in factor costs in different countries and also achieve economies of scale, learning curve effects and learning effects.

3. Intrapreneurship and the global business environment

Porter (2004a:47-74) sees the analysis of competitors as a central aspect in developing a competition strategy. In so doing, data about competitors must be gathered, potential competitor changes of strategy have to be anticipated and their probable reaction to changes in the macro environment or in the industry environment and industry structure has to be taken on board. In addition, it is necessary to examine four areas of diagnosis in order to draw up a competition response profile: Competitors' future targets ¹⁸⁴, current competitor strategy ¹⁸⁵, assumptions of competitors about the industry and their own organisation ¹⁸⁶, and strengths and weakness of competitors ¹⁸⁷ (see figure 58)¹⁸⁸.

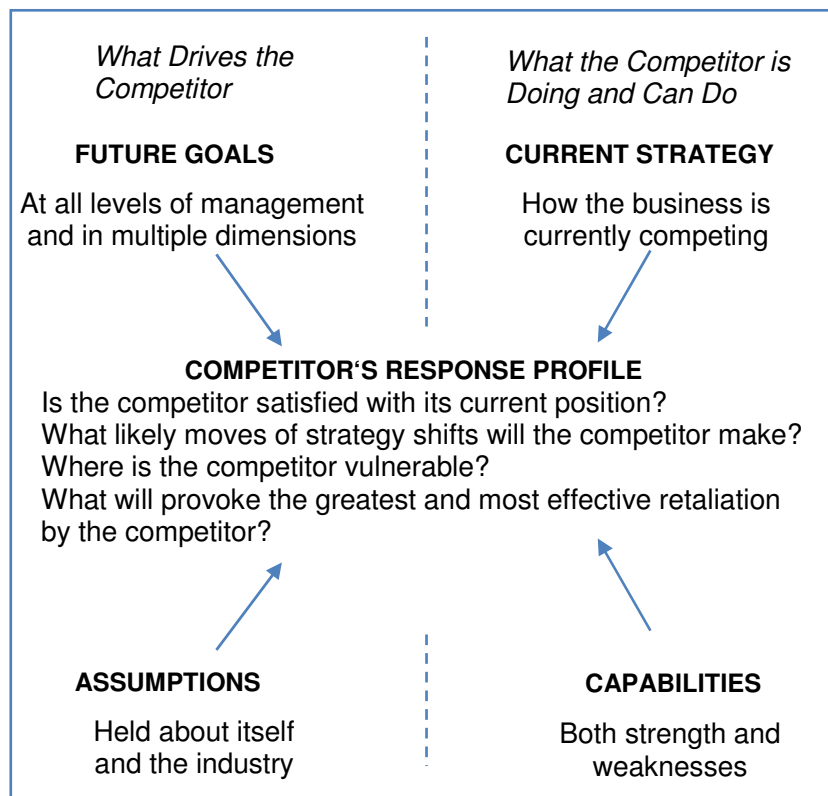


Figure 58: Framework for competition analysis according to Porter (2004a:49)

¹⁸⁴Recognition of future targets of a competitor allows a prognosis of how much it is satisfied with the current situation and how strong a reaction is to be expected – also to changes in the business environment. Thus, targets should be considered on various systems levels of the competitor (company level, business unit, functional area, actors). In this way, possible complementary strategic positions can be identified.

¹⁸⁵Activities of an organisation can implicitly reveal the current strategy and show which objectives an organisation wants to achieve.

¹⁸⁶The examination of assumptions of competitors shows how they see their own competitive situation. Since these assumptions determine the future behaviour of the company, certain prognoses can be deduced. In this way, consideration of competitors' company history can provide important indicators for the identification of assumptions and organisational targets

¹⁸⁷Awareness of strengths and weaknesses of competitors enables an assessment of the ability to adapt and take proactive action in response to changes in the business environment. Also, the competitor can be analysed in relation to his position with reference to the five competitive forces.

¹⁸⁸According to Porter (2004a), this framework of analysis can also be used for self-analysis.

3. Intrapreneurship and the global business environment

The analysis of all current and potential competitors can then be used as an input for the prognosis of future sector conditions. Potential information sources are, for example, public reports and presentations by management of competitors, business news, mutual customers and suppliers, expert appraisals and product analyses.

The direct task environment of an organisation can be defined within the specific micro environment of an organisation. According to Ulrich and Fluri (1995:41-44), the organisation's procurement market, sales market, employment market and finance market are all part of the company-specific task environment (see figure 59). As a result, entrepreneurial organisations can exploit industry changes and shape the industry structure (Porter 2008).

The task environment thus defines the direct business environment for the entrepreneurial activities and operations of an organisation. In a global economy, the entrepreneurial shaping of the supply chain beyond company boundaries and thus networking with external partners is of outstanding significance. The selection and design of relationships with suppliers, customers and producers of complementary products and services is thus a central entrepreneurial task¹⁸⁹.

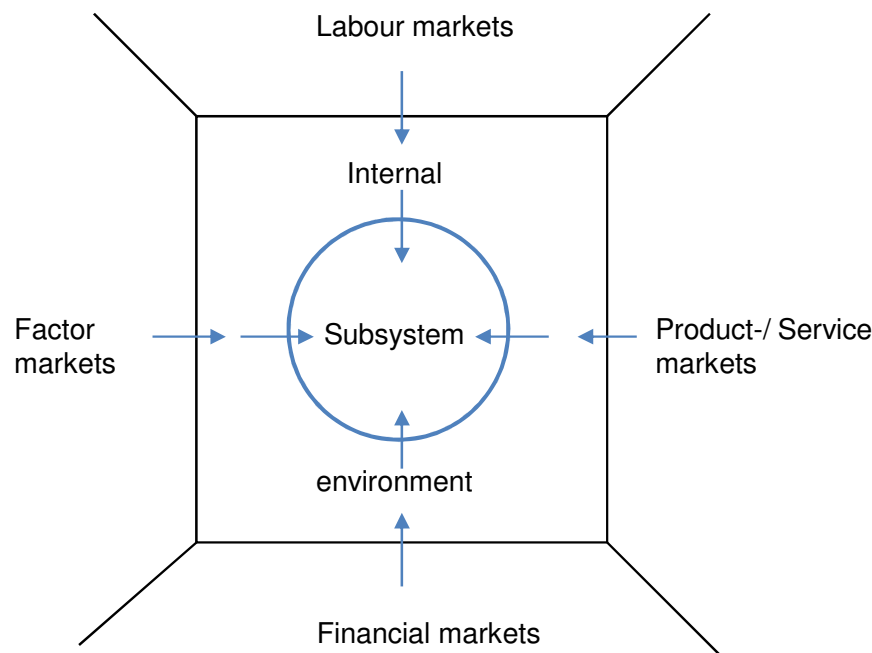


Figure 59: Task environment according to Ulrich and Fluri (1995:43)

¹⁸⁹ This aspect is emphasised by Porter (2004a).

3. Intrapreneurship and the global business environment

Entrepreneurial organisations secure and create competitive advantages and use existing and future core competencies to strengthen their own competitiveness within the markets they are active. At the same time, they attempt to work interactively with the environment and try to achieve a viable position within the framework of the international division of labour. As well as competitive strategies, entrepreneurial organisations also pursue cooperative strategies. They actively seek out opportunities for cooperation with other enterprises and form, amongst other things, alliances and partnerships. Brandenburger and Nalebuff (1996) describe this interplay between competition and cooperation as co-opetition. They cite the search for and analysis of complementary products as important sources for identifying opportunities and risks. The total task environment will only be seized by taking into consideration providers of complementary products. To describe the organisation in the task environment, they propose a value net (see figure 60).

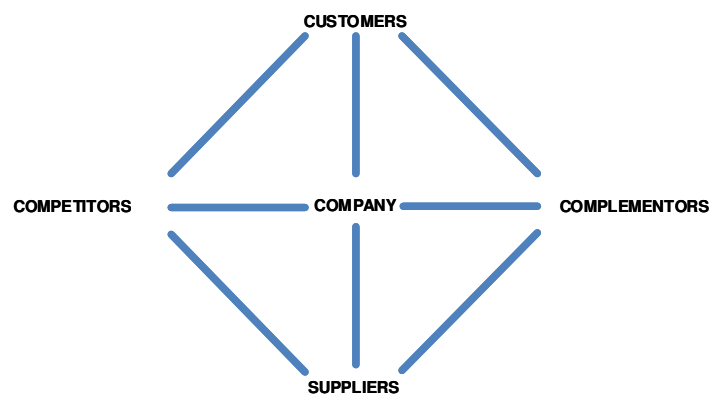


Figure 60: Value net according to Brandenburger and Nalebuff (1996:17)

For a holistic understanding of the external business environment, it is also necessary to be aware of the networking and the connections between the components of the macro and micro environment (see the following chapter 3.2.2.3).

3.2.2.3 Networking within the external business environment

According to Fahey and Narayanan (1986:188-205) and Grant (2005:68,69), changes in the macro environment have an effect on the industrial and competition environment in different ways. In particular, the viability of industries and industrial sectors and the boundaries and structures of an industry would be influenced by general economic development. Changes in the macro environment have an effect on customers, suppliers and competitors (see figure 61).

3. Intrapreneurship and the global business environment

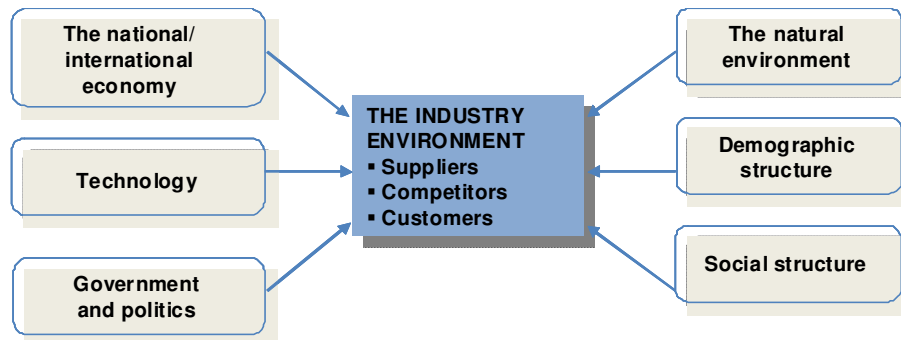


Figure 61: Macro and industrial environments according to Grant (2005:68)

Technological developments can trigger changes in the products and structures of suppliers and competitors. A change in society’s values and life styles can have a big influence on consumers. Changes in political and legal framework conditions could, for example, create barriers to market entry or promote the formation of strategic groups. Trends in the macro environment also influence the general expectations within the industry.

Therefore, many entrepreneurial decisions involve information from the macro and micro environment being collected and integrated and then processed. For example then, for the technology segment (Narayanan 2001:21-58,201-213), general technology-relevant information, trends, and the effects for one’s own organisation must be observed and evaluated (Narayanan 2001:202)¹⁹⁰ at the macro level in order to recognise whether and when one’s own key technologies have to be removed (see figure 62).

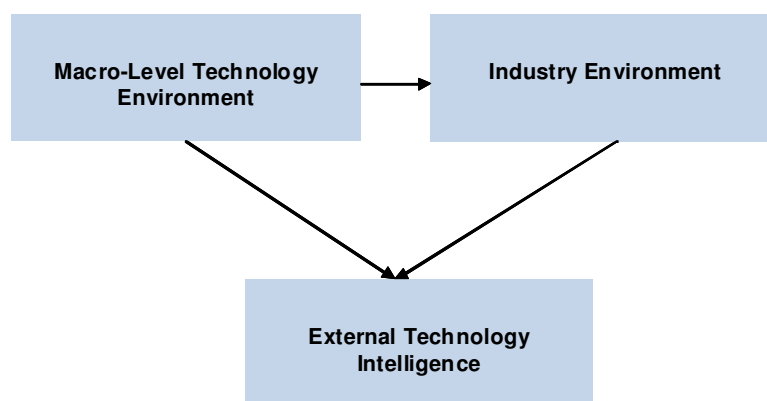


Figure 62: Technology intelligence according to Narayanan (2001:206)

¹⁹⁰ Narayanan (2001) describes the collection of information from the technology segment for strategic decisions as technology intelligence. Where the analysis focuses on technological developments outside of the organisation, he speaks of external technology intelligence. The specific situation of the company determines the relevance of additional internal technological developments and the associated internal observation of technology.

In doing this, time delays between findings of basic research, application-orientated research projects and possible applications to products and markets must be taken into account. At the micro level (Narayanan 2001:210-213), technological developments that directly influence the company's own sector have to be taken into account. In this context, the sector type and its maturity should be taken into account. Narayanan asserts that the observation of technology, particularly in knowledge based industries, is of great significance. Whereas in new industries, a wider focus should at first be placed on observing technology in order to unearth new opportunities, the emphasis in mature industries has to be on the search for process innovations and signs of threats to the industry by new technology. The application of the technologies in the organisation's operations then places the focus on the internal business environment. Thus, it is useful to look in the following chapter 3.2.2.4 at some theoretical constructs of the internal environment.

3.2.2.4 Analytical framework for the internal business environment

Mintzberg (1993:9-19) describes the internal business environment of an organisation with reference to five elements¹⁹¹ (see figure 63). Subsequently, the operating core of employees build the basis of an organisation. The latter would perform the fundamental tasks in the production of goods or services. Because of the increasing complexity of large organisations, the operating core has to be directed by middle line managers and the organisation as a whole, by top managers (strategic apex). In addition, staff (analysts) who improve the standardisation and coordination within the growing organisation (technostructure) and staff who deliver indirect services within the organisation (support staff) are required. The operating core purchase factors of production, convert inputs into outputs in the production process and sell the products and services. Top management has responsibility for the organisation as a whole and achievement of targets in accordance with the prescribed mission. For this, the internal business environment, external relationship management as well as decisions of the organisation are shaped taking the external business environment into account.

¹⁹¹ This organisation model assumes basic central structure planning by top management.

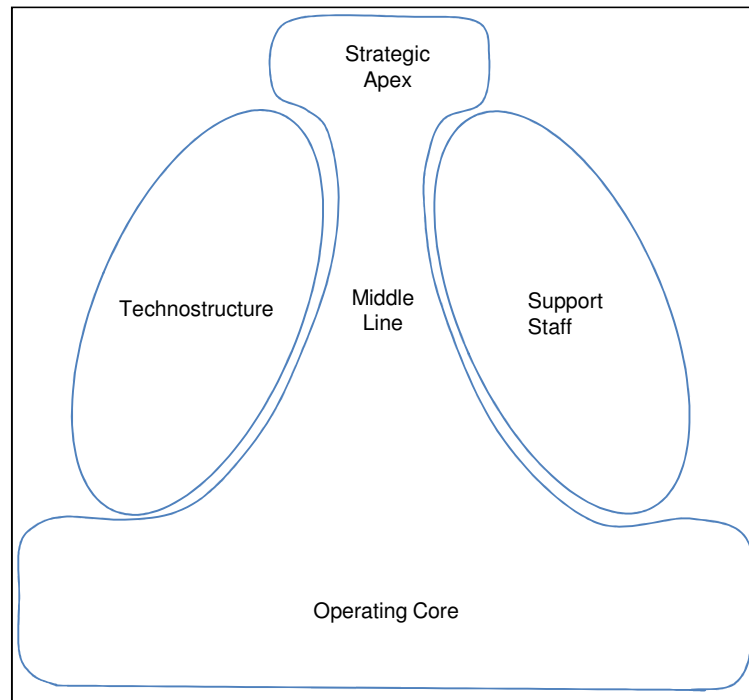


Figure 63: The five basic elements of an organisation according to Mintzberg (1993:11)

A requirement for the development of consistent strategies for the organisation's communication with its external environment is an understanding of the business environment. The required adaptations and actions would not shock the internal organisation.

Middle line managers communicate within the hierarchy via their own interfaces, develop agreed strategies for their own areas, have coordination tasks and undertake direct leadership of the operating core of one or several organisational units. The company analysts design the organisation structure and the core work. This is done, on the one hand, for the organisation to adapt to changes in the external business environment and on the other hand, to increase efficiency.

Efficiency improvements are achieved through the standardisation of work processes, products and services or by training staff within the organisation. Service facilities work independently from the actual performance process and deliver specific services for the organisation.

3. Intrapreneurship and the global business environment

Mintzberg uses his five organisational elements to present five approaches about the functioning of an organisation and these together convey an impression of the complexity of the internal business environment.

Within an organisation, there are (1) formal organisational units, positions and formal authorities for the direct management of employees and (2) for activities regulated by standardisation. In addition to this, there is (3) an informal communication and power structure, (4) clusters for task resolution and (5) ad hoc decision processes that span all the elements. All five approaches together define the internal business world of an organisation (see figure 64).

The total model can make a fundamental contribution to the understanding of the internal business environment so that in further steps, the activities within the organisation structure can be more sharply focused.

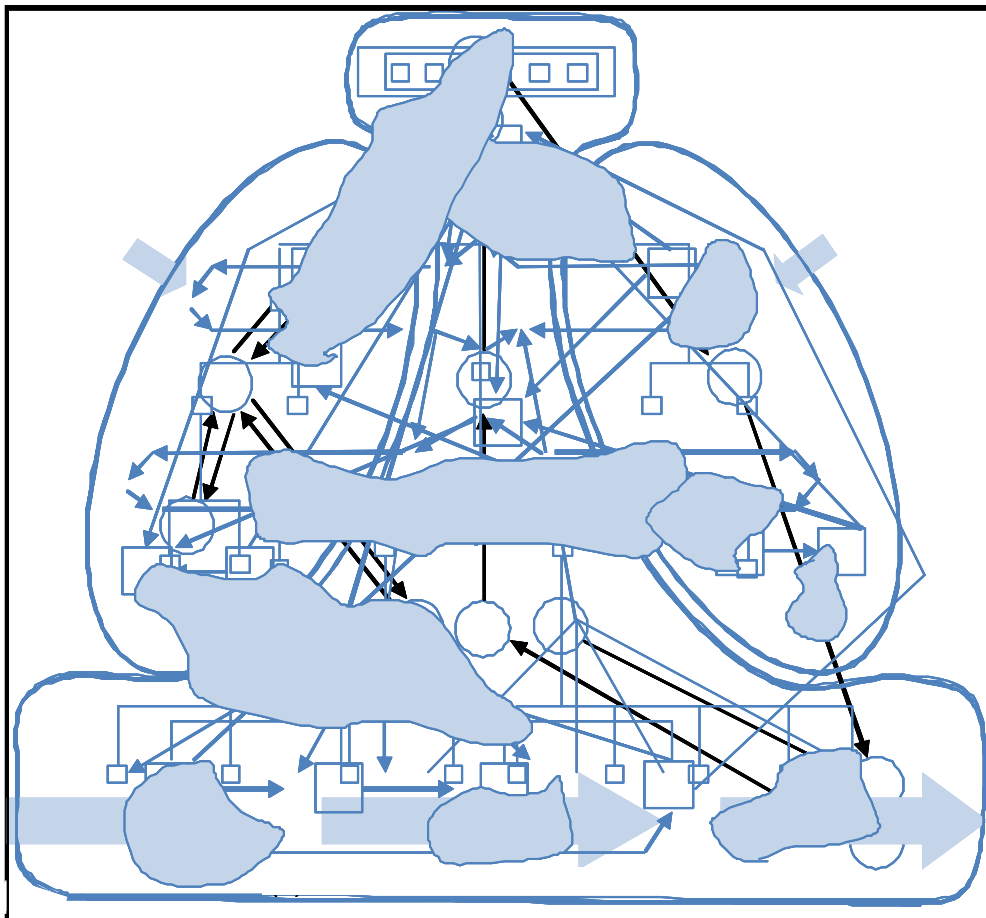


Figure 64: The internal business environment according to Mintzberg (1993:22)

3. Intrapreneurship and the global business environment

Porter (2004b) describes the internal business environment with reference to the activities that are necessary for development, production and sale of the strategically relevant products and services. He categorises the activities of an organisation into primary and supporting activities (see figure 65). All activities taken together represent the value chain of an organisation. By referring to the value chain of an organisation, it is possible to analyse the strengths and weaknesses of a company within the internal business environment in relation to the competition. Where activities are carried out less expensively or better in comparison to the competition, competitive advantages accrue.

An entrepreneurial organisation must have a clear picture of its own core competencies. It must identify and develop resources and skills that form the basis of competitive advantage and take on a central role in competitive strategy as well as in the realisation of entrepreneurial opportunities (Venter 2006:148-175). The value chain (Porter 2004b:33-61) forms the basis of an analysis¹⁹² of the strengths and weaknesses of an organisation. Porter focuses on those individual activities of a business that are necessary for every business. For every activity, there must be an examination of what difference is being made and the cost. Consistent configuration of the individual activities then defines the strategy and the independent system of a company.

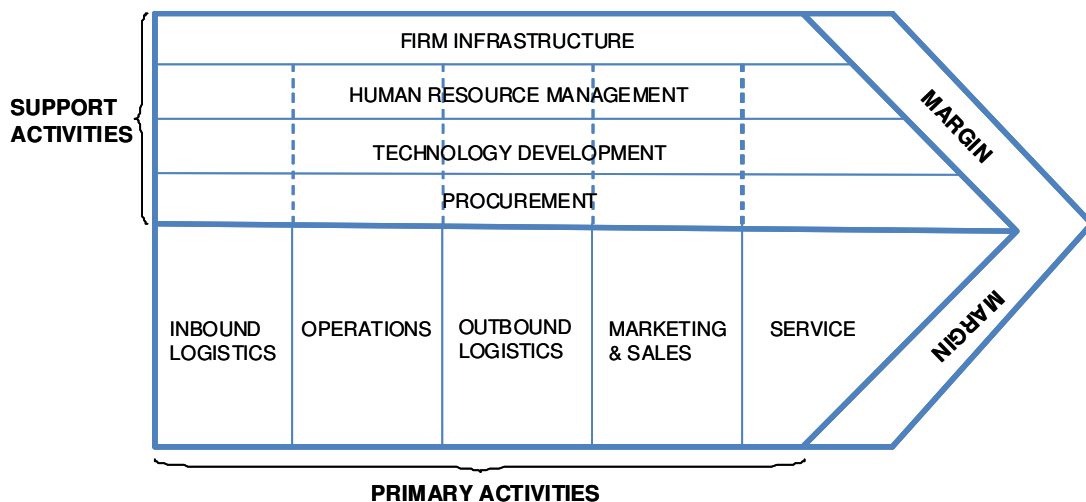


Figure 65: The internal business environment as a value chain of activities according to Porter (2004b:37)

¹⁹² Palmer and Hartley (2002:485) names, for example, the following as instruments for an internal audit: gap-analysis, finance analysis, product portfolio analysis, marketing mix analysis, marketing organisation.

3. Intrapreneurship and the global business environment

In this way, it becomes clear that all actors in a business are part of the strategy and that such a configuration can be a sustainable source of competitive advantages. With the focus on activities, strategies could be developed for the achievement of synergies between different businesses, locations or also for the transfer of knowledge as between different entrepreneurial activities. A company's competencies would become effective as a result of the activities. Porter's process view of the business for the generation of customer benefit offers a good starting point for the observation of the internal business environment. Bearing in mind the entrepreneurial activities in a dynamic and complex business environment, more emphasis must however be placed on aspects of strategy implementation and change.

According to Hammer (1997:221-236), companies can be defined in particular by their processes, i.e. by organised tasks that they are able to do best. Efficient processes can then be used as a basis for the development of new products and services or for the exploitation of new markets. Existing processes in existing businesses can be improved or expanded and new processes for existing or new businesses can be developed. Efficient processes can also be offered as services to other companies and customers. The processes should be designed in such a way that customer wishes can be satisfied in a flexible way. Hammer describes the internal business environment using four central elements: company processes, organisation structure with jobs, management and evaluation systems, expectations of value and beliefs (see figure 66).

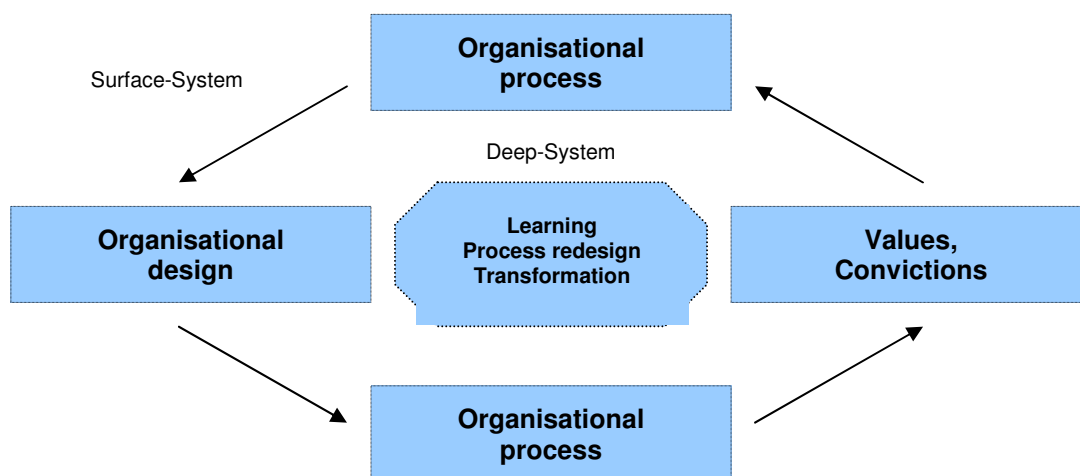


Figure 66: The internal business environment with structural and deep system as per Hammer 1997:246-248

3. Intrapreneurship and the global business environment

To secure long-term competitiveness, change processes must be put into place which enable an organised adaptation to changes in the external business environment (Hammer 1997:240)¹⁹³. The process-centred business system outlined above with its four elements is described by Hammer as a structure system that must be adapted when there are changes to the external business environment.

Adaptation of the value-creating structure system is controlled by a deep system (Hammer 1997:247-257)¹⁹⁴. The deep system is then responsible for realising changes in the external environment and steering the transformations and innovations that are necessary in the organisation. The deep system is said to be defined by the three processes of learning, process re-design and transition. The learning processes identify, evaluate and communicate information from the external environment. The actors have to be active in the structure system and at the same time, think about the resolution of tasks in the deep system. New ways of working then come about and these must be integrated into the process re-design and introduced into the structure system via the transition.

Rüegg-Stürm (2004) also defines value-creation from resources within the internal business environment (see figure 67) with reference to process architecture with management processes, business processes and support processes. The structuring factor strategy, structure and culture should steer the activities and resources towards certain effects and results. The strategy is said to have a directional function, whilst the structures have a coordination function and the culture, a function of creating meaning. Culture can ensure that the individual actors act and react for the good of the whole.

The optimisation and innovation modes of development are the two fundamental templates of entrepreneurial change processes. Within the framework of entrepreneurial development, the phases of optimisation with incremental change would alternate with the phases of innovation with radical change. The structuring factors can then be described as a central lever for intrapreneurship.

¹⁹³ Hammer asserts that a fragmented hierarchical organisation structure is not suitable for the realisation of dynamic changes in the environment.

¹⁹⁴ Hammer emphasises that actors who design the change process must demonstrate a creative drive for improvement and a holistic orientation.

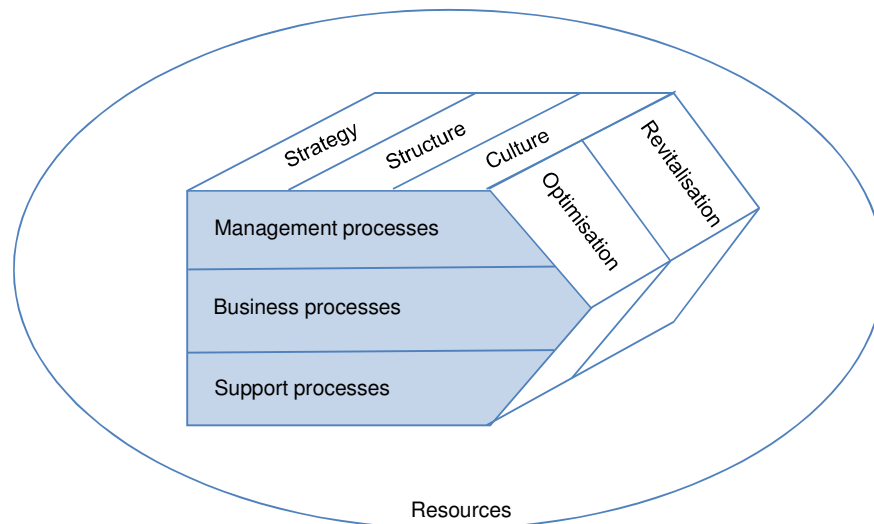


Figure 67: Internal business environment according to Rüegg-Stürm (2004:125)

According to Child (2005) the collective activities are determined by an adaptive and emergent design of an organisation's components (see table 5). Resources and actors can then be directed via structural process components from all parts of the organisation in such a way that organisational objectives can be achieved, even in a permanently changing environment.

In terms of the structural components, he makes a distinction between the basic structure with agreements about hierarchy and specialisation, and procedures with rules, standards, processes and systems. Existing procedures have to be changed if external change demands flexible adaptation of the organisation or innovation. In terms of systems, there must be a system of signals to recognise the need for adjustment.

In terms of process components, Child (2005) defines three fundamental organisation processes: integration should achieve the coordination of complementary activities. A control system sets targets and checks achievement of them, although it is also possible to have self-checking while at the same time committing to collective targets. Reward mechanisms support motivation in order to attain individual contributions to the organisation as a whole, to change and to innovation. Overall, there must be direct communication, an intensive exchange of information, active coordination and productive relations between the divisions of the organisation.

Structural components	Processual components	Boundary-crossing components
<i>Basic structure</i> Hierarchy: levels, authority (centralized versus decentralized), reporting lines Specialization: roles, groups, and units <i>Procedures</i> Rules and standards, systems	Integration/ Coordination Control Reward	Outsourcing Virtual organisation Alliances Organisation across borders

Table 5: Components of organisation according to Child (2005:7)

According to Child¹⁹⁵ synergies must be creatively and proactively pursued within and between organisations that go beyond the relevant divisional and company boundaries and networks, and relations have to be developed and nurtured. An entrepreneurial culture can help in shaping network relationships. In interplay between global and local orientation, global networks can promote flexibility, innovation and cooperation within the organisation. The analysis of problems that occur¹⁹⁶ within the organisation can provide important indications for what adjustments are necessary to the configuration of components.

Child (2005:29-51) talks of important implications for the design of the components of an organisation that are dependent on trends in the business environment. Globalisation offers many organisations the opportunity to achieve economies of scale or diversification in new overseas markets. Resulting from this, there are consequences for the coordination and reconfiguration of company resources. Technological developments influence communication and information and enable efficient local and global network and project structures. However, the latter should be coordinated by a strong company identity.

¹⁹⁵ According to Child (2005), entrepreneurial decisions have to be taken about outsourcing of activities, the forming of alliances, the shaping of virtual organisations as well as cross-border networks.

¹⁹⁶ Child (2005:17-21) cites: low motivation of actors, slow and unsuitable decisions, deficits of coordination and conflicts, poor reaction to changes in the business environment and few entrepreneurial activities, increasing costs.

3. Intrapreneurship and the global business environment

Within the organisation, learning processes must be supported in existing and new businesses and interdisciplinary teams must be promoted. In this process, existing businesses must be operated differently, like new businesses and these need to be designed more flexibly. It is important to develop the ability to continuously adapt the components of the organisation in response to changes in the business environment. With this, relating analyses to the internal and external business environment (see Chapter 3.2.2.5) in a global context (see Chapter 3.2.2.6) becomes the focus of an entrepreneurial organisation

3.2.2.5 Linking analyses to the external and internal environment

If one is to be able to exploit and identify opportunities and threats coming from the business environment by applying strategies, the latter must reflect the strengths and weaknesses of the organisation. This method of developing entrepreneurial strategies is described in the literature (Kotler et al 2003:169-172, Morrison 2006:31-33, Venter 2006:150, Worthington and Britton 2000:456-458, Bea and Haas 2005:121) as a SWOT¹⁹⁷ analysis (see figure 68). The objective is to adapt the organisation as well as possible to events in a turbulent business environment.

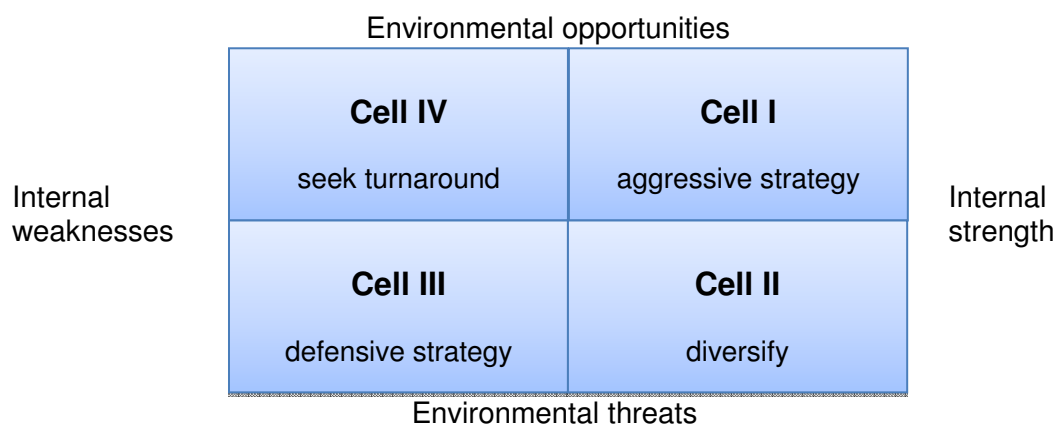


Figure 68: SWOT analysis as per Forgang and Einolf (2007:208)¹⁹⁸

¹⁹⁷ The acronym SWOT is used as an aide-memoire for **strengths**, **weaknesses**, **opportunities** and **threats**.

¹⁹⁸ The SWOT analysis (see also Wheelen and Hunger 1999:107-129) diagram classifies products on the basis of internal strengths and weaknesses as well as the opportunities and risks in the external business environment in a four field matrix. Products in cell I should be pursued as a priority (aggressive strategy) and resources should be steered into this area so that external opportunities can be used. Products in cell II (diversified strategy) are based on internal strengths, but have no attractive market so that a great number of resources should not be established for this area. Products in cell III (conservative strategy) have no strategic priority and should not be pursued further. Products in cell IV (searching strategy) have an attractive market but are not supported by internal strengths. Development of the necessary strengths should be checked as a strategic option in order to be able to achieve sustainable handling of the market.

3. Intrapreneurship and the global business environment

Ansoff (2007:10-28) examines the relationship of the organisation with its business environment in terms of an *open loop*: the organisation reacts to effects of the business environment in such a way that the business environment, the strategic reaction of the organisation and the internal adaptation of the structure are closely related to each other. Subsequently, the entrepreneurial organisation becomes efficient in its internal business environment, is aggressive in relation to the external business environment using entrepreneurial activities and this is combined with a strong orientation towards success. Within this context, Ansoff speaks of *environment serving organisations* and these have a strong orientation towards securing viability.

The analysis¹⁹⁹ of the internal and external business environment leads to an entrepreneurial gathering of information which enables opportunities and threats to be identified and reflected against the strengths and weaknesses of the organisation (see figure 69).

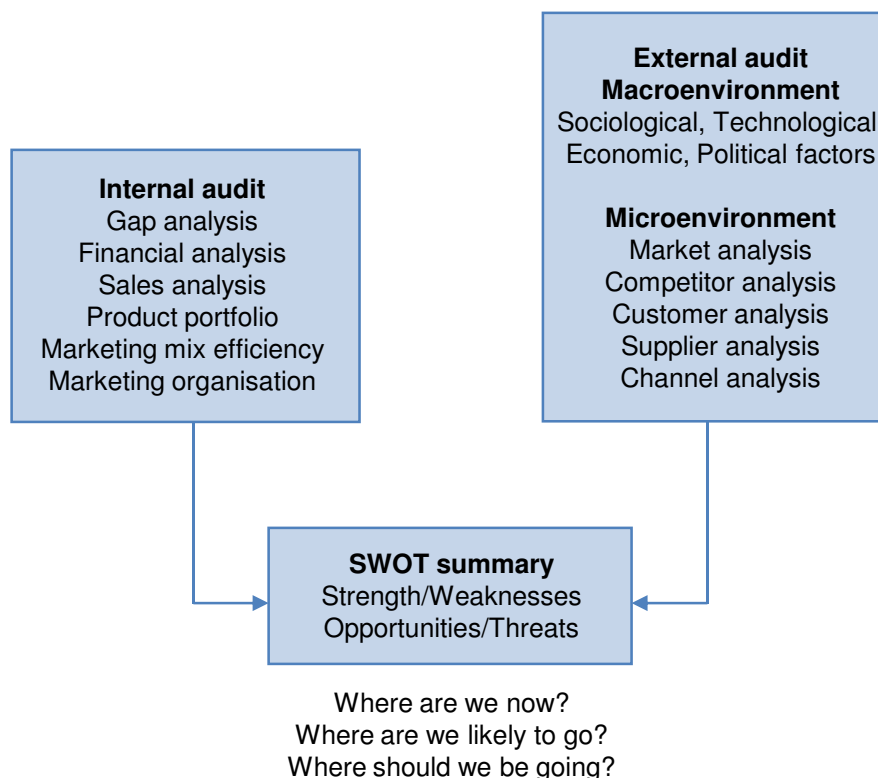


Figure 69: Identification of internal strengths and weaknesses and external opportunities and risks from the business environment as per Palmer and Hartley (2002:485)

¹⁹⁹ For a description of analytical techniques see for example Johnson and Scholes (1993:75-152), Worthington and Britton (2000: 453-459), Palmer and Hartley (2002:468-483).

3.2.2.6 Levels of analysis for the global business environment

The entrepreneurial organisation has to analyse the business environment on various geographical levels. In a global economy and in terms of securing long-term viability, it is important for an organisation to follow the development of the global economy if it is to be able to evaluate opportunities and risks and the effects of its entrepreneurial decisions. Graf (2005:330-332) also believes that information about supranational economic regions (see for example Melnikas 2008) is necessary in order to make strategic decisions. Bearing in mind the achievement of short-term viability and individual entrepreneurial activities, it is particularly important to examine markets, industries and national economies (see figure 70).

Graf suggests an inside-out perspective as a starting point for adapting the organisation to changed framework conditions and its positioning in the environment; this has to be supplemented with an outside-in perspective that bears in mind future developments in the business environment, enabling specific entrepreneurial activities to be planned. With this, it becomes clear that systems thinking and systematic consideration of the interplay between various system levels are of great significance when analysing the environment. In this way, relevant analyses appropriate to existing entrepreneurial questions and/or problems can be carried out on a global level, on the level of economic regions, on country levels and also on a regional level.

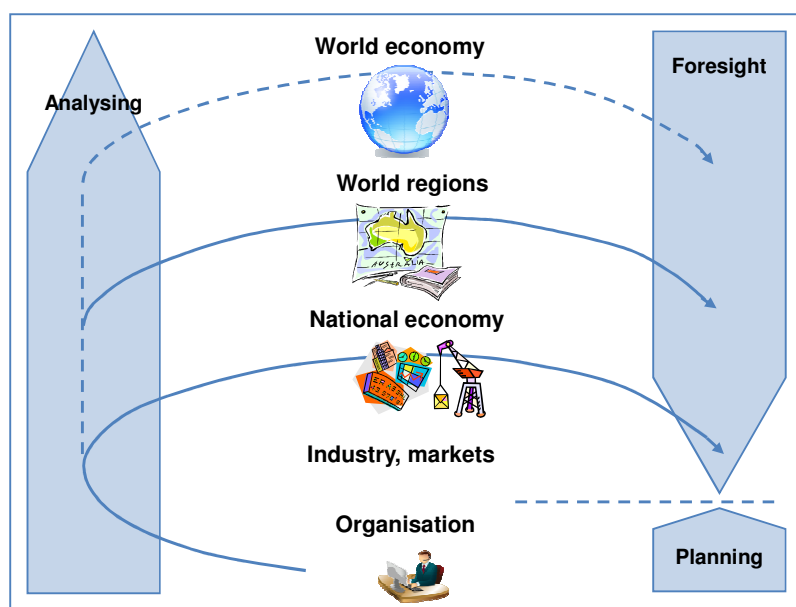


Figure 70: Business environment levels of analysis as per Graf (2005:331)

Kolde (1982) was calling for this global perspective some 30 years earlier. The global economy with its complex system that stretches beyond national boundaries has attained a new dimension and comprises a complex hierarchy of systems. The domestic economic system comprises public and private enterprises which, in turn, consist of sub-systems such as branches, departments, cost centres or teams. Added to this, there are professional bodies and associations as well as trades unions, interest groups and sub-systems which connect the economic system with other social systems. Each sub-system is then a component of a higher system. The exchange between the system in question and the environment takes place via inputs and outputs.

All connected national economic systems together form the international economic system and this international economic system is made up of the following five components (Kolde 1982:6)²⁰⁰:

- (1) Economic systems of the various countries;
- (2) Institutions which support exchanges that go beyond national boundaries (e.g. financial institutions);
- (3) Global companies;
- (4) International organisations that are an element of the world economy²⁰¹;
- (5) Supranational economic regions.

The operational fields that are relevant for an organisation within the network of international economic systems are determined by taking into account the entrepreneurial questions selected so that it is possible, in principle, to bring the whole world into focus for the entrepreneurial organisation. Each change in the business environment offers entrepreneurial organisations the chance to benefit from change by adapting. In turn, it is also necessary to analyse and understand the business environment at the level of individual countries to take an integrative perspective in developing entrepreneurial strategies on the basis of global market interdependence and national regulatory conditions (Wijen and Tulder 2011).

²⁰⁰ He describes the modern world as a mosaic of connected national states in which global enterprises are active beyond their own borders. Fuchs and Apfelthaler (2009) describe these transnational value creation and market development processes in detail.

²⁰¹ Today, these include the World Trade Organization (WTO) or the International Monetary Fund (IMF). For perspectives of a new world order see Müller (2008).

3. Intrapreneurship and the global business environment

Global entrepreneurial organisations operate, thus, in various local business environments in which there are different rates of change²⁰². Individual components (sub-systems) of the business environment may demonstrate a global dimension, whilst others are firmly anchored in national systems. Because of this, the socio-cultural segment stands out as a particularly country specific element²⁰³. According to Narayanan, it is particularly important to examine the economic and technological area, including in a global dimension (see figure 71).

The global economy is divided into various economic areas and these, in turn, into individual economies. Much of the literature (Rugman and Collinson 2006, Dülfer and Jöstingmeier 2008)²⁰⁴ often describes the three largest economic areas in the world (USA, EU and Japan) as the Triad and is separated from the other economic areas. Canada and Mexico are often included in the USA economic area and together with the USA, form a free trade zone²⁰⁵.

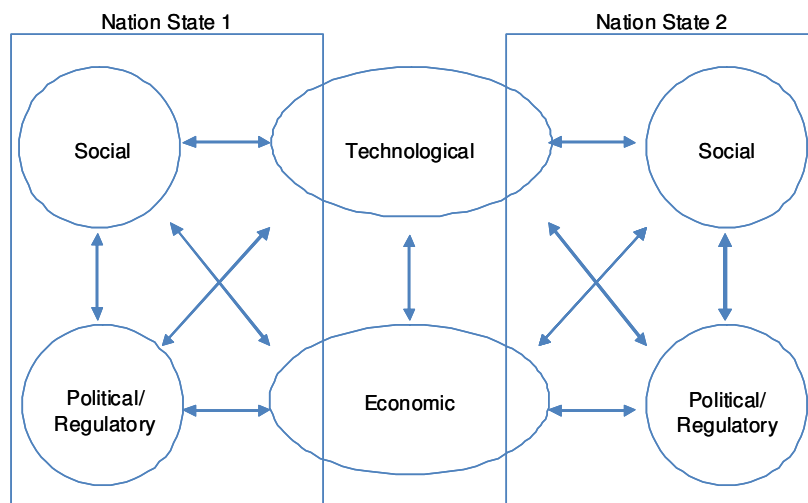


Figure 71: PEST analysis framework for a global company as per Narayanan (2001:25)

²⁰² According to Kolde (1973) it becomes important to not only see differences in various national environments, but rather to take account of the various change dynamics there and to consider these in their own entrepreneurial activities.

²⁰³ For cultural dimensions of the business environment see Tepstra and David (1991:1-126) and Hough and Neuland (2000:71-95). As well as adaptation of business to markets in other cultural contexts, one must also ask what can be learned from other cultures for the home country and for entrepreneurial activities overall.

²⁰⁴ For the evolution of the three large economic areas see Sheth and Sisodia (2006). With long-term global trends in mind, Sheth and Sisodia outline trends in the integration of global economic areas. Thus, an expansion of the EU eastwards and southwards to South Africa is to be expected. The USA would strive for integration with South America. Southern Asia strives for a free-trade zone. Japan and China would strive for integration with Australia and New Zealand.

²⁰⁵ NAFTA: North American Free Trade Agreement

3. Intrapreneurship and the global business environment

The Common Market of the European Union currently consists of 27 countries²⁰⁶. The Triad markets form the largest operational field and the companies in the Triad, with exports, imports and foreign direct investment (FDI), make for an increasingly networked world economy. Triad companies are mainly investing at the moment in other regions of the Triad or in regions that are geographically close²⁰⁷. The operational field of non-Triad members²⁰⁸ can be divided into these economic areas:

- Central and eastern Europe (non EU countries)²⁰⁹;
- Africa²¹⁰;
- South and East Asia²¹¹;
- Western Asia²¹²;
- Latin America and the Caribbean²¹³.

According to Rugman and Collinson (2006:570-571), the networking of the global economy has an additional dynamic, since global companies in the Triad will increasingly pursue entrepreneurial activities in non-Triad economic areas (see figure 72).

²⁰⁶ **Belgium, Germany, France, Italy, Luxemburg, the Netherlands**, Denmark, **Ireland**, United Kingdom (UK), **Greece, Spain, Portugal, Austria, Finland**, Sweden (= EU-15); **Estonia**, Latvia, Lithuania, **Malta**, Poland, **Slovakia, Slovenia**, Czech Republic, Hungary, **Cyprus** (= EU-25); Bulgaria, Romania (=EU-27). Countries in bold use a common currency, the Euro.

²⁰⁷ For further information see, for example, World Investment Report of the UNCTAD (United Nations Conference on Trade and Development: www.UNCTAD.ORG/WIR).

²⁰⁸ There are various other delimitations for country groups in the literature and according to international institutions. For example, emerging countries and developing countries are separated from the developed nations (see also Dülfer 1997).

²⁰⁹ Central and Eastern Europe currently receives 6,3 % of global foreign direct investment – FDI (World Investment Report 2010:6).

²¹⁰ Africa receives 5,3 % of global FDI (World Investment Report 2010:6). Some economies have a large wealth of resources. The developing economic area of Southern Africa (SADC - Southern African Development Community) comprises: The Congo, Tanzania, Angola, Zambia, Malawi, Mozambique, Zimbabwe, Madagascar, Mauritius, Namibia, Botswana, South Africa, Lesotho and Swaziland.

²¹¹ Together with the Middle-East, this economic area receives the highest FDI outside of the Triad (currently 20,9 % of global FDI – see World Investment Report 2010:6). This economic area comprises China, India and the ASEAN nations (Association of South-East Asian Nations) Brunei, Cambodia, Indonesia, Laos, Malaysia, Myanmar, The Philippines, Singapore, Thailand and Vietnam. The growth and development dynamic is sustained in particular by the opening up of international trade and exports to Japan and the EU.

²¹² The growth dynamic and improvement in living standards in this economic area with 6,1 % of global FDI (World Investment Report 2010:6) is sustained from income from oil.

²¹³ Latin America and the Caribbean currently receive 10,5 % of global FDI (World Investment Report 2010:6). The ANDEAN COMMUNITY economic area comprises Bolivia, Columbia, Ecuador, Peru and Venezuela. The MERCUSOR economic area comprises Argentina, Brasil, Uruguay and Paraguay with associated members Chile, Bolivia, Peru. In the future, there is to be a free-trade agreement between North America, Central America, South America and the Caribbean.

3. Intrapreneurship and the global business environment

	Triad firms in non-triad regions	Non-triad firms in triad regions
Market-seeking	Growing disposable incomes and growing markets; potential future lead markets	Large, mature markets; large disposable incomes; home-base of many client companies and flagship firms
Resource-seeking	Cheaper (sometimes better) labor, land, resources, materials, and/or suppliers	Specific technological expertise and managerial capabilities; specialist suppliers; capital

Figure 72: Entrepreneurial opportunities in Triad and non-Triad regions as per Rugman and Collinson (2006:571)

In this way, new markets will be created and grow and, at the same time, new opportunities for gaining resources will come into being (see Tracey and Phillips 2011). Conversely, global companies from the non-Triad areas will aspire to entrepreneurial activities within the Triad²¹⁴. In particular, mature markets and the purchasing power of potential customers offer many entrepreneurial opportunities in terms of sales. In terms of buying, new competencies and technologies can be acquired. Graf (2005:247) requires actors in a global economy to direct and organise themselves on a local-global axis. On the one hand, globalisation and global networking require a global entrepreneurial perspective. On the other hand, at the level of the national economy and in terms of actual entrepreneurial activities, it is particularly important to take the specific local framework conditions²¹⁵ into account (see figure 73).

²¹⁴ According to Raman (2009), five fundamental changes starting from developing countries would become effective: (1) Developing countries with Brasil, China, India and South Africa at the head could, by strengthening domestic demand, remove themselves from the economic development in developed countries and develop attractive market segments; (2) Family businesses and public companies with long-term strategies and entrepreneurial managers facilitate future-oriented companies in the developing countries; (3) Companies from China, India, Russia or other developing countries pursue internationalisation strategies by acquisitions and are attractive cooperation partners for global companies from the developed countries when opening up new markets in developing countries; (4) Products following the principal of sustainability (Grunwald and Kopfmüller 2006, Meyer 2008, Ekardt 2005) could demonstrate great entrepreneurial potential in the economy of the future and particularly in the emerging markets; (5) Multinational companies make use of the great future market potential in Africa.

²¹⁵ Depending on the specific situation, natural and geographical conditions can have great relevance for the viability of an organisation. The influence of natural factors is described, for example, by Dülfer 1997:277-306.

3. Intrapreneurship and the global business environment

Demographic Characteristics <ul style="list-style-type: none"> • Geography • Population • Health/Illiteracy • Technology • Important home pages 	Loanable Funds Market (Interest Rates) <ul style="list-style-type: none"> • Central bank name • Money supply • Gross saving/GDP • General budget deficit or surplus/GDP • Interest rates
Real Goods Market and Labor Market <ul style="list-style-type: none"> • GDP/Income distribution • Labor force • Inflation rate • Leading economic indicators 	Foreign Exchange <ul style="list-style-type: none"> • Currency: Code • Exchange rate • Exchange rate system • Balance of payments

Figure 73: Conceptual framework for an analysis of countries as per Marthinsen (2008)

In practice, there are many overlaps between the different geographical levels of analysis. The exchange between the system levels in the business environment, in particular between a global and local perspective (see table 6), can help entrepreneurial organisations to achieve the required adjustments to changes in the environment. Kanter (2011) describes such a move across a continuum of perspectives with the *Zoom in* and *Zoom out* metaphor to bring details into sharp focus as well as to map the whole territory to identify emerging threats and opportunities.

Dimension	Global environment	National environment
Economic	Global and regional economic integration; globalisation of production	National economic systems
Cultural	Media and internet penetration; consumer society and global markets	National and subnational cultural, including linguistic and religious, groupings
Social	International division of labour; international migration	National and subnational social groupings, for example family and ethnic groups
Political	International and regional political interdependence and integration	National political systems; political parties in pluralist states
Legal	International law and practice (in, for example, human rights and environment); international tribunals	National legal systems, including national legislative processes and national judicial systems
Trade and competitive	Multilateral trade agreements (for example GATT); multilateral organisations (for example WTO); regional trade groupings	National strategic trade policy; bilateral trade agreements
Technological	Global R&D by transnational corporations and international bodies	National innovation systems
Financial	Global capital markets; international institutions (for example IMF and World Bank)	National financial systems, including banks and other financial institutions
Ecological	Climate change; international regulation	Resource depletion; environmental degradation; national regulation; national energy policies

Table 6: The global and national environment according to Morrison (2006:449)

3.2.3 Comment: Understanding the global business environment

A holistic understanding of the global and dynamic business environment is important for the consideration of the business arena for intrapreneurship. The literature analysed in chapter 3.2 gives a full picture of the whole business environment (see chapter 3.2.1.2) as well as a focus on the segments of the external macro and micro environment and the components of the internal, organisational environment (see chapter 3.2.2).

The role and character of intrapreneurship depends on the nature of the business environment. Thus, it is necessary to focus on understanding of the uncertainty arising from complexity and dynamism (see chapter 3.2.1.1). In a global business environment the cultural peculiarities in the global operational fields define business opportunities as well as the specific framework conditions for design of an entrepreneurial organisation in a specific cultural context. Thus, the knowledge about and for specific cultural situations has to be considered (see chapter 3.2.1.3).

Understanding and analysis of the levels of the global business environment (see chapter 3.2.2.6) is a requirement for identifying and pursuing entrepreneurial activities. Thus, chapter 3.2 lays the foundation to integrate the theoretical concepts in a framework with four dimensions (see analysis in chapter 4.1 and synthesis in chapter 5.2) for further exploration of the interaction between organisation and the environment (see chapter 3.3), the analysis (see chapter 4) of the entrepreneurial tasks identified (see chapter 3.4) and model building for holistic intrapreneurship (see chapter 5).

Explanations of the business environment already show that the interplay between the organisation and the environment is of great significance and that an analysis of the interaction should also include a systems approach. The following chapter examines some systems approaches and theoretical concepts.

3.3 Organisation, Environment and Systems Thinking

Chapter 3.3 looks at the interaction between the organisation and the external business environment and summarizes some major concepts of systems thinking. It shows that it is valuable to consider the organisation as an open system and to take a broader look at the networking of the total system (see chapter 5). Global companies operate in various business environments and many of these business environments are in a state of permanent change. It is critical for the organisation to adapt proactively in these dynamic framework conditions if it is to secure its viability. In order to be able to shape its own change in a focused way, global companies must observe and understand their dynamic and complex environments as well as possible. In doing this, it is important not only to analyse the individual elements of the business environment, but also to keep fully in mind the networking between them and their relationship to the organisation.

The complexity of the internal division of labour within the organisation must also be organised in a focused way. Due to the many technological developments and the complex social structures in the global economy, it appears to be an absolute necessity to have a holistic approach²¹⁶ within management and to see the individual parts as being connected to a coherent whole. The literature²¹⁷ gives a whole range of theoretical concepts and methods for systems thinking (Ramage and Shipp 2009). As well as the basic aspects and ideas, organisation cybernetics provide fruitful findings on the discussion about intrapreneurship in a dynamic business environment²¹⁸. Systems approaches seem to be crucial for the shaping of future-proof entrepreneurial organisations in complex and dynamic environments.

²¹⁶ An introduction to the origins of systems thinking in various disciplines can be found for example in Jackson (2000:43-89). Miller (1995:1) states that the various systems theories are very different. As a general starting point, he defines the object as being to organise the findings of different scientific disciplines within one uniform conceptual structure.

²¹⁷ Important ideas and methods from the systems approach in management can be found in Malik (1992), Haines (1998), Jackson (2000), Gharajedaghi (2006). A brief introduction to systems theory approaches in management is also given by Steinmann and Schreyögg (2005).

²¹⁸ Burns and Stalker (2001:119-125), distinguish the mechanistic and organic management system as polar types which have advantages, depending on the environmental situation. In stable business environments, the mechanistic management system is said to be more appropriate and in times of extensive change in technological and economic conditions, there has to be a more organic management system. Organisation types between the polar extremes can also be suitable for specific environmental situations.

3. Intrapreneurship and the global business environment

Systems thinking can, for example, be implemented when developing the necessary mental models (Senge 2006:163-190) of a global business environment that is continuously changed by competition and technological developments. It helps with the understanding of complex organisations and the interaction between the organisation and the business environment; it also helps to make future-oriented entrepreneurial decisions and to solve problems (Hipel et al 2007). These approaches (see Jackson 2000) dictate that organisations are seen as open systems that are proactive in relation to the business environment (see figure 74). With this perspective, changes in the environment can be identified by active monitoring and the input-output relationship of the organisation vis-a-vis the environment can be shaped in an active fashion.

According to Duncan (1975), the business environment is an integral part of reality for organisations. The organisation system is composed of (1) several sub-systems that interact with the environment, (2) one or more boundaries that separate the organisation from a superordinate peripheral system and (3) a process that transforms external inputs into outputs which are then, in turn, applied to the environment. The inputs are classified as information or goods and the organisation system in this illustration consists of three central sub-systems.

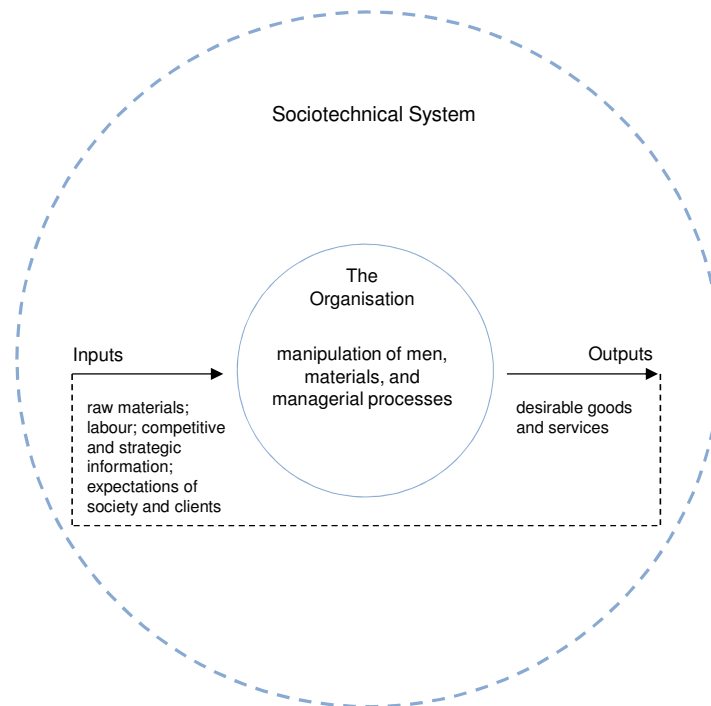


Figure 74: The organisation as an open system as per Duncan (1975:70)

3. Intrapreneurship and the global business environment

The formal sub-system contains all of the actively designed structural elements of the organisation, such as task specification, the organisation chart and organisation units. The informal sub-system results spontaneously and flexibly from the interaction of the actors. The political sub-system should enable the participation of the actors in the decision-making processes and also take account of the political dimension of group behaviour. The acceptance of outputs in the environment provides important feedback which is in turn, taken on board in the organisational process (see figure 75). In the following chapters, some of the major works on systems thinking and action is presented, with a particular emphasis on the interaction between the organisation and the environment. It will become clear that the shaping of these exchange relationships is the central entrepreneurial task and can be seen as the entrepreneurial shaping of the future.

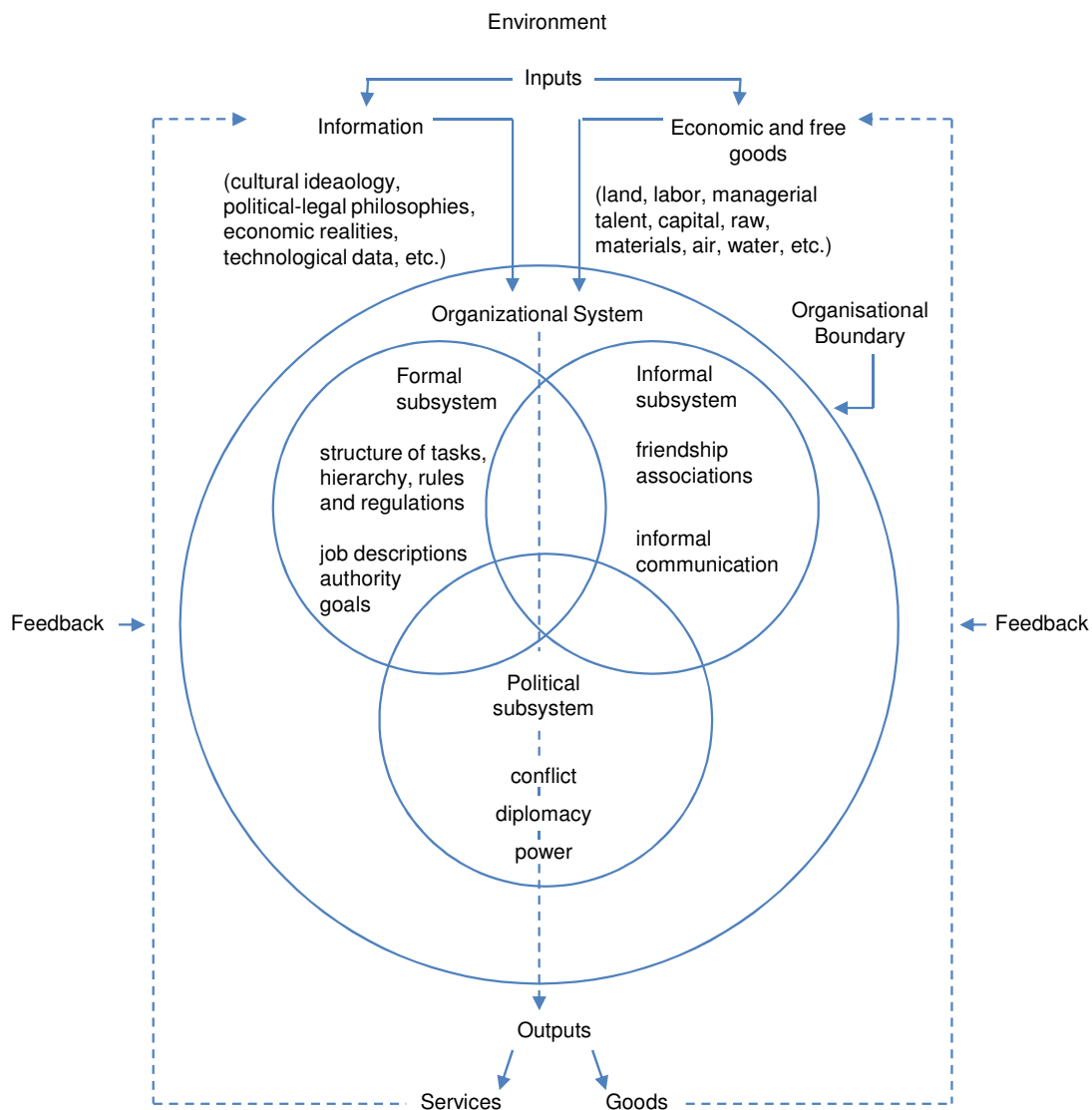


Figure 75: The organisation as an open system with three internal sub-systems as per Duncan (1975:373)

3.3.1 System and environment according to Bertalanffy

General systems theory provides us with a basic systems approach. In the work of Bertalanffy (1968:3-53), the necessity of systems thinking is derived from the interpretation of problems from various scientific disciplines. To understand many problems, it is not enough to understand the individual parts, and it is more a question firstly of the connections and the dynamic interplay of the parts defining the problem as a whole. In this context, it is worth remembering the expression that *the whole is more than the sum of all the parts*.

This is how an interdisciplinary systems philosophy²¹⁹ would shape a new world view. The world as a whole is comprised of various systems levels. The organisation exists on all systems levels. This world view would contain an explanation of the development and the origin of everything new. Social organisations would also have to be considered as living systems. The connected parts with their many interactions make the total system viable.

According to the general systems theory, all living systems are open to their environment, adaptive, deliberate, target-oriented and strive for a pre-determined situation. Bertalanffy states that central concepts for communication and control in open systems are the flow of information in respect of decisions made and a feedback schema (Bertalanffy 1968:42-43)²²⁰ that results in self-regulation of the system. This enables the system to be stabilised or controlled.

²¹⁹ Miller (1995:9) describes general systems theory as a set of connected definitions, assumptions and claims that understand reality as an integrated hierarchy of organisations.

²²⁰ The incoming message goes to an interpretation point via a receptor which forwards the message to an activated effector. The effectiveness of its stabilising reaction is registered in turn with the receptor.

He defines cybernetics²²¹ as a part of general systems theory in that self-regulation and the concepts of information and feedback as control mechanisms between the system and the environment, as well as within the system, are at the fore. A system can thus be defined as a *black box* with input-output relationships. Cybernetics is a further important premise for an in-depth discussion of the role of intrapreneurship.

3.3.2 Organisation and environment according to Katz and Kahn

Katz and Kahn (1966:86-104) also think an organisation should be looked at as an input-output system that is open to its environment. They define nine general characteristics of open systems. Open systems are dependent on a continuous supply from the business environment (1), they reorganise the input and create new products or services (2), which they then release into the business environment (3). All of these activities define a cycle of events (4), whereby open systems try to achieve a surplus from repeated activities in order to secure their viability (5). Along with this, the collection of information (feedback) about the structure of the environment is critical if one is to be able to undertake changes of direction (6). Open systems that can survive are able to achieve a consistent status. In a steady state, the system's character, the relations between the parts and the input-output rates of exchange, remain constant. The targetted surplus enables the system to grow (7). Open systems tend towards specialisation of the actors (8) and can achieve the same target in different ways and via various sources (9).

²²¹ Using the Greek word *kybernetes* (helmsman), Wiener (1992:39), gave this discipline its name. He asserts that a social system is an organisation that is similar to an individual and the organisation's individual parts can also be seen as individual organisations. The social system possesses a dynamic in which cyclic processes with feedback characteristics play a significant role. Thus, questions about the company and the economy can be examined within the context of cybernetics, since the present time can be described as an era of communication and regulation. Thus, the reception and transfer of information are of great significance. The integration of the social organisation or company via mutual understanding can work provided that the community acts in agreement. The effective transfer of information then determines the size of the group and the number of decisions that can be made in the group. Information in this sense holds the organisation together and smaller communities have more information that is available to the community than large communities. In particular, the ability to learn is a character of living systems and determines their adaptability to the environment. The following entrepreneurial tasks can be derived: Gathering and passing on of community information for the entrepreneurial control of the social system as a basis for the adaptation of the organisation to the environment, learning from experience and definition of the optimal organisation size.

When organisations are treated as open systems, this must result in companies being dependent on a continuous exchange with the environment. Due to the change in the business environment, this exchange cannot be maintained at a constant level. Should the organisation try to organise internal processes in a very stable fashion, then it would soon be realised that flexibility within the organisation is necessary to enable the company system to adjust to the changing environment²²².

Regular examination of the forces in the business environment that the organisation has an influence on, is a necessary condition if one wishes to build a viable organisation. A central entrepreneurial task is therefore the systematic collection of information relating to changes in the business environment.

3.3.3 Relationship networks according to Emery and Trist

Emery and Trist (1965:241-257) assert that the shaping of change in organisations is difficult as organisations exist within an environment that is also changing at an increasing rate and becoming increasingly complex. Accordingly, it is just as important to take care of the networking of parts of an organisation to the whole as to consider the relationships of the organisation to the environment. Emery and Trist formulate four relevant basic relationships of an open system. The first relationship network is concerned with internal interdependencies and processes. The second and third relationship networks are concerned with the mutual exchange between the organisation and its environment. The fourth relationship network relates to the interdependencies within the environment itself.

These four ideal-type networks exist in the real world simultaneously and together form an organisation-specific total network. Organisations must observe the networked events in the environment to be able to recognise general changes in the structure of the environment (network 4) at an early stage and to relate them to the other three networks. Emery and Trist present a range of total networks (types) which demonstrate, step by step, an increasing rate of networking.

²²² It must be taken into account that in open systems there are many different ways to achieve established objectives.

With environment type 1, there are no connections between the individual parts and thus the individual organisation can adapt itself as a small unit to its stable local environment. Environment type 2 is characterised by a number of stable local environments such that the individual organisation can choose optimal locations. Therefore, knowledge of the environment is important. The organisation can grow and is then increasingly hierarchically organised and centrally controlled.

With environment type 3, there are several similar organisations and thus a situation of competition arises. The quality and speed of strategic decisions and entrepreneurial reactions create new challenges. The necessary flexibility requires more decentralised decisions. Turbulent fields define environment type 4. The economic and social environments are increasingly networked. Research and development activities within organisations create competitive advantages. Uncertainties in a complex business environment increase. Orientation within the organisation results in values that are linked in with values in society. Cooperation within the organisation becomes more important.

An important entrepreneurial task for organisations at first is to see the environment as a whole so that they can understand its structure. These structures define the framework for the organisation's exchange relationships with the environment. By looking at the specific total network, organisations can shape the exchange processes with the business environment as an open system and shape the internal structures of the business as the whole of its connected parts.

3.3.4 Viable organisations according to Beer

Beer (1959:24-77,97-103,171-182,251-276) proposes cybernetics for application in management. He describes economic and company systems as having been for the previous 50 years extremely complex with a dynamic and change effect that cannot be fully described or predicted (see also Hoverstadt 2008, Malik 2008). Companies must behave in a similar way to a living organism and adapt to the changing economic, commercial, social and political environment and be able to learn from experience.

Complex systems examined in cybernetics can be described as a closely connected network of information. Using regulation and information, the industrial manager can reduce the complexity and keep the selected control variables with the desired limits. At the core of the regulation is the principle of feedback. It is important that the feedback regulator monitors all disturbances (including unknown ones) so that the system can be aligned to the defined purpose.

In order to cope with the variety in the environment there must be adequate variety²²³. Instead of an analysis of causes and effects, there has to be methods of input manipulation and output classification for the organisation system using a *black box*. A regulating mechanism is then developed from the real situation and real action is derived, in turn, from the system model – e.g. a production plan. When environmental factors change, the system model must change with them.

Beer also presents an outline of a cybernetic factory as a first part system which adapts to its surroundings (second part system) and thus achieves the end objective of survival. As well as identifying the market, it identifies the economic climate and confidence in the economic situation, these being part of the environment. Both part systems offer each other an up-to-date set of conditions which can be compared with the prevalent priority conditions at the time (see figure 76).

The regulatory function is not separable since businesses have to be understood as an integrated whole if they are to be a viable system. Decentralised regulation must at the same time be fully integrated into a higher level of the system and central regulations must operate on the lowest level. A central task of the entrepreneurial system is thus the integration of the parts of the company into a functional whole so that reality can keep pace with changed conditions. Beer (1959:264)²²⁴ describes a four-tier hierarchical system of rules that is distributed across the entire entrepreneurial system.

²²³ This requirement dates back to Ashby (1956)

²²⁴ Here he establishes that where there are divisions, the higher ranked part system must contain an image of the lower ranked one.

3. Intrapreneurship and the global business environment

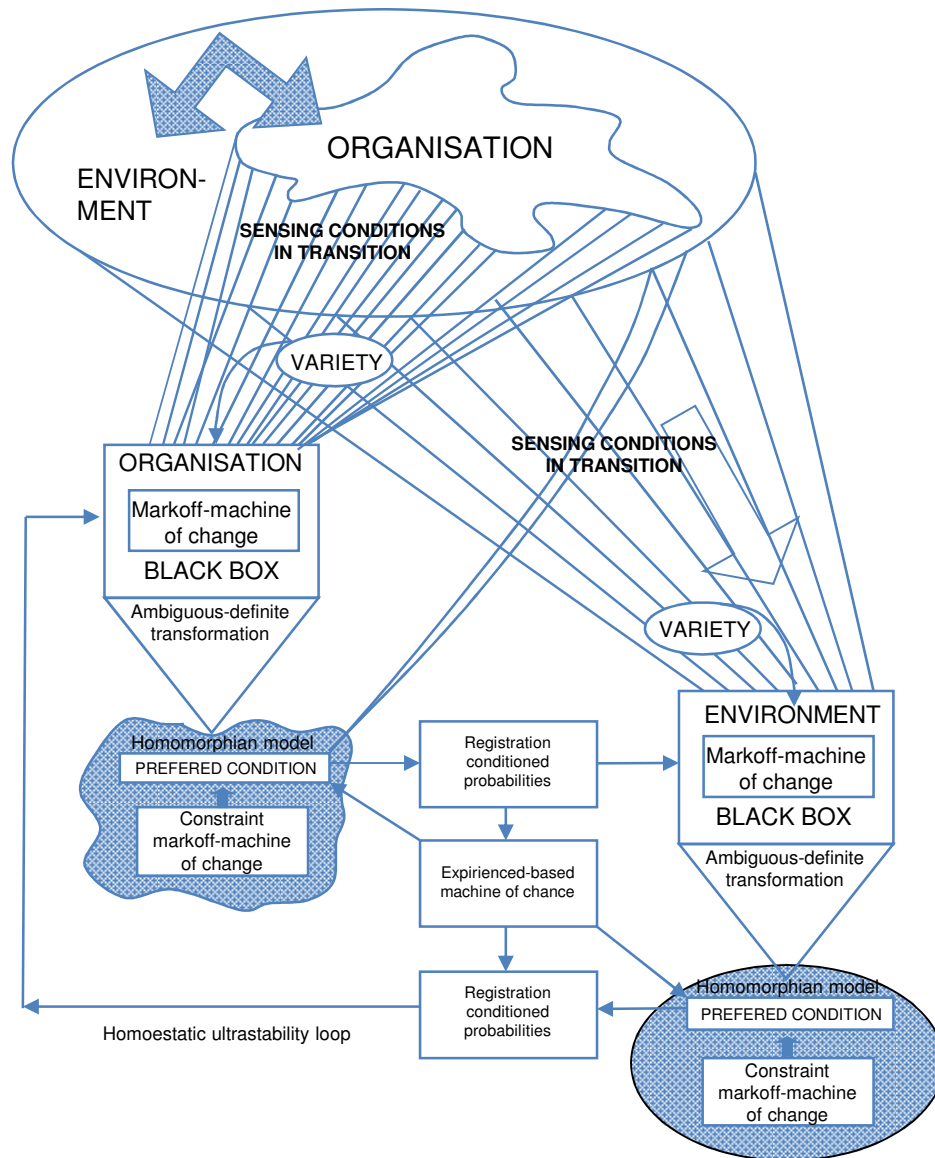


Figure 76: Business and environment as per Beer (1959:181)

Information receptors that register changes in the surroundings and behaviour effectors which define the reactions of the company to these changes, constitute the inputs and outputs of the company system in the present time (rule system 1).

As a result of taking the outside world into account in the system model, there is a reduction of variability and only important information is filtered in the model. As further elements of the present, he names (local) autonomous units (e.g. functional areas or subsidiaries) that are self-regulatory (rule system 2) and conscious control of the total company by senior management (rule system 3).

3. Intrapreneurship and the global business environment

Looking to the future, opportunities and risk have to be examined, alternative courses of action developed and areas of risk reduced. By use of targeted adjustments, change in the company can be shaped in harmony with change in the business environment. This ability of foresight must be firmly anchored in the company so that possible future situations can be investigated and probable outputs simulated (rule system 4).

This integrated, holistic view of the company and its surroundings enables optimal realisation of company policy and means that change in the outside world can be used to achieve an increase in profitability. Beer describes the company as a living organism: the brain has to control the organism and be informed about internal and external conditions. Internally, a balance is attained concerning the delegation of tasks to autonomous systems. The balance with the external world is realised by senior management enabling them to make the right decisions for the long-term future.

The following entrepreneurial tasks can be identified; future-proof adaptation of company systems to the business environment whilst taking systems contexts into account and the structural design of task distribution within the company system, bearing in mind the varying degrees of centralisation and decentralisation required.

In later works, Beer (1979, 1995) develops his management cybernetics further and, together with fundamental management principles, presents a model for viable organisations with five sub-systems. Above all, it is important for management to know how to deal with complexity, i.e. with an increasing number of potential system conditions (variety). He shows how dynamic complexity can be regulated by recursive organisation (see figure 77) and defines criteria for viability of organisations (see also Espejo et al 1996:105-145).

3. Intrapreneurship and the global business environment

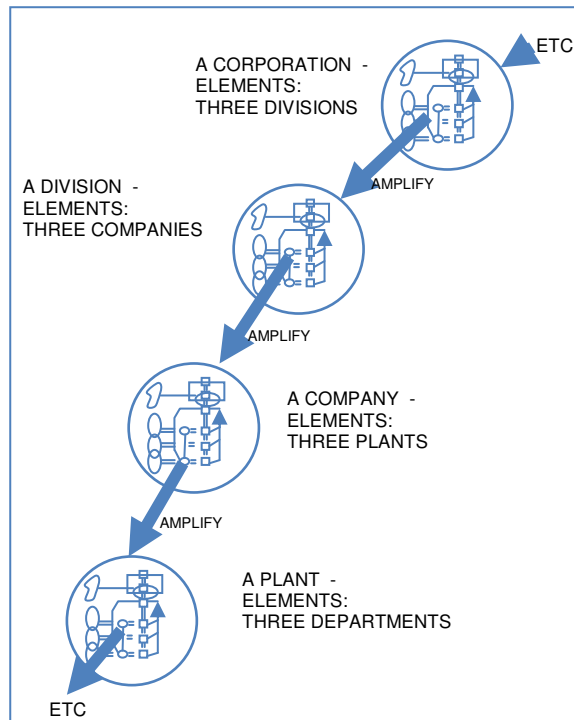


Figure 77: Recursive structure of viable organisations according to Beer (1979:315)

In the process, he also observes the regulatory principles that connect the individual actors and realise the organisation's identity. The autonomy of the elementary operative units is a key aspect (system 1). The external business world is then firstly observed with a focus on the effects on the operative unit (system 1). In terms of components of the meta-systems in the internal business environment, system 2 is responsible for stabilisation of system 1 and system 3 is responsible for the auditing of system 1. The external business environment for system 1 carries threats for internal stability but also brings future entrepreneurial opportunities. According to Beer, these opportunities and risks are processed by a meta-system (system 4). In order to bring together the internal and external business world, a viable system requires an identity, i.e. a company management (system 5) that is an administrator and also controls the variety between systems 3 and 4. The living system²²⁵ (see chapter 3.3.5, and in this context Tracy 1993, Maula 2006) then becomes a unit within its own milieu (see figure 78).

²²⁵ Maula (2006:83-90) describes the organisation as a self-producing, living system, co-evolving with its complex environment, with ten components: Identity; Perception of the environment; Strategy; Knowledge and knowledge management; Boundary elements; Interactive processes and communication; Triggers; Experimentation; Internal standards, processes, and communication; Information and communication systems.

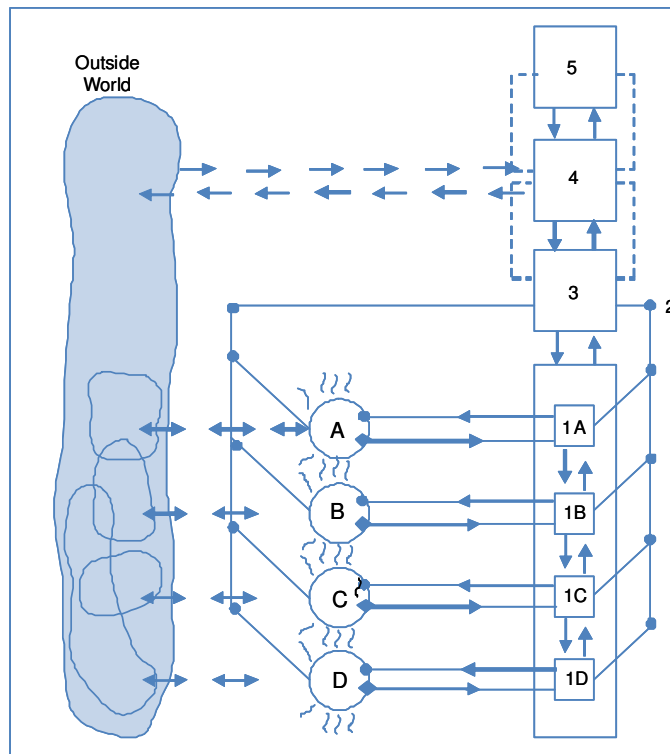


Figure 78: Viable organisation as an integrated whole with four units (A, B, C, D) according to Beer (1995:130)

A,B,C and D could be, for example, autonomous branches (system 1) which, using a viable organisation design (Beer 2003), can be integrated into a whole entrepreneurial organisation (systems 1 to 5). They take care of their own relationships with the local business environment and (via system 2) interact in a coordinated fashion with the other branches. Synergies between the branches are exploited and the internal business environment, including operations (via system 3), is stabilised (Beer, 1995:119-134)²²⁶, even when the system as a whole has to adapt to changes in the business environment. At the level of the whole organisation, relationships to the (global) environment are also taken care of (via system 4). In particular, information is gathered concerning the external business environment which is used as the basis for strategic and entrepreneurial decisions by top management (system 5). Beer requires continuous planning in the company and this has to be implemented without delay and continuously adapted to new information coming from the business environment. There is a permanent process of self-generation by the organisation.

²²⁶ Systems 1-3 form an autonomous system.

3.3.5 Living systems according to Miller

Using studies about biosocial evolution, Miller (1995) developed the General living systems theory with eight levels of living systems (cells, organs, organisms, groups, organisations, communities, societies and the supranational system) and 20 sub-systems (Miller 1995:52-69). Miller's variation of systems thinking (see figure 79) considers the connections between the individual parts to be fundamentally important for an understanding of the whole. Systems that are higher in the hierarchy show a higher degree of complexity than those lower in the hierarchy. Living systems use information from the environment and sub-systems to control and coordinate the system. This enables them to adapt to the continuously changing environment.

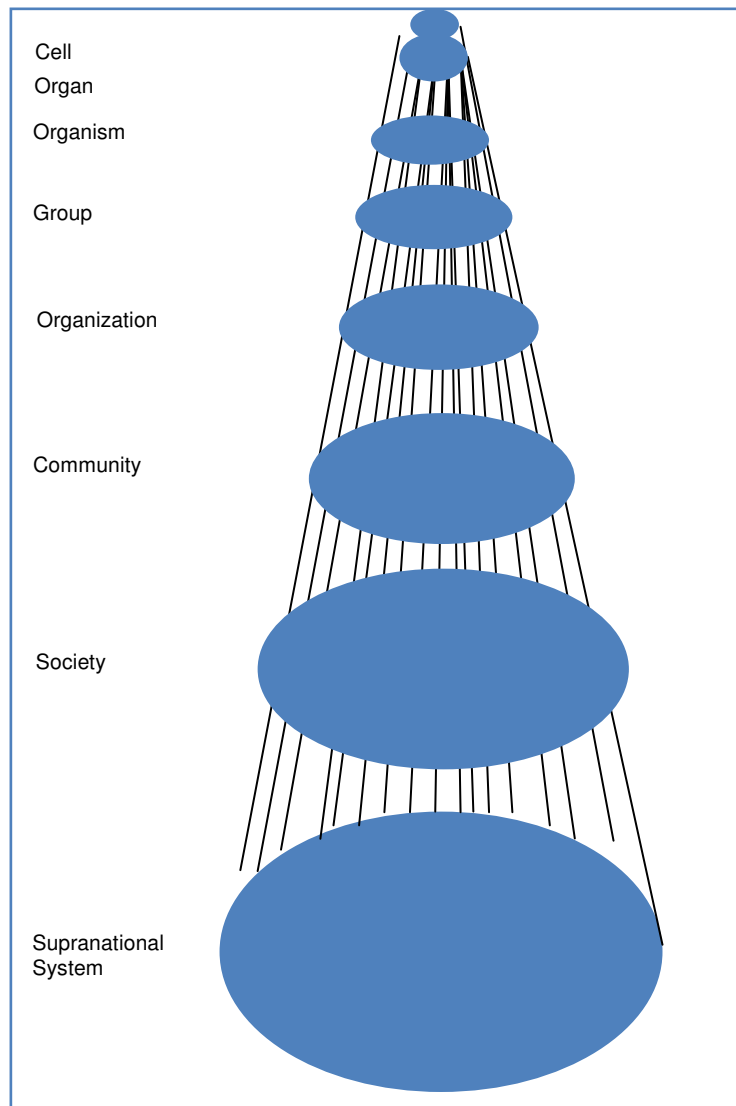


Figure 79: Levels of living systems according to Miller (1995:xvii)

Miller observes structures (arrangement of sub-systems) and processes (conversion of matter, energy or information) of living systems on a general level²²⁷ and examines specific aspects on different hierarchical levels as in an open system with inputs, throughputs and outputs in the form of matter, energy and information²²⁸. Thus, systems can be understood better and their environment can be better controlled. In order to survive, systems must interact with their environment and adjust to changing conditions. With this, the system and the environment (suprasystem) in turn change, so that following periods of interaction, the environment is reflected in the system and vice versa. In turn, the systems develop value hierarchies that guide decisions and are shaped by sub-systems that fulfil defined processes.

Organisations as systems comprise further sub-systems such as branches and subsidiaries, groups and people and are themselves sub-systems of companies or sub-components of supranational systems. An organisation is thus a *multi-level-multi-goal-seeking system* (Miller 1995:595) that is embedded in higher level social systems and provides a general organisation theory for the living systems theory²²⁹. The organisation system is defined by its sub-system. Structural relationships, process relationships and sensible relationships connect the individual sub-systems to each other. The total organisation system possesses input and output process relationships with the environment that are connected together by the internal process relationships between the sub-systems.

²²⁷ Miller (1995:26) describes this as an *intersystem generalization* based on similarities between the systems.

²²⁸ Miller (1995:28) speaks of *intersystem differentiation*, whereby all systems at the various levels also show distinguishable characteristics alongside general characteristics.

²²⁹ Miller (1995:605-665) describes in detail the sub-systems for the organisation. The reproducer (1) can, for example, be interpreted as a venture team, a new business unit or as a newly-founded company. For the matter-energy process he defines a boundary system (2) (e. g. buildings, security staff), a reception system (3) as an interface to the environment, a distribution system (4) for internal and external inputs, an (5) intermediate product system (5) for the production system (6), a buildings and plant system (7), a cleaning system (8), a transport system (9), a means system (10). For the information process, he defines an early warning and information system (11) for innovations (business intelligence), an internal information system (12) for increased efficiency, an internal information system (13) for communication with parts of the company, an expert system (14) for interpretation of information (pattern recognition), a learning system (15) for experiential learning to achieve process innovation, a learning system (16) for the archiving of information for knowledge management, a central decision system (17), a communication system (18) with the business environment, a contact management system (19) to look after relations with other organisations, an information system (20) that notifies time-related business environment states and system components to the decision-making system to facilitate coordination.

3. Intrapreneurship and the global business environment

The markets, which are part of the business environment, give rapid and clear feedback on the viability of an organisation. Using internal and external feedback, controlled adjustment processes in the matter, energy and information processes within the organisation and its environment, as well as within the organisation itself, establish a steady state. The organisation can grow as long as it makes the necessary internal structural adjustments and there is a demand for its products and services. Tasks of intrapreneurship can be defined as achieving the internal structural conditions for growth, identifying new (international) markets in the business environment and creating new demand via diversification²³⁰.

According to Miller, there are two basic templates for growth via product innovation. In template 1, product development and acquiring customers takes a long time, but the establishment of production locations is rapid. Competitor organisations can make up ground a little here on the innovative organisation as competitors copy the new product and can fairly quickly set up their own production where there is only slow development in demand. In template 2, customers quickly become familiar with the new product, the production locations are expensive and the technology is complicated and as a result, a long period is required for development, even for organisations that copy. In this situation, the market develops virtually simultaneously with the pioneering organisation and organisations that are first to innovate can reckon with pioneer-level profits.

Therefore, an important entrepreneurial task is to evaluate the growth and development models of products and markets so that the appropriate entrepreneurial projects can be selected. Growth can then be achieved by increasing decentralisation, whilst at the same time integrating the processes of decentralised units (e.g. by coordination of feedback, monitoring by management information systems or profit centre structures). One entrepreneurial task is to collect sufficient information about the information system for entrepreneurial decisions – e.g. selection of location – as well as feedback from the business environment so that entrepreneurial performance can be improved.

²³⁰ Miller (1995:696) describes organisations which adapt their processes to changes in the supra-system as *immortal*. By learning and adaptation to changing environmental conditions, established companies can achieve permanent success.

3.3.6 Organic organisations according to Wheatley

Wheatley (1999:7-9,17-25,75-90) calls for a reassessment of the mechanistic world view, with its focus on cause and effect, and the discovery and introduction of new organisational forms. Organisations must use learning and creativity from within. In this process, organisations as inventors have to find out, using unique and organisation-specific experiments, what works for their own organisation. In particular, they have to create structures that are flexible and adaptable. In this way, consideration of the individual parts is not the central focus in explaining the whole as it was in the mechanistic world view thus far, but rather the focus has to be on a holistic approach and the relationship between the parts and the network related to them (see Capra 2004).

It is important for organisations to demonstrate that they have such organic structures and be set up as learning organisations so that they can adapt to changes in the business environment and grow by taking advantage of new opportunities. The focal points are change and self-renewal and these continue to be so when the organisation system is troubled from outside. The organisational form as it is cannot then properly cope with the new situation and the only way to achieve a new order is by creative action. The result is alternation between change and stability and structures within organisations that have only temporary stability.

With regulatory feedback, it is possible for organisations to pursue a set course of action or by evaluating information received from positive feedback, to achieve the necessary adjustment and change. A situation of imbalance is the source of growth in an organisation. Organisations that are open, self-organising systems create structures that are suitable for the relevant business environment and thus maintain the organisation's viability; permanent structures are abandoned to achieve maximum flexibility and consequently, the necessary adjustments.

Information has to be gathered actively and interpreted by as many managers and employees as possible. The openness of an organisation to changes in the business environment can lead to a productive exchange with the business environment.

Organisations with a strong identity can use their own strengths to react intelligently to changes in the business environment and use new entrepreneurial opportunities appropriately. Organisations with a clear idea of their own values, company culture and their own experience and strengths (self-reference) can, using the natural process of self-renewal and growth, create new markets or conquer established markets. Decentralised freedom in taking entrepreneurial decisions that are controlled by an entrepreneurial identity creates dynamic, adaptable and creative organisations.

It is precisely self-organisation that brings new ideas, although creativity from only a few actors can provide entrepreneurial success. Order and freedom together give rise to healthy and ordered organisations in situations of local instability and continuous change. In this process, important information within the organisation has to flow freely and be able to be interpreted by all the actors. Thus, new ideas and projects can arise and new ideas generated. If knowledge and experience about environmental changes are shared within the network of the organisation, this enables informed actors to carry out tasks in a responsible way.

The creative search for new knowledge and the sharing of information from common systems perceptions of the business environment that varies from the situation to date can be identified as collective entrepreneurial tasks. Leadership have to specify order and freedom of the entrepreneurial actors as a necessary basis for change, temporary stability and self-renewal.

3.3.7 Holistic thinking and adjustment according to Ulrich and Probst

Ulrich and Probst (1991) require management to think synthetically, with reference to the wider context, and taking into account the many influencing factors in terms of the perception and solution of problems. The behaviour of the whole system has to be considered if the system behaviour is to be influenced. What also has to be considered is how people network with the natural environment. They set down seven building blocks for learnable holistic thinking:

3. Intrapreneurship and the global business environment

- Block 1: An observer defines a system a dynamic whole comprising connected parts and that is situated with a hierarchy of systems.
- Block 2: Between the parts, there is a network of relationships with reciprocal effects in a cycle of effects²³¹. The total behaviour of the system²³² results from the network of interactions.
- Block 3: Between the open system and its environment there are vital circular reciprocal effects, i.e. there are mutual adjustments in relation to material and informational exchanges²³³. The company develops a view about existing and future environment conditions as a basis for targeted behaviour towards the environment and for the adaptation of internal structures
- Block 4: Comprehensive control of a complex system is impossible, since, in a given time span, the system can take on a large number of unforeseeable, different conditions²³⁴. It is possible, however, to be able to influence the desired direction (preferred condition) of development, given an accepted order. The influencing happens by using situational measures (rule mechanisms) which increase the complexity of the system (e.g. by providing space for entrepreneurial activities) or reduce it (e.g. by introducing rules to create order).
- Block 5: The perception of models of order for complex systems makes it possible for the system's behaviour to be understood. It is possible to have orientation and coordination of the parts within the context of the whole.
- Block 6: The steering of systems (recording, processing and transfer of information, e.g. for adapting to a change in the business environment) can be done by control (impacting the system directly to achieve the goal) or regulation (rectifying disturbances – even unknown ones – from the environment by using the feedback principle). In complex systems, the steering is distributed across the whole system as well as the network. Higher priority target settings are prescribed to the self-regulating part systems as control variables.

²³¹ Ulrich and Probst (1991) refer here to feedback in relationship networks.

²³² Ulrich and Probst (1991) quote here upswing or downswing versus stabilisation in dynamic equilibrium.

²³³ This evolutionary process of adjustment is thus not to be seen as biased (as in natural selection).

²³⁴ The output is thus dependent on input, but also on the state of the system thus far.

3. Intrapreneurship and the global business environment

- Block 7: Social systems can be developed and set their targets and purpose either consciously or subconsciously. Via learning in the organisation as a whole, potential can be created or necessary adjustments and changes can be achieved. Consistency and changes are defined as complementary requirements for a system's viability and ability to develop.

Ulrich and Probst cite recognition and thinking in terms of opportunities and possibilities, together with permanent reflection about structures, as success factors for the successful adaptation of the organisation to changed environmental conditions. The organisation, in its role as an active unit and as part of the superordinate system, can set entrepreneurial targets and integrate its sub-systems into a target-oriented whole. The organisation can also achieve the development of specific environmental relationships through conscious decisions (e.g. exploitation of new export markets).

The development of self-regulating operating systems (see Probst 1987, Stacey 2011) and the achievement of innovation competencies and qualitative learning help the business to develop as a whole. Learning at the level of the organisation then leads to a change in the rules governing action. In given markets, with existing products and with relatively stable environmental conditions, learning processes in existing systems can make a significant contribution to the development of the organisation. According to Ulrich and Probst, changes to existing systems, in turn, make far reaching learning processes possible and create new behaviour and entrepreneurial opportunities in dynamic environmental conditions. The learning areas for existing and new business areas can both be simultaneously important for development of the company so that in a production area flexibility has to be at the fore and in other business areas, preservation and perfection.

The complexity of increased (structural management) or reduced (direct management) control interventions within a dynamic system can be determined as entrepreneurial management tasks. The more complex the business environment is, the more successful is indirect management via structures and self-organisation (regulation), without direct control.

A high dynamic and complexity in the business environment requires as much flexibility as possible in companies (behaviour variety) as well as variable systems. Dealing with situational entrepreneurial complexity means controlling a continuous interplay of variety reduction and variety increase.

Entrepreneurial action also means supporting the ability to learn and innovate in an organisation via the development of the company culture and prioritising long-term target setting in order to secure survivability in the economic system. Another entrepreneurial task that can be derived is the selection and justification of community value systems as an orientation towards entrepreneurial action and integration of the organisation in the community's value system. The organisation interacts with the political system in respect of the representation of interests. According to Ulrich and Probst, the business has therefore to practise an entrepreneurial exterior politics at all levels of business control. Central integration of the parts into a whole by holistic management should be a major entrepreneurial management task.

3.3.8 Dealing with complexity according to Bleicher

Bleicher (2004:25-71) emphasises the permanent search for new management instruments on account of the changing socio-economic environment. Because of increased turbulence in the environment, it is important for organisations to recognise all the contexts of dynamic environmental developments and take into account interdependencies in the environment when making decisions so that survivability and ability to develop can be secured. He sees a paradigm shift in management teaching, which is increasingly under the influence of a system-oriented approach as well as an increased significance of intrapreneurship and economic incentive and reward systems (see figure 80). He defines the core of today's management task as dealing with complexity in the internal and external business environment. In this way, it can also make sense to occasionally increase the complexity in order to realise adaptation to changed environmental conditions with new structures.

3. Intrapreneurship and the global business environment

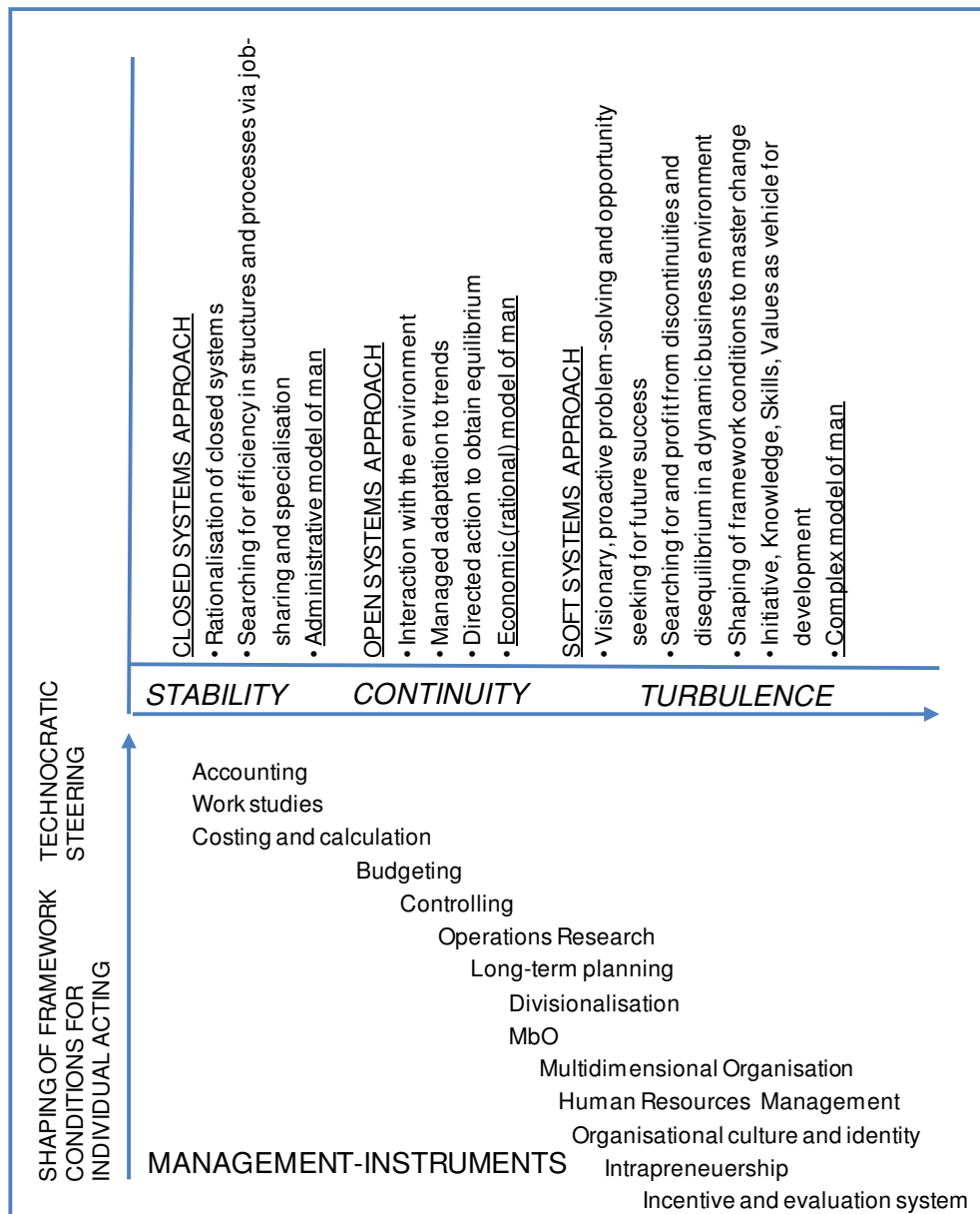


Figure 80: Systems approach and management instruments according to Bleicher (2004:14)

Bleicher calls for holistic thinking, recursion when carrying out structural development of complex systems (Stacey 2001), autonomy of sub-systems for the achievement of self-regulation and viability, as well as for an evolutionary perspective when dealing with the dynamic of the environment. Management must be aware of the three functions of design, steering and development and implement evolutionary processes in fields of tension involving environmental and internal changes (Stacey 1991). In so doing, consideration should be given to the strengths and weaknesses laid down in the past and which make specific future developments possible or otherwise.

Bleicher believes that the development of framework conditions using systems and structures is a central management task. Internal cooperation and intrapreneurship in small units promote creativity and innovation. It is possible to achieve a steady state between the environment and the internal environment as well as between the past and the future by using the intelligence of systems and political action in the company²³⁵.

3.3.9 Networking and recognition of models according to Vester

Vester (2005) notes that the pressure of short-term decisions prevents networked contexts (see Vester 1983:17-49) from being noticed. Indirect effects, relationship networks and time delays have to be taken into account in planning and action. When exploring system contexts, there is a dependence on the selection of correct information in terms of being able to recognise models and systems parameters. In terms of strategies, the cybernetics of the system have to be used strategically and it is important to achieve self-regulation of the system components²³⁶. Defects can be cancelled out by negative feedback, keeping the system in a situation that is tolerable or even desirable²³⁷.

Vester (2005) defines the main objectives as being to increase and secure the viability of a system. Thus, there is always an optimum for the number and size of units in a complex system or sub-system. Inappropriate growth priorities can lead to short-term priorities but hinders the sustainable development of an organisation. Individual optimisation of system components diminishes the viability of the whole system. Growth brings greater networking, which a new organisation form needs.

²³⁵ Bleicher (2004:78-91) presents here terms of reference for observation, diagnosis and resolution of management problems which give an overview of the dimensions and modules of an integrated management: normative management defines the target-oriented objectives of the business within the context of the economy and society and justifies every action of the company. Strategic management focuses on the development, care and exploitation of potential for success and aims to influence activities. Operative management carries out the normative and strategic tasks in operations and is oriented towards competencies and resources.

²³⁶ Errors made with complex systems are described by Dörner (2006)

²³⁷ See also building block 4 of holistic thinking (Ulrich and Probst 1991)

All viable systems have to create a superordinate structure with regional and economic sub-structures and achieve a healthy mixture of self dependence and dependence providing mutual feedback and self regulation. Organisations are in symbiosis with the business environment and are involved in feedback hierarchies of systems and sub-systems²³⁸. Vester warns of dependence on growth in terms of size and points out that companies can also strive for qualitative growth. The analysis of systems contexts and acceptance of models can also be defined as an entrepreneurial tasks. Networked systems must be recorded, interpreted and evaluated. In this way, one can identify levers for controlling the entrepreneurial system.

Vester defines eight ground rules for suitable system planning and action:

- Rule 1: With due consideration to the interplay between system and environment, negative feedback has to take priority over positive feedback. Whilst positive feedback has a self-strengthening effect, negative feedback provides for stability against disturbances and crossing borders.
- Rule 2: The system may not be dependent of growth. If a system grows, it must undergo metamorphoses if it is to survive.
- Rule 3: A system that can survive must be needs oriented (function oriented) and not product oriented. If there is not sufficient demand for a product, new ways have to be sought to achieve growth via evolution using employees and know-how.

²³⁸ Vester (2005:75-85) criticises the current lack of sustainability of the total global system and refers to developments of the short-sighted and non-networked orientation in sub-ordinated sub-systems that are harmful for the global system. Forrester (1972) develops the structure of a world model and examines systematically the boundaries for population and business growth on the earth. He shows that the system, with its main elements of population numbers, capital investment, food production, raw material stocks, pollution, living standards and geographical living space is not governable on a permanent basis and leads to an overburdening of the environment on a global basis. He derives 8 assertions from the model: (1) Industrialisation is a greater disturbance factor for equilibrium than population growth, (2) Humanity can select from four problem scenarios: suppression of the industrial community due to lack of natural raw materials; reduction of the world population due to pollution; restriction of the world population due to lack of food or disease, wars or social pressure; (3) Living standards cannot be maintained in the future; (4) Population control is not consistently effective; (5) Population growth is only suppressed by a serious fall in quality of life; (6) Underdeveloped regions cannot attain the living standard of developed countries; (7) with decreasing raw material stocks, industrialised countries can go backwards in terms of development; (8) For underdeveloped countries, the way to a new equilibrium with the environment can be shorter (directly via industrialisation). The achievement of equilibrium has been dealt with systematically in recent decades, particularly by Meadows et al (1972, 1994, 2004). They call for new targets and new ways for humanity to achieve sustainable development (Rogers et al 2008, Weizsäcker et al 2010).

3. Intrapreneurship and the global business environment

- Rule 4: The system should steer its existing forces in the desired direction (Jiu-Jitsu principle).
- Rule 5: The system should use products, functions and structures multiply.
- Rule 6: The system should develop cyclic processes in material usage (recycling).
- Rule 7: The system should actively seek symbiosis (mutual use of diversity by interfaces and exchange in decentralised structures).
- Rule 8: The system should not carry out isolated planning and development of products, functions and structures (use of feedback from the environment when designing).

According to Vester, the cybernetic ground rules can control entrepreneurial thinking and action in organisations.

3.3.10 The adaptable organisation according to Morgan

Morgan (1998:69-109)²³⁹ describes adaptable organisations as learning, holographic systems which organise themselves as a whole and which can develop themselves according to the challenges emerging from the business environment. Thereby, intelligence, information and control must be shared across the whole organisation. Decisions have to be made where the knowledge is situated. In turn, organisational learning occurs at the place where decisions are made²⁴⁰.

There is a continuous exchange of information between the organisation and the business environment which lead to learning processes, for example on the basis of self-regulation from negative feedback. Firstly, the business environment is examined and then the verified information is compared with given norms. If, in this process, undesired deviations are spotted, suitable activities are undertaken to keep the organisation on the course set down (*single loop learning*).

²³⁹ In order to describe the organisation from different perspectives, he uses various metaphors that help with the (better) understanding of actual theories. He uses *the organisation as a brain* as a metaphor for the organisational concept of autonomous groups in connection with organisational learning. Beer (1995), derive fundamental principles of a theory of effective organisation from the comparative observation of the brain and management structures.

²⁴⁰ For organisational learning see Argyris (1999).

3. Intrapreneurship and the global business environment

Modern cybernetics go one step further and also pose the question of whether the given operative norms are still suitable for purpose under new environmental conditions (*double loop learning*). The development of individual and organisational learning processes must occur on the basis of cybernetic principles. Information systems have to analyse the business environment, be aware of changes and as far as possible make predictions to enable entrepreneurial opportunities to be exploited.

In so doing, account has to be taken of the active intelligence of the organisation and its core competencies so that internal operations can be adjusted. Common mental models have to be understood and continuously adjusted in accordance with external changes. As a reference point, it is important for visions, values and norms to steer central action.

Morgan defines the continuous checking of current structures, processes, markets, products and services as an entrepreneurial task and sees the question of whether the hierarchical organisation can be replaced by a network of self-organised teams as a central question. So that *double loop learning* can control the system successfully, the company culture must be able to support dealings with change, risk and uncertainty.

The parts in holographical systems are self-organised, adapt progressively to changes in the environment, are agents of organisational knowledge gathered de-centrally and share information for various tasks. Through this, organisations can reconstruct knowledge acquired in one part of the system in another part of it. Self-organisation (Probst 1987) can be achieved using a holographical organisation design.

The holographical organisation is then determined by the following five principles:

- Principle 1: The whole is contained within the parts, e.g. via the company culture, organisational information systems, organisation structures with an organisation template (holographical reproduction) that remains the same (differentiated) or holistic (autonomous) teams with differentiated roles within the teams.

- Principle 2: Redundancy and spare capacity create space for innovation and development from various perspectives and strengthen self-organisation within the system.
- Principle 3: The diversity of all self-organised parts must exhibit as a minimum the variety and complexity of the corresponding environment. Variety must therefore be developed at the interface to the environment (e.g. by decentralising development of processes).
- Principle 4: Fostering responsibility-conscious autonomy of self-organised units by structural management (creating enabling conditions).
- Principle 5: Development of operative norms by *double loop learning* and adapting to developments in the business environment.

3.3.11 Comment: Evolutionary organisational development and symbiosis with the environment

From the systems theory approaches, it is thus possible to derive the development of an intelligent, learning organisation with self-organising, decentralised, networked, autonomous organisational units as being an entrepreneurial task. Innovation and adaptation to changes in the business environment enable a future-proof evolution of the organisation in symbiosis with the environment. Consequently, in the analysis (see chapter 4.2.1) ten systems principles related to the interaction of the entrepreneurial organisation with the environment follow the systems theories analysed via qualitative exploration and synthesis. Consideration of systems principles enables reactive, proactive and future-oriented adjustments of the entrepreneurial organisation to shape the evolutionary development and symbiosis with the business environment.

The literature study of existing theoretical concepts for researching the role of intrapreneurship in a global and dynamic business environment shows that for a holistic understanding, it can be helpful to develop a new conceptual framework. In chapter 3.4, the findings so far are combined into an interim conclusion to specify the fundamental tasks of an entrepreneurial organisation in a global and dynamic business environment; this serves as a starting point for further theoretical exploration in chapter 4.

3.4 Conclusion: The three central tasks of an entrepreneurial organisation

A dynamic and complex business environment creates permanent new opportunities and risks for the entrepreneurial organisation. At the same time, to ensure viability, it is necessary to have permanent interaction between the organisation and the external environment. The starting point here is the gathering of information about changes in the business environment; it is on the basis of this that the exchange of inputs and outputs is developed in a future-oriented fashion. Within the organisation, this continuous adaptation to a changing environment requires strategic and organisational flexibility. Shaping of the future is accompanied by individual and organisational learning as well as continuous development of the internal configuration. From the literature analysed in chapter 3, it is possible to derive three fundamental tasks of an entrepreneurial organisation (see figure 81) as a theoretical construct via qualitative theory based exploration (Bortz and Döring 1995:334-341) and pattern recognition (Harnden 1990, Vester 2005). Entrepreneurial information gathering from the business environment as a basis for identifying opportunities and risks²⁴¹, entrepreneurial shaping of the future, in order to determine the interaction between the entrepreneurial organisation and the external business environment²⁴² as well as the entrepreneurial shaping of the organisation²⁴³ for adaptation of the organisational architecture and development of an entrepreneurial self-dynamic for optimisation, adaptation and innovation.

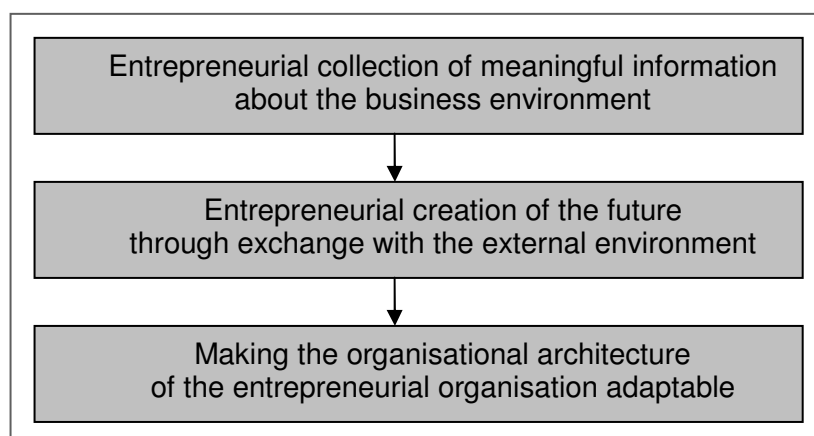


Figure 81: Three tasks of the entrepreneurial organisation

²⁴¹ See chapter 3.1.5 and in particular the design elements 1,2,3.

²⁴² See chapter 3.1.5 and in particular design elements 1,4,5,6,7,8,9

²⁴³ See chapter 3.1.5 and in particular design elements 1,3,4,5,6

3. Intrapreneurship and the global business environment

Findings from literature surrounding intrapreneurship (see chapter 3.1) already give important indicators in terms of the entrepreneurial development of the organisation. Analysis of the literature concerning the business environment (see chapter 3.2) leads in particular to a framework for entrepreneurial information gathering. The evaluation of systems approaches (see chapter 3.3) shows fundamental aspects of how to entrepreneurially shape the future.

The three tasks consolidate the nine development elements for intrapreneurship (chapter 3.1.5) derived and interpreted from the literature search (see figure 82).

Entrepreneurial collection of meaningful information				
Entrepreneurial creation of the future	Element 1: Entrepreneurial task Identify and set up opportunities and risks in existing and new businesses	Element 2: External entrepreneurial operation fields Analyse general macro environment, local and global factor and product markets (micro environment) as sources of opportunities	Element 3: Entrepreneurial organisation design Analyse and develop entrepreneurial vision, mission and strategy, structure and culture, resources and competencies	Making the organisational architecture adaptable
	Element 4: Entrepreneurial strategy fields innovation adaptation optimisation agreement	Element 5: Entrepreneurial decision fields define buy-side in-side sell-side	Element 6: Entrepreneurial action fields process product market technology	
	Element 7: Orientation towards viability Pursue short and long term potential Make use of <i>life cycle thinking</i> and positioning as mature organisation: Continuous renewal, adjustment of organisation boundaries	Element 8: Global orientation Global playing fields Global strategies Global and local perspectives Use of cultural differences and learning from global activities	Element 9: Holistic orientation Identify system structures and development models, understand and use harmonisation of objectives and interests within the organisation Symbiosis with environment Internal and external synergies	
Entrepreneurial orientation				

Figure 82: Tasks and design elements for holistic intrapreneurship

Implementation of the three entrepreneurial tasks leads to fulfilment of the entrepreneurial order and to the productive design of the interaction between the entrepreneurial organisation and the external business environment.

In what follows (see figure 83), the three central entrepreneurial tasks based on the literature study thus far are further clarified (chapter 4) and then transferred into a development concept with a role model for the entrepreneurial organisation (chapter 5).

Systems theory principles²⁴⁴, economic thinking (Kirchgässner 2000, Homann and Suchanek 2005) and a Schumpetrian development dynamic (Schumpeter 2006, Nelson and Winter 1982, Witt 1987) thereby support the entrepreneurial direction of an organisation (Kiechl 1990:28-30, Antoncic and Hisrich 2003, Morris et al 2008)²⁴⁵ and strengthen the viability of the entrepreneurial organisation. The starting point for the analysis of the three entrepreneurial tasks is now outlined from an economic perspective.

²⁴⁴ See chapter 3.3

²⁴⁵ Kiechl (1990) defines seven principles required for an entrepreneurial organisation to achieve an entrepreneurial orientation. The basis of intrapreneurship is formed by a market-oriented company management (first principle) in combination with an entrepreneurial culture that requires constant questioning of the current situation and the permanent search for new opportunities. Visionary management (second principle), should facilitate new areas of activity and more rational avenues of approach as well giving orientation within the development of more individual complementary visions from the individual actors in the organisation. The emphasis of entrepreneurial activities (third principle) promotes entrepreneurial experimentation and defines decentralised scope of action and allocation of resources. Calculated risks (fourth principle) have to be taken when realising internal and external entrepreneurial activities and mistakes must be learned from (fifth principle). Within the entrepreneurial organisation, there is an exchange of relevant information about plans, procedures, projects, success and failure (sixth principle). Successful actors should be rewarded with recognition and incentives (seventh principle). With this, a market-oriented shaping of the organisational architecture becomes the focal point. Antoncic and Hisrich (2003) define a multidimensional and activity-oriented concept with eight dimensions that are relevant for firm-level entrepreneurship: new ventures, new businesses, product/service innovativeness, process innovativeness, self-renewal, risk-taking, proactiveness, and competitive aggressiveness.

3. Intrapreneurship and the global business environment

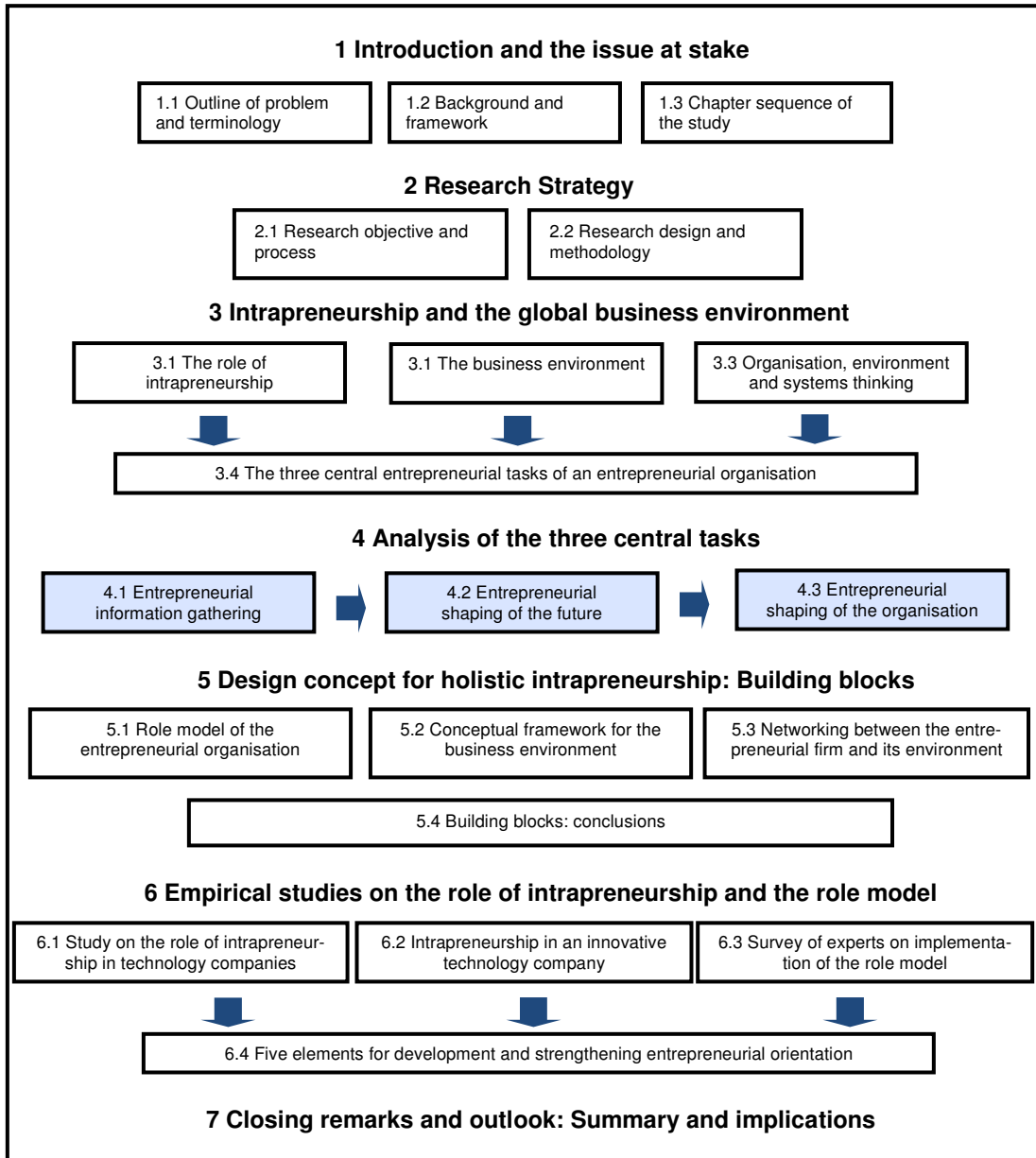


Figure 83: Method of analysis for the three entrepreneurial tasks

4. Analysis of the three central tasks of an entrepreneurial organisation

Based on the study of the previous chapter, this chapter analyses the identified three entrepreneurial tasks. The analysis starts from a managerial economics point of view and before getting to the body of the examination in this chapter, the setting of the three entrepreneurial tasks will be considered. According to Brickley et al (2004), the entrepreneurial organisation must, in particular, actively develop the interaction between the organisation and the environment and continuously adapt the internal organisation design in accordance with the strategic direction that emerges from this (see figure 84). The strategy and organisation design influence each other mutually and determine the framework conditions and the incentive structure of the organisation, which in turn steer entrepreneurial activities towards value creation. In addition, the following key questions have to be answered: Is the company strategy compatible with the business environment and the competencies of the company? What are the core elements of the current organisational architecture? Is the current organisational architecture compatible with the business environment and the strategy? Are the elements of the organisational architecture developed in a consistent way? Do the elements fit together?

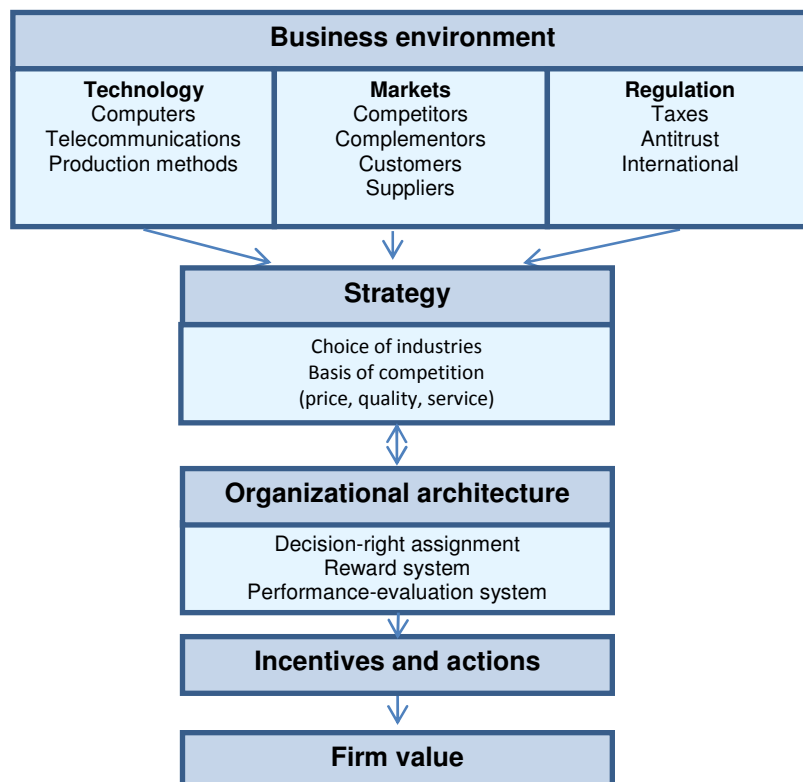


Figure 84: Organisation and environment according to Brickley (2004:286)

4. Analysis of the three central tasks of an entrepreneurial organisation

The realisation of entrepreneurial principles and the entrepreneurial development of the interaction between the organisation and the environment sketch out the way for analysing the three key entrepreneurial tasks identified for an entrepreneurial organisation. In addition, the setting of the three entrepreneurial tasks should first be briefly described on the basis of the literature study and then analysed further²⁴⁶.

The systematic observation of the business environment to identify opportunities is the fundamental activity of entrepreneurial information gathering (Kirzner 1973, Drucker 1985). Expectations of changes in the business environment, trends and scenarios are important sources for the discovery of future opportunities (Schwab 1976, Penrose 1995, Thornberry 2006, Kotter 2009). The common collection of information by all the actors in an organisation from the interaction with customers and suppliers also provides important data (Kanter 1983, Brandt 1986, Joyce 2008). The development of a common mental model about the business environment helps to discover opportunities and risks (Oden 1997, Kuhn 2000, Senge 2003, Thornberry 2006, Joyce 2008, Kohlöffel and Rosche 2009). The internal and external business environment determine the areas of analysis (Kotter, 2009). It is particularly important to analyse the state of development and dynamic of the sector (Covin and Slevin 1991, Lumpkin and Dess 1996, Hitt et al 2002,2005, Weick and Sutcliffe 2007), the customer situation (Maucher 2007, Kohlöffel and Rosche 2009), the national cultural peculiarities of domestic markets as well as networking of the global economy (Covin and Slevin 1991, Zahra and George 2002, Hitt et al 2002,2005).

The development of new products and the conquest of new markets are decisive areas of action for the future viability of the entrepreneurial organisation (Schumpeter 1950,2006, Penrose 1995, Lumpkin and Dess 1996). In particular, international trade and globalisation offer opportunities and risks in global markets (Vernon 1966, Schwab 1976, Vernon and Wells 1979, Smith 1982, Kanter 1989,1997, Hamel and Prahaland 1994, Birkinshaw 2000, Zahra and George 2002).

²⁴⁶ Here, it becomes clear that the three central entrepreneurial tasks implicitly contain the nine design elements for intrapreneurship presented in chapter 3.1.5.

4. Analysis of the three central tasks of an entrepreneurial organisation

In this process, the understanding and use of cultural differences provide an important basis for many entrepreneurial activities within the framework of entrepreneurial shaping of the future (Trompenaars and Hampden-Turner 1998, Maucher 2007). The renewal of the organisation requires continuous innovation, internal efficiency and the regular evaluation of existing business (Schwab 1976, Kanter 1983,1989,1997, Drucker 1985, Hamel and Prahaland 1994, Oden 1997, Kuhn 2002, Thornberry 2006, Maucher 2007).

Many entrepreneurial activities at all levels of the organisation, a strong competitive orientation and a permanent strengthening of competitive advantages are important success factors (Peters and Waterman 1982, Covin and Slevin 1991, Block and MacMillan 1995, Lumpkin and Dess 1996, Morris and Kurratko 2002, Sathe 2003, Hitt et al 2005, Mets 2006:70).

The global business environment also calls for cooperation and alliances across the company (Kanter 1983,1989). Resources and competencies enable entrepreneurial activities and the realisation of entrepreneurial activities contribute to the development of new competencies and to acquiring resources (Kanter 1983,1989,1997, Guth and Ginsberg 1990, Hamel and Prahaland 1994, Penrose 1995). The adaptation to change, risks and crises in the external business environment, organisational resilience, fast learning from market reactions, a holistic view and a long-term orientation are key aspects for securing the long-term viability of an entrepreneurial organisation (Kanter 1983,1989, Senge 1990, Kuhn 2000, Sathe 2003, Weick and Sutcliffe 2007, Joyce 2008, Kotter 2009).

Increasing efficiency by division of labour (Smith 1982) and coordination (Abell 1993, Penrose 1995) is the first fundamental aspect in developing the entrepreneurial organisation culture. The second aspect is the implementation of innovation (Schumpeter 1950,2006). To achieve both of these fundamental aspects, it is necessary to harmonise the interests of the organisation with the interests of the actors and to motivate the individual actors, and to target activities with long-term viability in mind (Schwab 1976, Oden 1997, Kuhn 2000, Trompenaars 2007, Maucher 2007, Joyce 2008).

4. Analysis of the three central tasks of an entrepreneurial organisation

The two fundamental aspects can be described as dual entrepreneurial strategies; efficiency in existing business and development of new business via innovation processes (Kanter 1983,1989,1997, Abell 1993, Hamel and Prahaland 1994, Oden 1997, Birkinshaw 2000, Morris and Kurratko 2002). The organisation's development²⁴⁷ must support both of these fundamental entrepreneurial strategies. Thus, incentive systems (Kirzner 1973, Block and MacMillan 1995), flexible and decentralised structures (Schwab 1976, Hamel and Prahaland 1994, Oden 1997, Hitt et al 2005, Thornberry 2006, Maucher 2007, Kohlöffel and Rosche 2009), entrepreneurial management teams (Kuhn 2000, Trompenaars 2007, Maucher 2007) and entrepreneurial managers (Drucker 1985, Brandt 1986, Thornberry 2006, Kohlöffel and Rosche 2009) can lead entrepreneurial units (Peters and Waterman 1982) and develop effective formal and informal structures (Peters and Waterman 1982, Pinchot 1988) for the promotion of entrepreneurial activities.

In terms of entrepreneurial organisation design, apart from the structure, an entrepreneurial culture also plays an important role (Schwab 1976, Drucker 1985, Baden-Fuller and Stopford 1994, Wunderer 2006, Trompenaars 2007, Kotter 2009, Kohlöffel and Rosche 2009). In order to develop such an entrepreneurial culture²⁴⁸, successful managers can, for example, be rewarded with important new projects as a reward for entrepreneurial performance (Block and MacMillan 1995).

Equally, entrepreneurial experiments can be carried out in order to promote shared learning from the experiments (Hamel and Prahaland 1994, Senge 2003, Sathe 2003, Kohlöffel and Rosche 2009). The various development elements of the organisation design must be shaped with the agreement of all if an entrepreneurial orientation as a whole is to be achieved (Covin and Slevin 1991).

²⁴⁷ Kiechl (1990:30) names two fundamental structural design possibilities. New business can either be developed separately from operational systems or within a matrix organisation from vertical, more bureaucratic structures and horizontal, cooperative structures which support entrepreneurial activities.

²⁴⁸ Häfelfinger (1990) calls for a dynamic, innovation-oriented company culture on the basis of which entrepreneurial actors see changes in the business environment as opportunities and not threats. To strengthen the force of innovation, rules and conventions have to be scrutinised, ideas actively sought, experiments carried out and uncertainty, chaos and mistakes tolerated. Security for company development is then achieved by competent employees. He also introduces a process to strengthen innovation competencies: Establishment of a direction for innovation by company management (1st step); Creation of an innovation friendly climate (2nd step); Selection of entrepreneurial actors (3rd step); Training of intrapreneurs (4th step); Development of innovation friendly structures (5th step). Häfelfinger suggests separating the innovative unit from everyday operations.

4. Analysis of the three central tasks of an entrepreneurial organisation

By using and coordinating resources and knowledge, the entrepreneurial organisation achieves synergies within and between organisational units (Hitt et al 2005, Joyce 2008). This takes place with a global dimension in order to realise internal and external entrepreneurial activities (Birkinshaw 2000). To coordinate decentralised activities, the entrepreneurial organisation can use internal markets and networks as an alternative to the hierarchical system (Abell 1993, Wunderer 2006). The operative system should be designed in such a way that it can be operated even in times of crisis (Weick and Sutcliffe 2007).

Following this brief description of the setting of the three entrepreneurial tasks, the next chapter presents a more detailed analysis of these tasks.

4.1 Entrepreneurial information gathering

In this chapter, the analysis will illustrate key aspects, dimensions, and activities of the entrepreneurial collection of meaningful information. It presents a definition of entrepreneurial information gathering and describes learning as dynamic component of this task. From the systematic analysis of the business environment, it is possible to show and evaluate alternative entrepreneurial actions²⁴⁹. The analysis of the literature study relating to the role of intrapreneurship (see table 7) identifies four key aspects of entrepreneurial information gathering²⁵⁰ from the business environment:

- (1) Observation and analysis of the internal and external business environment;
- (2) Unearthing of existing and future opportunities and risks in the external and internal business environment;
- (3) Formation of expectations for the future and development of scenarios concerning changes in the business environment;
- (4) Development and adaptation of mutual mental models and learning about the internal and external business environment, as well as about networking of the organisation with the environment.

²⁴⁹ For the determination of search fields, situation analysis, finding ideas, selection and evaluation of ideas see e. g. Hartschen et al (2009:15-60).

²⁵⁰ For information gathering in general see for example Dillerup and Stoi (2008:601-647).

4. Analysis of the three central tasks of an entrepreneurial organisation

Entrepreneurial information gathering	
<p>Forming future expectations via changes of the business environment and trends as well as development of scenarios to identify future entrepreneurial opportunities (Schwab 1976, Penrose 1995, Thornberry 2006, Kotter 2009)</p>	<p>Analysis of the life cycles and features of relevant sectors (dynamic, uncertainty) (Covin and Slevin 1991, Lumpkin and Dess 1996, Hitt et al 2002,2005, Weick and Sutcliffe 2007)</p>
<p>Sensing of existing entrepreneurial opportunities (Kirzner 1973, Drucker 1985)</p>	<p>Analysis of the business environment in both an international and cultural context and in consideration of country-specific or regional framework conditions (Covin and Slevin 1991, Zahra 2000,2002, Hitt et al 2002,2005)</p>
<p>Use of employees with customer and supplier contact as an information source and information sharing within the organisation: information gathering as a community task (Kanter 1983,1989, Brandt 1986, Joyce 2008)</p>	<p>Systematic examination of needs and customer needs research (Maucher 2007, Kohlöffel and Rosche 2009)</p>
<p>Development of common mental models of the business environment and for networking of the organisation with the environment (thinking in systems, learning as a dynamic process) for identification of entrepreneurial opportunities and risks (Oden 1997, Kuhn 2000, Senge 2003, Thornberry 2006, Joyce 2008, Kohlöffel and Rosche 2009)</p>	<p>Observation of internal (as well as external) business environment (Kotter 2009)</p>

Table 7: Entrepreneurial information gathering as a task of the entrepreneurial organisation

The framework for entrepreneurial information gathering can be derived from the business environment literature study (see chapter 3.2)²⁵¹. Entrepreneurial organisations analyse the current business environment with a particular focus on opportunities, risks and resources. In doing this, it is necessary to consider four dimensions²⁵²:

1. Character of the business environment: recognise uncertainty from complexity and dynamic, and define the necessary entrepreneurial intensity;

²⁵¹ Nonaka and Takeuchi (1997) describe the process of knowledge creation. Explicit and implicit knowledge is produced on the three levels of the individual actor, the group and the organisation. Knowledge is then transferred particularly via experiential learning in experiments and through learning from each other and thus becomes part of the knowledge base. There is then a conversion process and the knowledge base is used for innovation. In the process of knowledge creation, all employees and managers should work together with dynamic interaction to share the knowledge and to convert personal knowledge into company knowledge. For practical implementation, Nonaka and Takeuchi recommend a programme with seven steps: (1) Creation of a knowledge vision; (2) Development of a knowledge community; (3) Production of an energy-charged interaction field; (4) Knowledge creation based on development processes for new products; (5) Amalgamation of the vision with activity fields and product concepts through middle managers (*middle-up-down-management*); (6) Creation of a flexible organisation structure with the three complementary layers of *business system* for acquisition, collection and use of explicit knowledge, *working groups* for the development of and exchange of implicit knowledge, *knowledge base* for storing and design of implicit and explicit knowledge; (7) Establishment of a knowledge network with the outside world.

²⁵² See chapter 3.2

4. Analysis of the three central tasks of an entrepreneurial organisation

2. Diversity of the business environment: analyse, consider and use culture specific context;
3. Examine and clarify geographical dimension of the operational field: global and local as well as world, economic area, country, region;
4. Recognise and develop interactive relationships within the organisation and between the organisation and the environment: Internal business environment (resources and competencies, formal and informal structures, activities in the value chain and operations, strategy, structure, culture, and development method optimisation and renewal), external micro and macro environment (with political-legal, economic, socio-cultural and techno-ecological framework conditions).

To understand entrepreneurial information gathering, it is helpful to take a quick look at the key activities and the process of entrepreneurial information gathering (chapter 4.1.1) in order to analyse the fundamental (chapter 4.1.2) and dynamic aspects like trends (chapter 4.1.3) or learning (chapter 4.1.4).

4.1.1 Key activities and process of entrepreneurial information gathering

As well as the present situation of the business environment, trends have to be analysed and scenarios developed and, additionally, a time dimension has to be considered in the process of entrepreneurial information gathering. Entrepreneurial decisions based on the collection of meaningful information always have a time dimension since they are always directed at the future (Graf 2005:325). Entrepreneurial information gathering must relate therefore to the present and future situation and also collect and analyse future-oriented information relating to the business environment.

Fahey and Narayanan (1986:36-43,46-57) distinguish four key activities in the process of information gathering:

- (1) Scanning: General observation of all environmental segments for early identification of changes;

4. Analysis of the three central tasks of an entrepreneurial organisation

- (2) Monitoring: Selectively examine identified trends and events with a view to checking these in terms of their relevance for the company;
- (3) Forecasting: Systematically describe future development templates and events (scenarios) with a view to generating information for decisions;
- (4) Assessment: Evaluation information in order to grasp actual activities (action plans).

Entrepreneurial information gathering can take place with two integrated perspectives. With an outside-in approach, general developments in segments of the business environment can be analysed in a way that enables subsequent derivation of company specific implications. In the case of an inside-out approach, the analysis starts with a narrow focus on the company-specific situation. Both perspectives together bring the necessary focus on the entrepreneurial viewpoint without placing too narrow a focus on the business environment. Fahey and Narayanan also develop an analytical framework (see figure 85) for the analysis of environmental segments that are relevant for the industry and the organisation. It is particularly important to analyse the industry and task environment with a focus on the short-term. The general macro environment is to be observed with a middle to long-term focus. Larger companies have to use their resources in a way that puts a broad focus on all the relevant environment segments.

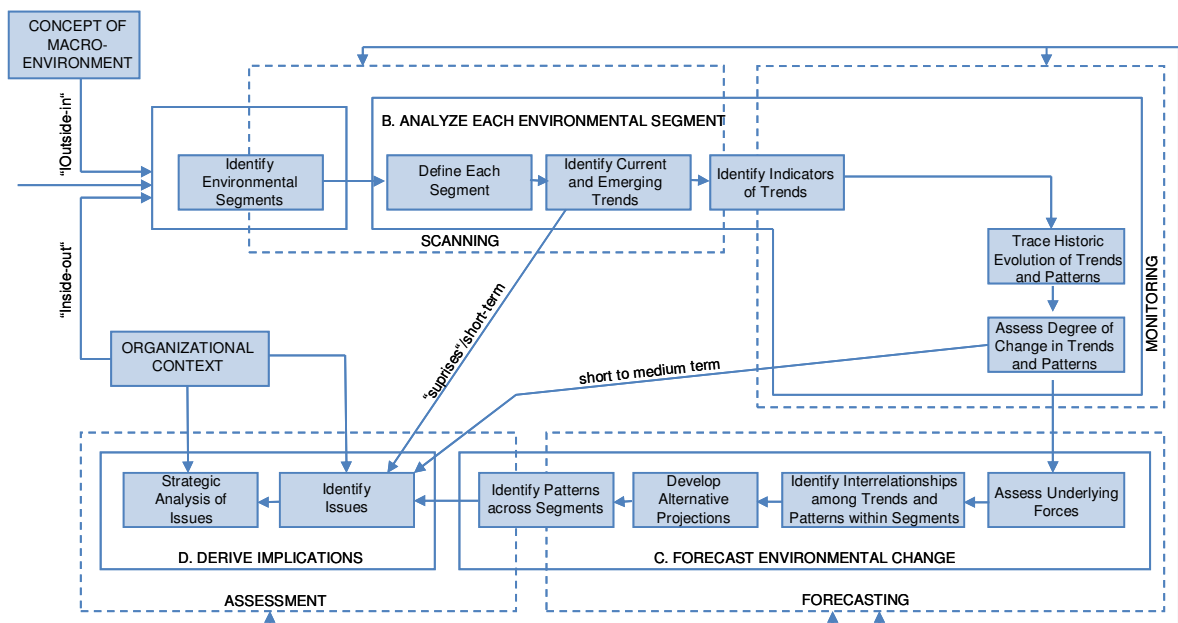


Figure 85: Framework for entrepreneurial information gathering according to Fahey and Narayanan (1986:50)

4. Analysis of the three central tasks of an entrepreneurial organisation

Smaller companies have to limit themselves more to an analysis of the micro environment and individual segments of the macro environment, this being due to restricted resources. Long-term entrepreneurial activities should be prepared and accompanied by an analysis of environmental trends that is as comprehensive and recursive as possible.

According to Palmer and Hartley (2002:460-486), entrepreneurial information gathering, together with social interaction within the organisation, creates a common picture of the connection between the organisation and the environment. At the same time, it is necessary to share individual knowledge about the business environment and to develop organisational knowledge. They develop a process model for the transformation of individual knowledge into organisational knowledge as a basis for entrepreneurial decisions and activities (see figure 86).

In addition, a strong culture of trust has to be developed which, over time, creates an information culture that permanently supports the exchange of information within the organisation. Management can be supportive as models in the same way as information technology and defined information processes can. Mutual learning from the past and a holistic understanding of the business environment enable a better understanding and shaping of the future²⁵³. Entrepreneurial information gathering thus requires a holistic focus.

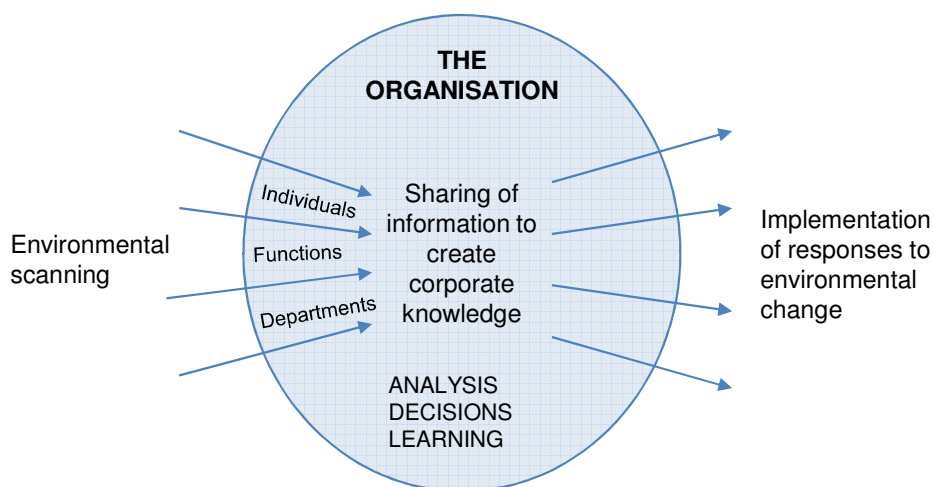


Figure 86: Model for information gathering according to Palmer and Hartley (2002:462)

²⁵³ Palmer and Hartley (2002:470-484) describe various analytical techniques such as marketing audit, SWOT-analysis, trend extrapolation, asking experts, scenario techniques, influence diagrams, opportunity and risk profiles, industry and competition analysis.

4.1.2 Analysis of entrepreneurial information gathering

In the view of Parr Rud (2009:43-157,161-189), together with information processing, information gathering is the central task of business intelligence in a company. The application of systems thinking and use of five central competencies enable companies to recognise and exploit new entrepreneurial opportunities in a global economy. The five necessary competencies are communication²⁵⁴, cooperation²⁵⁵, innovation²⁵⁶, adaptability²⁵⁷ and leadership²⁵⁸. Adaptation of an organisation requires changes to current business as well as the implementation of new ideas. In addition, organisations must be flexible and mobile to be able to continuously redirect processes, structures and systems whilst at the same time efficiently carrying out current operations. In particular, new and global markets must be focused on.

Parr Rud (2009) calls for a change from hierarchical organisation structures to an integrative network structure with entrepreneurial managers and employees. This facilitates many opportunities for information gathering. Systematic information gathering, particularly via customers, suppliers, competitors, and markets is subsequently a key requirement and an entrepreneurial task for the achievement of competitiveness in a global economy. Organisations should continuously adapt to change in the business environment using innovation. In addition, it is necessary to achieve a continuous flow of ideas and entrepreneurial opportunities have to be pursued proactively. The collection, evaluation and distribution of information and knowledge is thus a task for the whole organisation.

²⁵⁴ Meetings, for example, can be systematically used for information collection. Communication should help to define and achieve common aims, share knowledge and to develop mutual understanding across all functions.

²⁵⁵ Cooperation when gathering information should in particular enable fast responses to changes in the business environment and heighten the perception of trends.

²⁵⁶ Exchange of creative ideas exploiting different cultures and talents has to be used for the entire organisation. Decentralisation is said first of all to be a good strategy for idea creation. In terms of implementation, the priority is to have a central focus via leadership.

²⁵⁷ Flexibility and resistance of the organisation have to be firmly established when developing the structure. In addition, organisations must be set up as a living organisation whose self organising units support the evolution of the whole organisation. Through networking with and openness towards the business environment, the organisation adjusts and remains in equilibrium.

²⁵⁸ The leadership role would be realised situationally by the employees in a change situation. Entrepreneurial managers would thus act at all levels of the organisation. This would require a business environment that would no longer permit micro management carried out by top management.

4. Analysis of the three central tasks of an entrepreneurial organisation

The organisation structure must according to Parr Rud (2009) enable the necessary flexibility and resistance to allow the targeted and realised strategies for adaptation to business environment changes to be pursued. The company culture, and particularly the commonly held vision, then steer entrepreneurial activities and achieve a harmonisation of individual interests with those of the organisation. The strengthening of adaptability can be attained via the development of alternative future scenarios (see e. g. Graf 1999, Duin et al 2005) and the alternative company strategies arising, as well as via business units that, with their resources and abilities can pursue new entrepreneurial opportunities.

With this, the interdependence of the three key entrepreneurial tasks becomes clear. Entrepreneurial information gathering provides the basis for scenario and strategy development and thus for entrepreneurial shaping of the future which in turn steer the shaping of the entrepreneurial organisation and the development of resources and competencies of a company. The current resources and competencies determine, in turn, the current entrepreneurial activities.

Hidden influences and effects that are initially long-term can be identified by a holistic systems view when gathering information. Simulations and experiments²⁵⁹ make it possible to search for entrepreneurial ideas and evaluate their potential for success.

²⁵⁹ Formica (2007) analyses in laboratory experiments, for example, successful companies and the role of knowledge for the generation of new business. He examines how through the interaction of informed actors, individual knowledge can become part of the company's knowledge. Explicit company knowledge develops particularly with horizontal and vertical communication and free interpersonal relations. Thereby, there are big differences between both large and small established companies. Whilst established companies would mostly concentrate within a hierarchical system on process optimisation and reduction of costs, in small companies the development and implementation of new ideas are key factors. He emphasises that managers must see themselves in the future and that there should not be too much focus on the past. For future company success, the building of management teams must be carried out strategically. The different actors complement each other. He sees a trend of companies being able to increasingly create new niches and this is through the use of existing knowledge in new markets. The hierarchical company would be replaced by an orchestra structure: New heroes in management must motivate people and get them moving, achieve continuous improvement of the company's situation together with implementation of the company targets and recognise new potential. They have to be creative, seek out the competition and recognise and pursue hidden, entrepreneurial opportunities. It is even possible to check out business ideas in laboratory experiments. Through this, time can be gained in conquering markets and important learning experiences can be collected and entrepreneurial experiences developed.

4. Analysis of the three central tasks of an entrepreneurial organisation

According to Beer's (1979,1995) viable system model, entrepreneurial information gathering is realised on two levels. The operational units active in the market pay attention to the environment that is relevant for their own operations. The environment for the whole organisation is analysed in the context of strategic management. Thus, the necessary adaptations to changes in the dynamic and complex business environment can be identified and the future potential for success of the entrepreneurial organisation can be defined with a large degree of autonomy for operational units.

Hoverstadt (2008) analyses entrepreneurial information gathering in line with the viable system model. This begins firstly on the level of the whole organisation to enable understanding of the business environment and recognition of existing and future opportunities and risks. The evaluation of information makes it possible to lay the basis for the required change and the discovery of worthwhile innovations in the future. However, this task is not a simple one because of the uncertainty around the future development of the business environment. Therefore, entrepreneurial organisations should try, for example, to anticipate technological developments and, within management teams, develop common models of future business environments. Entrepreneurial strategies that can be used in various future situations have to be developed on the basis of the information analysed. In the context of entrepreneurial information gathering, thinking in terms of scenarios is therefore an important factor when analysing the external business environment.

A very important factor for Hoverstadt (2008) is also what common mental model of the organisation itself prevails and whether this model, coupled with an understanding of the business environment, is suitable for controlling internal and external entrepreneurial activities. Internal and external information gathering makes it possible to gain feedback and learning in respect of the management team's mental model. In this way, synergies within the organisation can be developed, organisation learning can be attained and any adjustments required for the mental model can be made. In this context, entrepreneurial information gathering means in effect sharing the information collected amongst the actors, interpreting it in a holistic way and developing common knowledge about the internal and external business environment within the organisation.

4. Analysis of the three central tasks of an entrepreneurial organisation

Espejo et al (1996:285-288) also refer to the relevance of entrepreneurial information gathering as an input for individual and community learning for the development of core competencies within the organisation. Thus, it is possible to research and communicate systematically relevant information about successful solutions to problems in an organisation so that similar problems can be solved now and in the future.

De Geus (2002) establishes that the viable entrepreneurial organisation must recognise the signals of a changing global business environment if it is going to be able to use the information gathered early enough by way of entrepreneurial activities and adjustments of internal structures (De Geus 2002:28-37)²⁶⁰. Thus, the interdependence between entrepreneurial information gathering and shaping of the future and the organisation becomes a key factor. Holistic fulfilment of the three central tasks of an entrepreneurial organisation make it possible for opportunities and risks to be recognised, entrepreneurial activities to be selected and implemented, and internal structures to be adapted.

Entrepreneurial learning organisations are communities and develop a knowledge base that enables permanent change within the organisation. It becomes clear with entrepreneurial information gathering which adjustments are necessary in dealing with the market, in product portfolios, in production or within the structures in order to be able to live in harmony with the external business environment.

De Geus (2002) notes that the more images of the future that an organisation develops, the greater is its ability to filter signals from the business environment as being opportunities or risks. With this, he justified the great relevance of thinking in terms of options to make it possible to recognise relevant information and thus knowledge for opportunities and risks within the context of entrepreneurial information gathering (De Geus 2002:37)²⁶¹.

²⁶⁰ De Geus establishes that organisations rarely react to signals from the business environment but rather usually only become active if an actual crisis situation arises. Here, there is an advantage for older organisations which can recall earlier crises and therefore act earlier.

²⁶¹ De Geus speaks of *memory of the future*

4. Analysis of the three central tasks of an entrepreneurial organisation

In this process, it would be necessary to consider which entrepreneurial activity in each individual case should be applied to various possible events, which in the view of the organisation were possible scenarios (future stories). Thus, events in the external business environment could be observed and their relevance for one's own sector and thus for the organisation itself examined. With such scenarios and analysis (Voros 2006), plausible alternative futures can be developed and the mental models of an organisation adapted. Organisations can then learn from entrepreneurial decisions.

Senge (2003:213-250) also believes mental models control action. These common images determine how the world is interpreted within the organisation. An important task is thus to develop common mental models for each situation and bring their fundamental assumptions to the surface. In this way, for example, mental models of the business environment or the competitive environment could be discussed within an organisation and on the basis of this, entrepreneurial information gathering could be realised. For Senge, it is precisely the connection of systems thinking and mental models that supports long-term orientation; furthermore, within the context of information gathering, interrelations and templates in the business environment can be detected.

Scharmer (2009) develops a concept for entrepreneurial information gathering from the inner source of inspiration (see figure 87). With this inner journey of teams and organisations, future entrepreneurial opportunities are uncovered and transferred into the present. Thus, the past is relinquished and there is a feeling of being in the future. An inner perception open to the future (individual and collective) should enable an exploration of entrepreneurial ideas and initiatives.

According to Tapscott and Williams (2009), the new internet offers new opportunities for entrepreneurial information gathering via mass cooperation. Entrepreneurial organisations can involve a whole range of networked actors in innovation, value creation and cooperation. At the same time, it is important to see the risks of global virtual networks for existing business. Customers or suppliers can be involved using information technology in the creation of ideas.

4. Analysis of the three central tasks of an entrepreneurial organisation

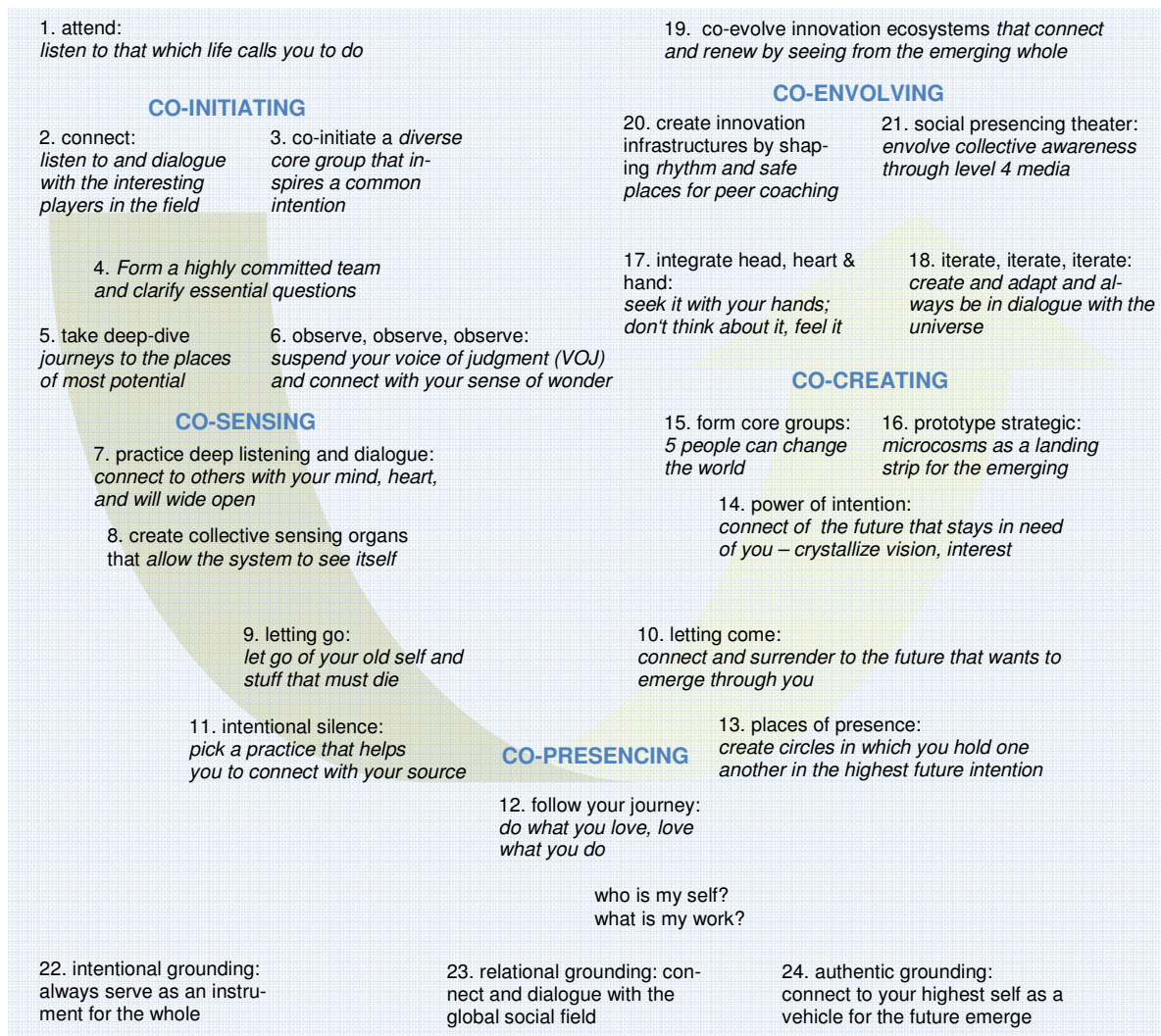


Figure 87: Principles and practices of theory U for innovation and change according to Schärmer (2009:441)

According to Tapscott and Williams (2009) the collective intelligence of external and internal self-organised partners would be used for entrepreneurial activities with openness, equality, sharing and global action. The decentralised virtual structures enable new forms of interaction and information gathering from global markets for ideas across the company.

Thereby, information gathering as a starting point for entrepreneurial activities in a global economy with participative platforms takes on even greater importance. Entrepreneurial information gathering provides the basis for entrepreneurial decisions and for both individual and collective entrepreneurial activities, which can, in turn, be learned from.

4. Analysis of the three central tasks of an entrepreneurial organisation

According to Checkland and Holwell (1998:86-109), this information process is classified into several phases. Firstly, data that is relevant for the organisation (capta) has to be selected from the facts of the world (data). The relevant data must then be connected with the context to be examined so that meaningful information (see also Nonaka 1988) for the entrepreneurial future and shaping of the organisation can be deduced. The process of entrepreneurial information gathering can be either collective or individual. A collection of structured facts is then developed from the information as knowledge or as a mental model, and then entrepreneurial activities can be realised by entrepreneurial actors on a sound basis (see figure 88). According to Checkland and Holwell (1998) in the process of entrepreneurial information gathering, it is necessary not only to uncover current data, but in particular future developments and trends as well. It is precisely changes in the business environment that are the source of opportunities and risks. Future expectations can help the development of future options. Entrepreneurial organisations have thus to analyse trends bearing in mind their relevance for current and future business. The following chapter gives an overview of information gathered from the development of global framework conditions.

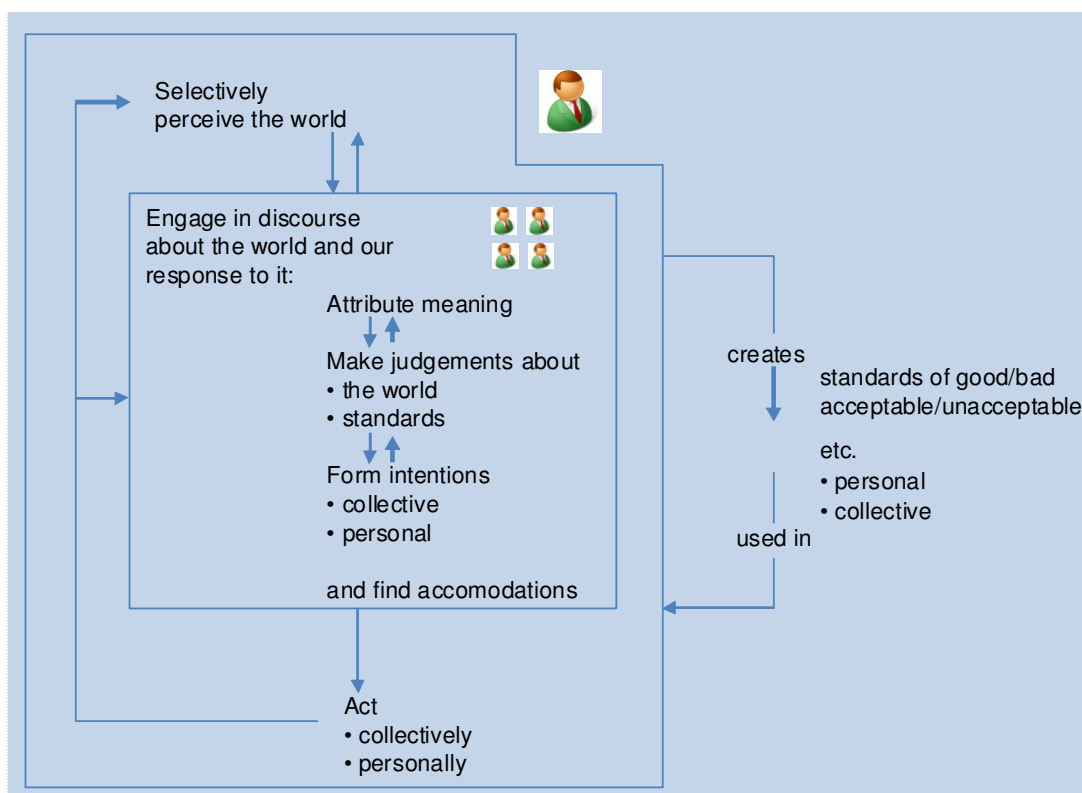


Figure 88: Information gathering according to Checkland and Holwell (1998:102)

4.1.3 Entrepreneurial information gathering from observing trends

The most important current trends and lines of development in the external business environment²⁶² are described, amongst others, by Holzhauser (2007)²⁶³. As part of this, consumer trends, socio-cultural trends and central developments in the areas of business, technology, politics and demography are distinguished (see figure 89). Globalisation²⁶⁴ leads to even stronger networking in the global economy (see e. g. Böhmer et al 2007). Global companies make location decisions all over the world and must stand their ground in global competition. New technologies are experiencing global expansion. Cultural exchange, international capital streams and mobile workforces characterise the development. At the same time, one can increasingly detect local strategies and regional developments.

With modern information technology, work processes, interaction and communication with customers and partners are changing. Whilst old companies are developing in industrial countries, new companies are springing up in many developing countries. In any event, increasing individualisation is evident in developed companies which give rise to customised products and services. Decentralised networks are replacing hierarchical structures more and more for control of cooperation. Customers are included in product development²⁶⁵.

²⁶² See also analyses of professional service providers for order research e. g. the Prognos AG report on Germany (www.prognos.com).

²⁶³ Futurologists and market and opinion researchers attempt to derive trends and scenarios from surveys, media analyses or observations. Even if the future is not predictable it is possible to derive important findings for entrepreneurial information gathering from research into the future. Relevant developments, for example in alternative scenarios, can be condensed keeping the organisation in mind so that potential entrepreneurial activities can be defined.

²⁶⁴ Globalisation requires the company to make adjustments and offers opportunities and risks. According to Friedmann (2006) it is driven by ten forces: (1) Global expansion of the market economy leads to a global increase in productivity. (2) The internet enables global networking so that actors can communicate, cooperate and act globally. (3) Work-flow Software enables and eases digital international (internal and external) division of labour and knowledge and offers a new global platform for cooperation. (4) Uploading and blogging create and use new collective information sources, innovations and problem solutions inside and outside the organisation and result in decentralised mutual innovations. (5) Outsourcing uses overcapacity in the (virtual) world (without real migration). (6) Offshoring describes the transfer of production in other countries. (7) Supply Chaining uses global cooperation and optimisation and results in the best overall solution. (8) Insourcing offers entrepreneurial opportunities in a global economy. (9) In forming results from search machines and the internet as a (not uncritical) source of information for entrepreneurial information gathering. (10) Wireless internet access makes it possible to have connection and communication everywhere.

²⁶⁵ Information sources such as customer complaints, information from employees with customer contact or also customer demands research can be used systematically.

4. Analysis of the three central tasks of an entrepreneurial organisation

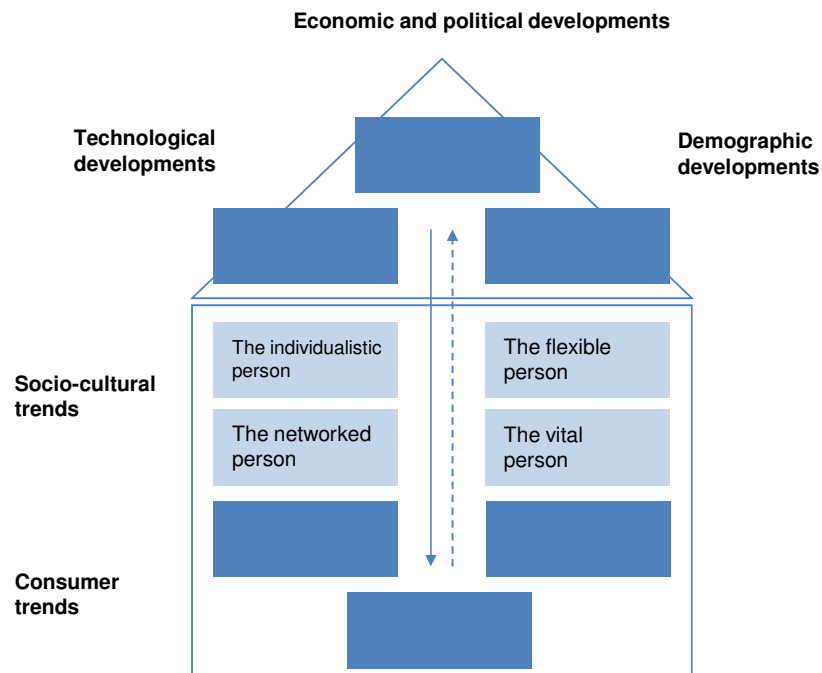


Figure 89: Systematisation of mega trends according to Holzauer (2007:28)

Health, fitness and sustainability are becoming ever more significant for potential customers (Holzhauer 2007) and have to be taken into account in terms of entrepreneurial activities. Consideration of the effects of mega trends on sectors (see figure 90) and the organisation within the context of entrepreneurial information gathering provides a start for the generation of entrepreneurial ideas²⁶⁶ and for systematic innovation processes.

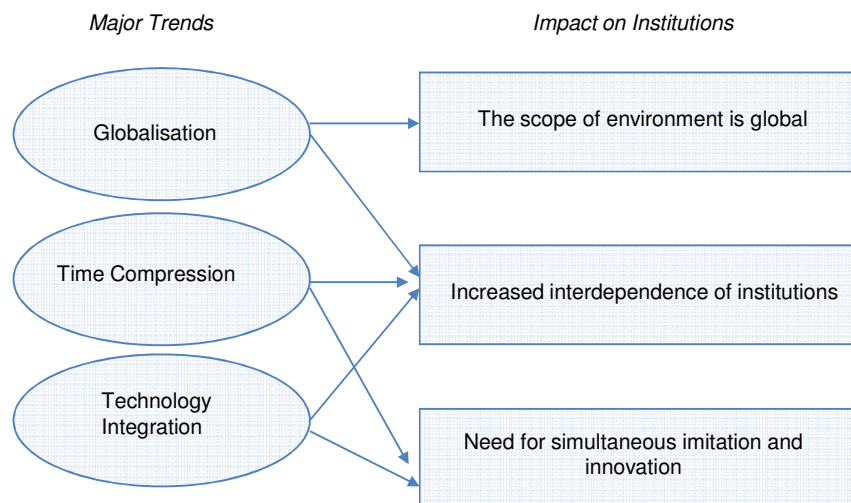


Figure 90: Mega trends according to Narayanan (2001:57)

²⁶⁶ The generation of ideas based on entrepreneurial information gathering can also be used as creativity techniques. For evaluation of ideas, it is possible, for example, to make use of benefit analysis. The implementation of ideas in entrepreneurial decisions and activities can be classified as being entrepreneurial creation of the future.

4. Analysis of the three central tasks of an entrepreneurial organisation

According to Holzhauser (2007:183-189)²⁶⁷, individual general trends that are relevant can firstly be systematised in accordance with the PEST analysis tool²⁶⁸ and then analysed in terms of how these trends can influence the company's own product portfolio, customers and target groups currently and in the future. From observation of how well future products and services meet the future needs of customers, it is possible to derive gaps in the market and new business possibilities. As a result, there is great potential for the discovery of entrepreneurial opportunities from direct customer contact, analysis of other sectors and the search for analogous problem solutions for application to the company's own markets. As well as identification and pursuit of opportunities, it is also possible to pursue the internal generation of entrepreneurial activities.

Thurow (2004) believes that it is more and more necessary to have a global perspective in entrepreneurial information gathering. Entrepreneurial organisations produce where costs are low and sell their products where high prices can be achieved. They decide continuously which components to make themselves and which to buy so that they can ensure the viability of the organisation. With this, the division of labour within the global company increases all the more. Central operation fields within global companies are particularly in the Triad economic area²⁶⁹. Companies have to pursue the key technological trends²⁷⁰ and derive entrepreneurial activities from them. Failures should be taken into account and learned from. Palmer and Hartley (2002:419-421) assert that in this process, the bringing together and interaction of knowledge and experience from various disciplines drive technological development (see figure 91).

²⁶⁷ Holzhauser (2007) define for this entrepreneurial information processing four search fields: (1) Which trends have an influence on the company's business? (2) What do customers want? (3) What can be learned from other sectors? (4) How can the future be shaped. Search fields (1) to (3) can be assigned to entrepreneurial information gathering. Search field (4) to entrepreneurial shaping of the future.

²⁶⁸ See Chapter 3.2.2.1

²⁶⁹ The economic regions of North America, European Union and Japan with some asiatic countries are described in the literature as the Triad (see chapter 3.2.2.6). Non-Triad economic regions are Central and Eastern Europe, Asia-Pacific and western Asia, Latin America and the Caribbean as well as Africa. For a systematic illustration of global operation fields for entrepreneurial organisations see e. g. Dülfer and Jöstingmeier (2008). For a systematic market entry decision see e. g. Fuchs and Apfelthaler (2009).

²⁷⁰ Important technologies are said to be: Microelectronics, robotics, biotechnology, computers and telecommunication. Graf (2005:206-210) names health and life sciences, automation and robotics, materials technology, environmental technology, energy-related technology and information and communication technology as significant areas for future development.

4. Analysis of the three central tasks of an entrepreneurial organisation

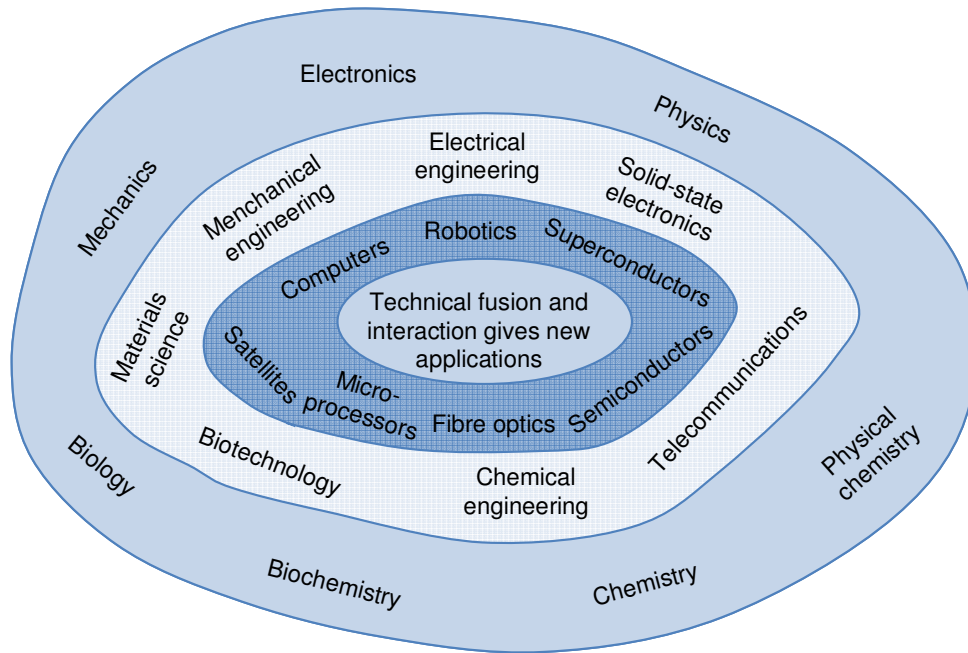


Figure 91: Identification of entrepreneurial activities from the fusion of technological possibilities according to Palmer and Hartley (2002:420)

Global entrepreneurial organisations must increasingly observe global organisation frameworks that define the global rules and regulations. The Regulation of the global economy is developing via cross-national cooperation, agreements and international organisations, particularly in the following five areas (Kruber et al 2008:57-60):

- International regulation of trade (e. g. World Trade Organisation);
- Global foreign exchange and capital markets: Systems and institutions (e. g. International Monetary Fund);
- Human rights, workers' right and standards for health and safety (e. g. International Labour Organisation);
- Environmental protection and sustainable development (e. g. Kyoto Protocol on climate change);
- Social development: Programmes and projects (e. g. World Bank).

In order to be able to understand and use the technologies of the future and global developments, Thurow suggests installing a *Chief Knowledge Officer* in entrepreneurial organisations (Thurow 2004:123-162). The job of this person is to collect information about new technologies in interplay with economic and societal development and evaluate it in respect of entrepreneurial activities.

4. Analysis of the three central tasks of an entrepreneurial organisation

According to Thurow (2004) the *Chief Knowledge Officer* also has to understand the life cycle of companies, markets and products so that he can establish when current business models have to be changed or given up or when new business models have to be modelled. A central entrepreneurial task for the *Chief Knowledge Officer* is thus to establish when to enter and exit markets.

According to Ohmae (Ohmae 2006), in a global economy, as well as there being a global view of markets and contexts, a regional view is also coming to the fore. Thus, entrepreneurial organisations must keep regional economic zones in mind in order to secure viability with alliances across countries. Within this process, the most important trends have to be recognised, the effects analysed and company strategies adjusted. Markets in different regions must be simultaneously processed and innovations continuously realised. In addition, human creativity potential for the generation of pathfinding ideas must be looked at in order to be able to use developments in the business environment. With information gathering, direct communication with customers is according to Ohmae (2006) the key success factor.

Because of the increasing complexity and dynamic of the global business environment and the often contradictory trends, Graf (2000:13-33,113-130,133-157)²⁷¹ believes that entrepreneurial organisations have to think in alternative futures if they are to be able to identify opportunities and risks within a global economy and select entrepreneurial options. Additionally, the development of basic framework conditions can firstly be perpetuated into the future in a basic scenario and then the system can be specified by the relevant actors and variables. Bearing in mind the possible problems as well as developments that are awash with opportunity, the effects of possible environment developments can be analysed and potential plans for different futures can be developed.

²⁷¹ Graf (2000) describes global uncertainty areas and four long-term scenarios. In two basic scenarios, positive development trends from the globalisation process (in the basic scenario no.2 with accelerated societal and political adjustments) are perpetuated so that living standards are improved, poverty reduced, ecological sustainability improved and worldwide political stability strengthened. The other two alternative scenarios, 'soft world society' (new life styles, local communities) and 'macro industrial society' (global economies, far-reaching technological advance) assume a positive development with improved living quality and many new opportunities for entrepreneurial organisations.

4. Analysis of the three central tasks of an entrepreneurial organisation

The results identified from global scenarios that focused on alternative developments can then be used as information relevant for action in terms of the development of actual entrepreneurial strategies and decisions and thereby be combined with the targets, competencies and resources of the entrepreneurial organisation.

Short-term economic and market forecasts are an important source of information for entrepreneurial operational management. In so doing, Graf (1999) believes that short-term entrepreneurial decisions have to be taken with a mind to securing the long-term security of the organisation. Targetted processing of information in market forecasts provides important management information for entrepreneurial decisions. Thus, knowledge of various market developments in the total economic trade cycle enables early reactions and adjustments²⁷².

Naisbitt (2007) attempts with a systematic analysis of the present to obtain a picture of the future (see Duin 2007) which can then serve as an important source of information for entrepreneurial decisions. He establishes that the evaluation of information is the central entrepreneurial task. In order to discover something from the information, it is necessary to create connections between things that apparently have no connection. Meaningful information must be recognised and seized in a creative way. Naisbitt sees the global economy as internationally significant segments full with entrepreneurial opportunities for innovative decentralised organisations. This view must also lay the foundation when evaluating information.

²⁷² According to Beinhocker et al (2009), the recession in 2009 radically changed the global economy. Companies that use the opportunities in their sector quickly and shape the structure of the sector can, having achieved a huge choice, use the crisis for future development. Innovations would in this process become even more important and operational fields in Asia would become even more significant.

4.1.4 Learning as part of entrepreneurial information gathering

Individual, community and organisational learning about the internal and external environment, as well as networking of the organisation with the environment, can be interpreted as dynamic components of information gathering. In turn, learning processes influence adaptation of the organisation to changes in the business environment in terms of the entrepreneurial future and shaping of the organisation. Learning in this context can also be described as an important development task for actors, groups and organisations (Decker 1995:364-416).

Systematic consideration of the dynamic and complex business environment is conducive for the individual ability of the actors to create new ideas and connections between ideas. Active entrepreneurial information gathering allows idea creation to be supported by the learning process. This particularly applies for teams as well. Through interaction between several actors, ideas can be created in interplay and by overlapping of various association templates and these ideas can only come from mutual awareness (Vester 2005:108-119).

Changes in the business environment require an immediate total change in the organisation. As part of this, actors as a group have to learn new ways of thinking and develop new mental models together. Individual and collective ability to gather and process information is a central development task. In an entrepreneurial learning organisation, the duality of the learning process becomes clear. On the one hand, learning can be considered as part of entrepreneurial information gathering and on the other hand, the ability of entrepreneurial information gathering has to be developed as part of the learning process. In turn, continuously learning in the organisation can be considered as part of the development of the knowledge-based organisation (Tajeddini 2009). Here, Decker distinguishes adaptive learning for overcoming risks and creative learning for creating new things (Decker 1995:371-375,400-416)²⁷³.

²⁷³ Decker establishes that it is important within change processes to recognise and question one's own conduct and reflect on new experiences. For organisation development see e.g. Rothwell and Sullivan (2005).

4. Analysis of the three central tasks of an entrepreneurial organisation

Raelin (2008:63-81) calls for continuous career learning so that this can be used in the whole organisation to help make changes in the environment. Organisations can learn from entrepreneurial activities and develop learning fields and experiments. Continuous reflection on the effectiveness of entrepreneurial activities in the business environment and integration and feedback of this information into the common mental model makes it possible to achieve control of entrepreneurial decisions to ensure the viability of the organisation in the environment.

On each of the individual and collective levels, Raelin defines learning types that can be brought together in the specific context of the entrepreneurial organisation. On the level of individual learning, he distinguishes complementary learning types (Raelin 2008:70-76) which can be used in an integrated fashion for entrepreneurial information gathering via learning processes. Thus, theoretical knowledge for example, can easily be used for the resolution on new, previously unknown problems. Experiments could anchor theoretical knowledge. Know-how could, for example, support intuitive problem solving. The problem solving process can be made clear by using reflection.

At collective levels (see Raelin 2008:83-123), the findings of the sciences applied could be used as an information base for entrepreneurial activities and theoretical concepts of various actors implemented and reflected upon (action learning). Furthermore, it is possible with time to build learning teams into whole learning organisations that exhibit mutual experience, values and practices (communities of practice). Also, collective discourses can take place and as part of this, one can check, for example, how far what is actually done ties up with the current values and practices in the organisation, which mutual mental models there are and whether the values and practices within the organisation possibly have to be changed (action science)²⁷⁴.

²⁷⁴ For organisational learning and action science see e. g. Argyris (1999).

4. Analysis of the three central tasks of an entrepreneurial organisation

According to Argyris (1999:67-106,149-224), entrepreneurial organisations learn from the entrepreneurial activities of entrepreneurial agents and for new ventures (Hebel 2007) if these activities are judged in relation to the achievement of set targets (single loop learning). Within stable operational businesses, this appears to be effective. In dynamic and complex environments and in new businesses, the basic assumptions or mutual mental models also have to be checked and adjusted on the basis of entrepreneurial information gathered (double loop learning). The controlling variables for entrepreneurial activities can, where necessary, be once again adjusted (see also figure 92).

According to Block and MacMillan (1995:309-324), collection of information about entrepreneurial activities that have been achieved is taking on enormous significance within the framework of information gathering. Analysis and documentation of success and failure of entrepreneurial activities help to shape future entrepreneurial activities more successfully. Added to this, a lot of attention is focused on experiential learning when entrepreneurial activities begin so that relevant information can be systematically collected from entrepreneurial experiments.

Block and MacMillan (1995) establish that every company has a unique story and illustrates a highly individual collection of resources and competencies such that an analysis of success factors always has to be company-specific. Learning can then take place on three levels. On the first level, the actor responsible for entrepreneurial activities can draw up a report on possible improvements and what can be learned. On the second level, experiences should be exchanged in meetings with senior management.

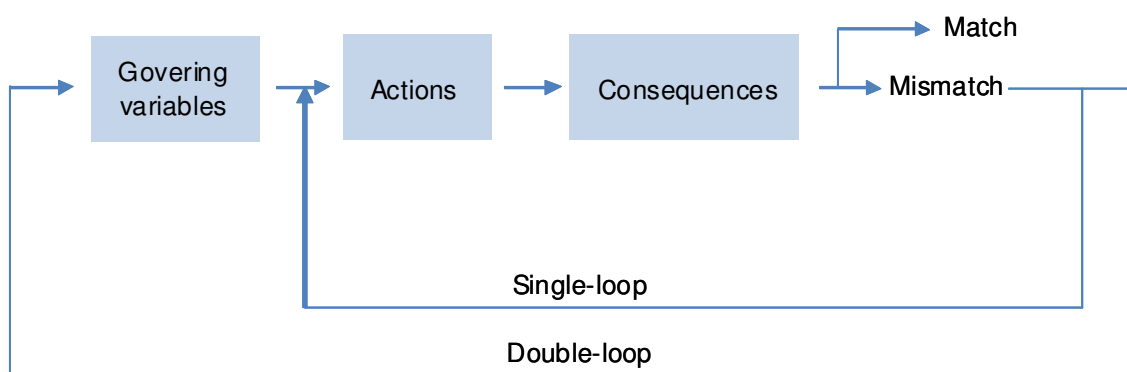


Figure 92: Single-loop and double-loop learning according to Argyris (1999:68)

4. Analysis of the three central tasks of an entrepreneurial organisation

On the third level, entrepreneurial organisations discuss particularly important entrepreneurial activities on the basis of documentation, analyses²⁷⁵ and conclusions²⁷⁶. The organisation can learn from this and also derive recommendations for action in future entrepreneurial projects and promptly document them.

Pedler et al (1997:92-99,143-163) call for a free flow of information within the organisation. The information system and human resources management should support individual and collective learning. By collecting and evaluating information for the discussion of new ideas, learning processes would be stimulated and a learning culture developed. Within this, constructive conflicts and differing views within the organisation are said to be an important source of learning. Entrepreneurial organisations would be able to learn with as well as from other organisations.

According to Checkland (2008:A9-A44), entrepreneurial information gathering in total can be organised as a learning system and in the process, the interaction relationship between the organisation and the environment are placed in the centre stage. He shifts the focus from a systems view of the world to the systems-based design of the information gathering process. Observation of the complex business environment can be conceived as a learning system in order to identify purposeful activities and to be able to reflect existing learning experience in entrepreneurial ideas. By way of permanent learning cycles, entrepreneurial activities can lead to the improvement of the situation of the organisation and to adaptation to changes in the external business environment.

²⁷⁵ Documentation of business ideas should contain the following points: Information about the start, checking concepts, market research, product development, development of business plans, authorisation of activities, organisation of activities and basic assumptions about the market, the macro environment, the competition, internal cooperation, product costs and sales process, technology, break-even point, ROI, regulations and distribution.

²⁷⁶ Within this there is an analysis of what done properly and incorrectly (single-loop learning) and why (double-loop learning). As areas to examine, Block and MacMillan (1995) name market, product, production, development, human resources, company resources and economic efficiency.

4.1.5 Conclusion: Notes on entrepreneurial information gathering

To achieve the company's success in a sustainable way, the company has to lay down the distribution of tasks within the organisation in relation to the maturation of entrepreneurial activities and treat the succession of task agents in the intrapreneurship system as a strategic task. Here, a key task of entrepreneurial knowledge management in a company results and this is the shaping of knowledge transfer within the entrepreneurial organisation. Task managers can, for example, pass on their strategic experiential knowledge by coaching the discharger of the task. Depending on the design of the individual intrapreneurship system, however, different transfer concepts must be developed. Thus, in a knowledge and experience-based economy in an entrepreneurial learning organisation, it is possible to secure values and to create the basis for future values²⁷⁷.

Entrepreneurial information gathering observes (signals for) change in the business environment and identifies opportunities and risks in the present and future²⁷⁸. To take account of future developments, entrepreneurial organisations have to identify and evaluate relevant trends and shape expectations for the future. Common mental models about the environment, the organisation and interaction between the organisation and the environment guide information gathering and are adjusted collectively on the basis of identified changes in the business environment and the assessment of the effectiveness of entrepreneurial activities. In this way, assumptions about the business environment are laid open.

Entrepreneurial information gathering is thus a joint task, leads to a holistic understanding of the business environment and helps an organisation to become more intrapreneurial (Antoncic 2007). Centralised and decentralised activities of information gathering and the mutual distribution of information help to develop a common knowledge base, to quickly uncover opportunities and risks and develop options for the future.

²⁷⁷ Leidl (2009) calls for the deployment of a new type of personnel manager to act as an entrepreneurial business partner of the company management. By recruitment (see for example Nohria 2009) and personnel development (see for example Cohn et al 2009) creative talent can be developed and supported by mentoring and networking for an increase in competitiveness.

²⁷⁸ Gilbert and Eyring (2010) recommend active risk management for entrepreneurial activities with the help of experiments and tests.

4. Analysis of the three central tasks of an entrepreneurial organisation

In this way, external sources and actors can also be involved and new information technologies for mass cooperation and information gathering can be used. Global trends are important sources for entrepreneurial information gathering and can define potential opportunities and risks. Individual and collective learning processes can be described as dynamic components of entrepreneurial information gathering. Learning from entrepreneurial activities and changes in the business environment also lead to adjustments of common mental models and increases in the adaptability of organisations.

The common knowledge base can be used to resolve unknown problems. The development of the knowledge base is done via an exchange of reports, an exchange of mutual personal experiences and collective discussion and formulation of recommendations for action in order to realise entrepreneurial activities. Entrepreneurial decisions about the future can be taken on the basis of entrepreneurial information gathering and scenarios developed on the basis of uncertain futures. Against this background, the following chapter contains an analysis how the future can be entrepreneurially shaped.

Definition: Entrepreneurial information gathering

Entrepreneurial information gathering enables the systematic observation of the current situation, the future development pattern and trends in the business environment together with the identification of (future) opportunities and risks so that real entrepreneurial strategies, decisions and activities can be determined. The development of scenarios and expectations for the future, common mental models, individual and collective learning are dynamic components of entrepreneurial information gathering.

4.2 Entrepreneurial shaping of the future

This chapter presents key entrepreneurial competencies, three entrepreneurial innovation areas, ten systems theory principles for interaction of the entrepreneurial organisation with the business environment, entrepreneurial decisions, the entrepreneurial and managerial mindset in the entrepreneurial organisation and a definition of entrepreneurial shaping of the future. In terms of entrepreneurial shaping of the future, entrepreneurial organisations can derive seven key entrepreneurial competencies from the literature (see chapter 3.1) in relation to the role of intrapreneurship (see also table 8):

- (1) Making decentralised and centralised entrepreneurial decisions in existing and new businesses on the basis of entrepreneurial information gathering;
- (2) Rapid action and reaction in order to shape opportunities and change in a focused way, as well as mastering risks and crises;
- (3) Rapid learning and developing resources, core competencies and competitive advantage;
- (4) Using cooperative intelligence;
- (5) Holistic thinking and action;
- (6) Pursuing a long-term orientation;
- (7) Using cultural differences.

In addition to these seven entrepreneurial competencies, it is also possible to identify three entrepreneurial innovation areas²⁷⁹ for shaping the future:

- (1) Market innovations for renewal and adaptation (new or improved products²⁸⁰, new markets, use of new technologies and progress in science for product development and market development);
- (2) Innovations in the areas of operational processes for optimisation and adaptation (implementation of new technologies);
- (3) Strategic innovations for strategic renewal.

²⁷⁹ Hartschen (2009:9-11) distinguishes here between radical, improvement and routine innovations bearing in mind the degree of innovativeness. According to Duin (2006b:177) it is necessary to see the dynamics and time-horizons in four connected worlds (science, technology, products, markets). Duin et al (2006) present an evolutionary perspective on innovation, link changes in scientific insights, technological capabilities, product design, and market demand to describe dynamic innovation processes within networks.

²⁸⁰ According to Berkhout et al (2007) a smart business development strategy focuses on a balanced mix of Life Cycle Management (improving existing products and services) and Innovation Management (designing new products and services).

4. Analysis of the three central tasks of an entrepreneurial organisation

The shaping of interactions between the organisation and the environment is a central point of entrepreneurial shaping of the future. In addition, ten systems theory principles will be presented in this unit (chapter 4.2.1) which formulate central aspects of interaction for proactive, reactive and future oriented adaptations of the organisation to changes (chapter 4.2.2), and which determine the key entrepreneurial decisions about the future in a global economy (chapter 4.2.3).

Entrepreneurial shaping of the future	
<p>Risk management and opportunity management from the international division of labour and internationalisation (Vernon 1966, Schwab 1976; Smith 1982, Birkinshaw 2000)</p>	<p>Adaptation of the organisation to changes in the business environment through proactive information processing (Kanter 1983,1989, Kuhn 2000)</p>
<p>Pioneering innovation and development new marketable products and new market entries (Schumpeter 1950, Penrose 1995; Lumpkin and Dess 1996)</p>	<p>Alliances and partnerships with external organisations (Kanter 1983,1989)</p>
<p>Use of resources, obtaining resources and development of resources with entrepreneurial activities in the marginal areas of an organisation's own competencies and development of new core competencies (Kanter 1983,1989,1997, Guth and Ginsberg 1990, Hamel and Prahaland 1994, Penrose 1995)</p>	<p>Use of globalisation and technological trends for new entrepreneurial opportunities, particularly the conquest of international markets (Kanter 1983,1989,1997, Hamel and Prahaland 1994, Zahra 2000,2002)</p>
<p>Social responsibility as prerequisite for the viability of the organisation (Schwab 1976)</p>	<p>Long-term orientation and holistic thinking (Senge 2003)</p>
<p>Permanent renewal of the organisation and evaluation of existing operational fields, products and services and the acceptance of risks for the design and revolution of markets without jeopardising what exists (continuous innovation and internal efficiency) (Schwab 1976, Kanter 1983,1989,1997, Drucker 1985, Hamel and Prahaland 1994, Oden 1997, Kuhn 2000, Thornberry 2006, Maucher 2007)</p>	<p>Strategic renewal (Guth and Ginsberg 1990, Hamel 2008)</p>
<p>Realisation of many small entrepreneurial activities (product, market, technology) and entrepreneurial (proactive, innovative, risk-taking) behaviour on all levels of an organisation (in autonomous units) to secure the viability of an organisation via an aggressive competitive orientation and the use, renewal and generation of competitive advantages (Peters and Waterman 1982, Covin and Slevin 1991, Block and MacMillan 1995, Lumpkin and Dess 1996, Morris and Kurratko 2002, Sathe 2003, Hitt et al 2005)</p>	<p>Recognition and use of cultural differences (Trompenaars and Hampden-Turner 1998, Maucher 2007)</p>
	<p>Rapid learning from success and failure of entrepreneurial activities – also for existing business as well as rapid implementation of entrepreneurial opportunities and reaction to risks and crises (Sathe 2003, Weick and Sutcliffe 2007, Kotter 2009)</p>
	<p>Adaptation and resilience as a community task and result of cooperative intelligence (Joyce 2008)</p>

Table 8: Entrepreneurial shaping of the future as a task of the entrepreneurial organisation

4.2.1 Organisation, environment and shaping of the future

If one considers the literature concerning the shaping of interactions between the organisation and the environment in chapter 3.3, the latter is defined as being a central entrepreneurial task on several system levels. In terms of systems theories, the world is considered to be a whole with several systems levels on which an emphasis is placed upon communication and information for interaction between the organisation and the environment (Bertalanffy 1968). Changes in the environment require flexibility within the organisation (Katz and Kahn 1966).

Thus, entrepreneurial organisations do not only have to consider the dynamic in the environment, but also the increasing networking within the organisation and the environment (Emery and Trist 1965). Integration of the organisation as a whole and overall control in steady state equilibrium with the environment is then a task for company management, whilst local autonomous units are responsible for existing operational transactions (Beer 1979). Organisations grow for as long as they successfully achieve the necessary internal adjustments to changes in the environment and markets exhibit appropriate demand (Miller 1995).

Entrepreneurial organisations can achieve adaptations to changes in the environment that are based on their own values in an interplay between temporary stable structures and changes of structures for self-renewal; this can be done via learning and creativity from the organisation on the basis of a strong identity (Wheatley 1999).

The more complex the business environment is, the more successful is structural leadership via structures and self-organisation in the decentralised units (Ulrich and Probst 1991). These self-organisational processes in decentralised units must be complemented by centralised organisation so that important synergies and internal cooperation between the individual sub-systems of an organisation can be achieved (Bleicher 2004).

4. Analysis of the three central tasks of an entrepreneurial organisation

In the interaction of the organisation and the understructures with the environment, indirect effects, relationship networks and time delays have to be considered, as do levers for systems control (Vester 2005). Entrepreneurial decisions are to be taken, if possible, where the necessary information is to be found, i.e. by decentralised self-organised entrepreneurial teams within constant structures (holographic organisation design) which are controlled, in turn, by visions, values and norms, and common mental models. Duplication and free capacities create freedom for entrepreneurial activities (Morgan 1998). Ten systems theory principles for interaction of the viable entrepreneurial organisation with the environment can be derived from the systems theories analysed (see chapter 3.3) through qualitative interpretation (Voss 2010:20):

- (1) Consideration of the world as a whole with sub-systems: the organisation interacts with the business environment above it (resources, goods and services, information). The organisation is defined by its own sub-systems and can shape the relationship with the environment by conscious²⁸¹ entrepreneurial decisions.
- (2) Changes in the business environment demand flexibility (structures and incentive systems) and adaptation (opportunities and risks) within the organisation. For this, it is important to develop an idea about future environmental conditions.
- (3) Networking within the external environment, the organisation and between the organisation and the external environment must be taken into account in entrepreneurial decision-making. Levers for entrepreneurial activities have to be recognised and existing skills utilised.
- (4) Top management pursues the integration of the organisation as a whole and overall control in steady state with the environment. Local autonomous units are responsible in particular for existing operational business.
- (5) Organisations can grow in a demand-oriented way commensurate with the market situation²⁸² if they create the necessary internal adjustments (metamorphoses) within the various sub-systems in response to changes in the environment. The company system must not be dependent on growth.

²⁸¹ With this, a longer term orientation and target-setting in the entrepreneurial organisation to secure viability is a key element.

²⁸² The potential for growth results from existing customer demand and the company's own competitiveness as against competitors.

4. Analysis of the three central tasks of an entrepreneurial organisation

- (6) Creativity, innovation and learning from the organisation enable the necessary adjustments to changes in the business environment. As part of this, temporary stable structures alternate with structures in a state of change²⁸³.
- (7) Complex and dynamic environments require more decentralised self-organising entrepreneurial units (as stable environments).
- (8) Central organisation complements decentralised structures and activities to achieve synergies and cooperation between the sub-systems and integration into a whole. Product, functions and structures are used several times.
- (9) Interaction between the organisation and the environment arises on various system levels and must take time delays, indirect effects and relationship networks into account. The overall behaviour of the system is a result of all the reactions.
- (10) Duplication with constant self-organising (recursive or holographic) structures and free capacities make it possible to deal with dynamic complexity and entrepreneurial activities which are controlled by the vision, values and norms, and common mental models.

Central standards for entrepreneurial shaping of the future can be derived from systems theory principles. The changes in the business environment identified by entrepreneurial information gathering must be analysed from a holistic perspective (see e.g. Wright 1989, Haines 1998, O'Connor and McDermott 2006) in order to be able to derive entrepreneurial strategies, decisions and activities for optimisation and renewal in existing and new business. The central (planned) and decentralised (emerging) strategies, decisions and activities in all functional areas²⁸⁴ must consider uncertain future developments in the business environment. In particular, discontinuities (Drucker 1978, Foster 2006) and disruptive innovation (Christensen 1997, Drew 2006) bring opportunities and risks. Therefore, it is necessary to develop some ideas about scenarios (see e.g. Fahey and Randall 1998a, Graf 1999, Fink et al 2001) of possible future environment situations and to use scenarios in innovation processes (Duin 2006a).

²⁸³ Conservation and perfection can be important factors in one business division, whilst at the same time in another product division there is a necessity for change. Order and freedom enable ordered organisation where there is local instability.

²⁸⁴ Slack et al (1995:8-11) cite typical functions alongside production as being product development, marketing, purchasing, personnel management, technical operations and accountancy and finance.

4. Analysis of the three central tasks of an entrepreneurial organisation

The development of proactive and reactive adaptations require creativity and innovation²⁸⁵. For the implementation of entrepreneurial adaptation, it is necessary to stimulate and realize internal flexibility²⁸⁶ and in the context of entrepreneurial shaping of the organisation – particularly when shaping the entrepreneurial strategy, structure, culture, resources and competencies. The entrepreneurial shaping of the future is thus the future-oriented tie between entrepreneurial information gathering and entrepreneurial organisation design and determines the interaction between the organisation and the environment.

4.2.2 Reactive, proactive and future-oriented adaptations

Changes in the business environment, particularly in the technology and competition segments, make it necessary to have rapid implementation of entrepreneurial activities based on ideas about the future (Makridakis 2004). Entrepreneurial shaping of the future connects the past and the present with the future. Possible effects, opportunities and risks can be seen and adaptations can be planned with pictures and mental models of the future. Entrepreneurial actors and entrepreneurial organisations attempt to recognise development models in non-foreseeable and uncertain changes in the business environment before they become a recognisable trend (Tsoukas and Shepherd 2004). They have to develop a knowledge base so that they can better detect and process relevant future events and scenarios and design possible reactive adjustments to conceivable discontinuous events in the business environment (Ansoff 2007:155)²⁸⁷. Ansoff (2007:29-43) describes, from a historical perspective, four central trends in the business environment:

- Changes in the (general) business environment increasingly have an unknown character;
- Within sectors, strategic intensity is increasing which means that for successful marketing of existing products and for successful product/market/technology/innovations, more money must be spent;
- Changes in the business environment are following with greater rapidity;
- The complexity of the business environment is growing.

²⁸⁵ For promoting creativity and innovation see for example De Bono (1989, 1995), Aerssen (2009).

²⁸⁶ For flexibility in the company see for example Kaluza and Blecker (2005).

²⁸⁷ Ansoff (2007) ascertains that reactive adjustments in turbulent environments delay events.

4. Analysis of the three central tasks of an entrepreneurial organisation

These central trends²⁸⁸ have the effect that the environment in which entrepreneurial organisations move is tending to become more turbulent. Thus, the events in the business environment and the effects of companies' own activities and those of competitors could become all the more difficult to predict. Ansoff establishes that the differing intensities of environmental turbulence require differing reactions and differing internal structures and cultures in the organisations in order to achieve successful adaptation of the organisation to its environment. He distinguishes change-resistant cultures and cultures that are open to change. Whilst organisations with a change-resistant orientation only react to changes in a turbulent environment, once effects in the company performance become visible, entrepreneurial organisations with cultures open to change attempt to achieve proactive adjustments even before the actual event in the business environment (Ansoff 2007:183-196)²⁸⁹. Which orientations lead to better performance depends on the turbulence of the environment in question.

Entrepreneurial organisations therefore have a performance drive and an entrepreneurial drive. Whether a stronger performance drive or a stronger entrepreneurial drive is more suitable for entrepreneurial success is dependent upon the turbulence of the environment. Whilst the current cultural orientation links adaptation in a particular situation and at a particular point in time, changes in the business environment may require additional strategic postponements (Ansoff 2007:193).

Changes in the strategic interaction of the organisation with the environment lead then to adjustments in the internal configuration, whereby Ansoff sees the adaptation of production and the internal transformation processes implicitly depicted by their influence on the strategic behaviour of the organisation (Ansoff 2007:12). Even when internal adjustments could also take place through internal shifts of power, Ansoff believes that external events are mostly responsible.

²⁸⁸ Ansoff (2007:183) distinguishes individual discontinuities from cumulative events, which he describes as trends.

²⁸⁹ Ansoff (2007) distinguishes organisations with change-friendly cultures in organisations with an anticipatory orientation, which seek ways forward on the basis of past experience or in organisations with a more creative orientation, which also take unknown paths.

4. Analysis of the three central tasks of an entrepreneurial organisation

Chandler (1962) already describes the logic of networking between the business environment, strategic behaviour and internal (decentralised) structure against the background of the historical development of organisation design. With regard to the internal cooperation of the entrepreneurial and operational activities, he defines the efficient performance of present business (operations) and involvement with future business to secure the long-term viability of the organisation as central entrepreneurial design tasks.

Important entrepreneurial activities, then, are the allocation and reallocation of resources. Changes in the business environment bring new opportunities and risks, which can be worked on with current and new resources and information and communication channels. If a changed strategy is to be implemented, the focus must not be too much on the securing of operational efficiency and preservation of existing structures. In addition, consideration of necessary internal structure adaptations so that external opportunities can be realised in the course of the various life-cycles of the organisation²⁹⁰ must be sharpened; it is also important to achieve effective coordination of the individual business areas. According to Chandler (1962:9-14), senior management have to define strategies and plans as part of their entrepreneurial design of the future and share resources amongst autonomous business areas which in turn, exist as functional business areas and are made up of sub-systems.

As well as adapting reactively to changes in the business environment, entrepreneurial organisations also realise proactive entrepreneurial activities (Morgan 1992). A proactive orientation requires that consideration is given to the current and future development of the business environment so as to achieve a future-orientated positioning of the organisation by realising entrepreneurial opportunities. The business environment is actively examined for entrepreneurial opportunities with an outside-in perspective and at a certain distance from current business.

²⁹⁰ See Chandler (1962:17,385-396) identifying four phases: (1) Expansion and accumulation of resources; (2) Efficient use of resources and closer coordination of production and sales; (3) Expansion into new (international) markets to stabilise the efficient use of resources and development of new products; (4) Development of a new (decentralised) structure for efficient use of accumulated resources to take account of short-term market changes and, at the same time, use long-term market trends (for new entrepreneurial activities).

4. Analysis of the three central tasks of an entrepreneurial organisation

These opportunities can exist in new or existing business. Indeed, problems can also be the starting point for new opportunities. A company's own strengths and weaknesses can be considered from the perspective of customers and competitors, and emerging technologies and other developments in the general business environment can be used to help reflect upon entrepreneurial activities. From such considerations, it is possible to derive which future competencies should be developed and which resources should be acquired in order to pursue future entrepreneurial strategies. As part of this, creativity and discipline have to be used in tandem to find entrepreneurial ideas and then implement them systematically (Morgan 1992:36).

For the entrepreneurial look into the future, Narayanan and Fahey (2004), present two options; the creative mode and the navigational mode. In the belief that one's own future can be proactively shaped, entrepreneurial organisations in creative mode draft common mental models in order to be able to plan entrepreneurial opportunities deliberately in dynamic environments. For this, they generate systematic knowledge so that they can use future opportunities strategically. In navigational modus, entrepreneurial organisations learn quickly and adjust themselves with lots of small innovations to an emerging future in more stable environments. They use available knowledge and develop existing mental models further. Entrepreneurial organisations could, depending on the (perceived) situation, use alternative approaches.

Entrepreneurial organisations must also identify possible risks in the business environment and develop strategies for dealing with risks. The effects of possible disruptions on the entrepreneurial organisation and its task environment are to be minimised and the ability to recover after disruptions strengthened. In so doing, risks that probably appear less but would have a strong negative effect should be focused upon in particular (Sheffi 2007). It is indeed the supply chain of a global organisation that is prone to disruptions. Entrepreneurial organisations and their cooperation partners take account of flexibility in their dealings with change and cases of disruption with a robust supply chain, cooperative relationships and resilient company cultures.

4. Analysis of the three central tasks of an entrepreneurial organisation

By learning from disruptions, mistakes and accidents, it is possible to improve the handling of such events and to define the necessary flexibility and duplication within the entrepreneurial organisation. Reporting systems must be introduced and one has to evaluate signals detected in the process of shaping the future (Sheffi 2007:269-285)²⁹¹.

In order to identify future-oriented proactive and reactive adaptations in the process of shaping the future, it is necessary to look at alternative futures. Scenarios make it possible to consider and check entrepreneurial strategies (Fahey and Randall 1998c:22-38), decisions and activities in response to various business environment developments (Fahey and Randall 1998b:3-21). The findings of entrepreneurial information gathering and foreseeable trends and prognoses (Graf 1999), assisted by additional, logical assumptions and projections about the future, enable us to formulate plausible and alternative stories about the future. Thereby, it is possible, for example, to develop scenarios in respect of all segments of the macro and micro environment (Fahey 1998a:189-222, Fahey 1998b:223-245, Behravesch 1998, Graf 2000) so that opportunities and risks can be uncovered and tested systematically. Through common discussion of possible futures, how and why these can arise, common mental models of the future develop within the entrepreneurial organisation. Use of scenarios can help to recognise significant lines of development at an early stage and promote the activity of thinking in scenarios (Fink et al 2001)²⁹². With scenarios, it is possible to scrutinise and reassess decisions – for example, which activities should be undertaken in which global operation fields (Fahey and Randall 1998b:12-14).

²⁹¹ Sheffi (2007) suggests the introduction of a *chief risk management officer*. This person can act as an agent of entrepreneurial shaping of the future and, within the activity of entrepreneurial information gathering analyse possible disruptions and their effects (also beyond organisation boundaries) and as part of entrepreneurial organisation design, improve the ability of the organisation to recover continuously as quickly as possible after disruptions (via learning processes) and also minimise the probability of disruptions by way of flexibility (in production processes) and duplication (with resources). In this way, it is also possible to check if an entrepreneurial opportunity can be made of a disruption.

²⁹² Fink et al (2001) define four processes for strategic early recognition in entrepreneurial information gathering: (1) Perception of weak signals; (2) Cecking the relevance of weak signals for the organisation; (3) Observation of critical factors over time; (4) Forecast. In the process of entrepreneurial shaping of the future, scenarios help with planning of an entrepreneurial strategy and entrepreneurial decisions or activities.

4.2.3 Entrepreneurial decisions in a global economy

It is clear from the literature study on the business environment that as part of the entrepreneurial shaping of the future, the cultural context also has to be taken into account. The identification of opportunities and risks requires the organisation to have a strong outward orientation whilst the implementation of entrepreneurial activities is supported by a strong inward orientation. National cultures often strengthen one or the other fundamental orientation²⁹³. If the cultural context supports a strong outward orientation so that entrepreneurial opportunities can be more easily identified, then where necessary, it is important firstly to develop or at least strengthen a strong entrepreneurial culture within the organisation. If the cultural context favours a strong inward entrepreneurial orientation within the organisation, systematic analysis of the external business environment must, where necessary, be learned or at least strengthened.

The cultural context therefore determines whether there should be a stronger focus on entrepreneurial information gathering or entrepreneurial organisation design to achieve overall a holistic entrepreneurial orientation within the organisation in the wake of entrepreneurial shaping of the future. This holistic approach of the three central tasks of an entrepreneurial organisation also offers an orientation framework for the design of an entrepreneurial organisation within differing basic cultural orientations. Against this background, the complementary relationship between national cultures and the organisation culture becomes clear.

Entrepreneurial decisions²⁹⁴ tend to be taken with an adaptive vision and a proactive vision (Garcia-Morales et al 2006) in functional areas in particular (see figure 93):

- (1) Where are external inputs to be bought in and how and where should they be implemented?
- (2) Which internal inputs are to be implemented and how and where?

²⁹³ See chapter 3.2.1.3

²⁹⁴ The determination of the central entrepreneurial questions for shaping the future are oriented towards the basic economic questions of an economy: *what (how many, which new products), should be produced and how (which technologies) and for whom* (see for example Forgang and Einolf 2007:17-19).

4. Analysis of the three central tasks of an entrepreneurial organisation

- (3) What should be developed and produced, which products and services for which markets?
- (4) What is to be developed and produced and how, which transformation processes are to be designed and implemented and how?
- (5) How should support functions such as accountancy and finance be designed and where, what should be sold and how?

The design of exchange relationships between the organisation and the environment concerning entrepreneurial decisions is the central aspect of entrepreneurial shaping of the future and requires close networking with entrepreneurial information gathering and entrepreneurial organisation design in the process of realising entrepreneurial activities. This requires a holistic approach and an intellectual interplay between completeness and incompleteness for the identification and processing of opportunities from the business environment.

Holistic consideration of interactions and relationships in the overall system (external macro environment), between the business and the business environment (particularly with the external micro environment), as well as within the business (internal environment) occurs through an exchange between various levels of abstraction. In this way, it is possible to see wider contexts and add them to the total picture.

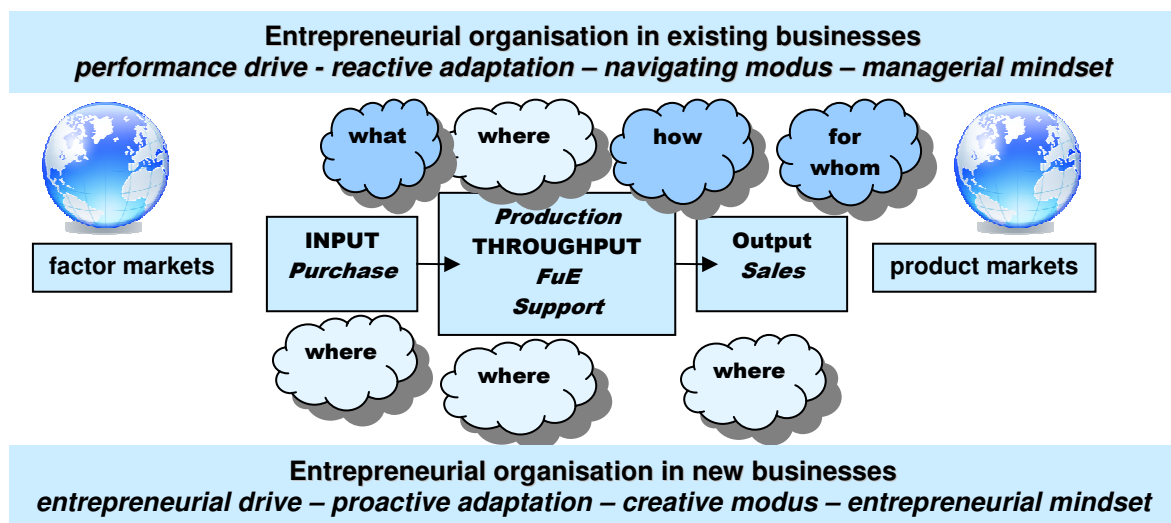


Figure 93: Entrepreneurial decisions and entrepreneurial shaping of the future for adaptation, efficiency and innovation

4. Analysis of the three central tasks of an entrepreneurial organisation

From a cybernetics viewpoint (Friedrich et al 2010), the organisation has to concentrate its energies at every level on the basic activities and key locations in order to be able to plan and implement a future-oriented strategy that ties in with the development of the company²⁹⁵.

According to Mewes (2007b:8-13,2008:8-11) and Friedrich et al (2010:59-215), integration of the entrepreneurial organisation into the networked environment is at the centre of entrepreneurial shaping of the future. Focusing strategically on maximising utility of the selected target groups in the business environment makes it possible to achieve effective, indirect profit maximisation, which is said to be more important than a direct profit maximisation strategy. He defines seven steps that can be used to focus entrepreneurial shaping of the future in such a way that the entrepreneurial organisation can achieve optimal adjustment and development via concentration and specialisation in harmony with the business environment.

As a first step, the entrepreneurial organisation has to analyse its own individual peculiarities, features and strengths. As a second step, there comes the search for markets that can be developed for implementing good entrepreneurial ideas. Next comes the selection of actual target groups that can be developed for the new products and services (third step). As part of the fourth step, the most burning questions of the target group have to be discovered so that a better innovative solution can be found more quickly than the competitors. Resources and competencies that are lacking should be developed, bought in or integrated through cooperations (sixth step) and there should be a pursuit of long-term achievement of success by orientation of specialisation strategies towards long-term basic needs (seventh step). With this, Mewes basically turns Adam Smith's (1982) invisible hand principle on its head: it is not the self-serving actors that provide a result that is good for society, but rather the organisation's orientation towards environmental benefits that brings long-term viability via indirect profit maximisation.

²⁹⁵ This concept goes back to Mewes and is today still described as bottle-neck concentrated strategy (see Mewes 2007a:8-12 and Friedrich et al 2010). By specialising and concentrating on core activities as well as targeting the most effective point (removal of internal and external bottle-necks) a chain reaction can lead to resolution of the core problems of an organisation and bring about fast adaptations and innovations.

4. Analysis of the three central tasks of an entrepreneurial organisation

The seven steps can be used as a method for a synergetic design of the interaction between the organisation and the environment and also for strategic control of resources. The removal of the largest and most urgent internal and external bottlenecks and placing an emphasis on intangible resources for finding ideas, problem solving and innovation enable a tangible development of the entrepreneurial organisation (Mewes 2007c:9-13, Friedrich et al 2010:19-49)²⁹⁶.

An internal company business plan (Paxmann and Fuchs 2010) can be put in place as a further method for the systematic design of an entrepreneurial shaping of the future. The internal business plan records the opportunities and risks in a feasibility study, structures the planning process for the achievement of potential entrepreneurial activities and makes it possible to make well-founded entrepreneurial decisions. The drawing up of planning documentation as a basis for decisions enables a holistic approach to a business idea or learning process and forms the basis for implementation entrepreneurial activities.

4.2.4 Conclusion: Notes on entrepreneurial shaping of the future

Entrepreneurial shaping of the future requires entrepreneurial competencies in the organisation in order to achieve success in the sales, market and strategic innovation fields. Entrepreneurial organisations combine a managerial mindset with an entrepreneurial mindset²⁹⁷ (see table 9). At the centre of entrepreneurial shaping of the future is the design of the interaction between the organisation and the environment on the basis of entrepreneurial information gathering and core competencies and resources. Consideration of systems theory principles enables reactive, proactive and future-oriented adjustments to changes in the environment for the achievement of viability through indirect profit maximisation.

²⁹⁶ According to Friedrich et al (2010:36-39) the most important intangible values are (1) tensions between the actual vs target position as the driving force, (2) learning for the actors and the organisation from specialisation and for further development of the system and also (3) possession of target groups as the best problem solver in the special area.

²⁹⁷ This follows from the holistic perspective and research in this examination. According to Gartner (2001) entrepreneurship scholars held different beliefs about the nature of entrepreneurship. However, the presented holistic view distinguishes the managerial and entrepreneurial mindset from a theoretical perspective. In practice both mindsets should be used in an integrated way and at all levels of the company system. The balance of both perspectives and the entrepreneurial intensity (Morris et al 2008:89-72) to secure vitality depends on the character of the business environment.

4. Analysis of the three central tasks of an entrepreneurial organisation

	Managerial mindset	Entrepreneurial mindset
Orientation	Performance drive	Entrepreneurial drive
	Navigating modus	Creative modus
	Reactive adaptation	Proactive adaptation
	Strategic thinking from “small picture”	Entrepreneurial thinking from “big picture”
Focus	Task and controlling	Opportunity and vision
	Efficiency and improvements	Innovation and change
	Planned managerial strategy	Emergent entrepreneurial strategy
	Established business	New business

Table 9: Entrepreneurial and managerial mindset, and dual perspective in the entrepreneurial organisation

Consideration of the cultural context enables a holistic design of the three central tasks of an entrepreneurial organisation and defines necessary learning fields and cultural adjustments in order to bring about opportunistic strengthening of entrepreneurial information gathering or entrepreneurial organisation design²⁹⁸. Fundamental centralised and decentralised entrepreneurial decisions in existing and new businesses are taken within the context of shaping the future in an entrepreneurial way. These decisions can steer strategic focus onto the benefit of the organisation for the environment and lead to an evolutionary development by the networking of synergies with the environment. With an entrepreneurial business plan it is possible to draw up, document and discuss feasibility studies in the context of entrepreneurial shaping of the future and at the same time, strengthen an entrepreneurial focus concerning learning processes and cultural development. Central and decentralised entrepreneurial decisions then link the entrepreneurial design of the organisation (Blenko 2010).

Definition: *Entrepreneurial shaping of the future*

Entrepreneurial shaping of the future means taking reactive, proactive and future-oriented entrepreneurial decisions centrally and decentrally in order to achieve the best possible use of resources and competencies during the interaction of the organisation with the global environment for the strengthening of viability. In this process, trends, scenarios and environmental characteristics, in particular the competitive situation, must be taken into account in order to be able to find and implement entrepreneurial ideas in new and existing business in the areas of products, market and technology.

²⁹⁸ See also Chowdury (2000), who sees adjustments in particular in the company structure, in the design of processes and in the management style. Managers must search for and implement the entrepreneurial dream, conquer global markets whilst adapting to local demands and pursue permanent innovations and creative processes.

4.3 Entrepreneurial shaping of the organisation

The main objective of chapter 4.3 is to describe the levers and internal action fields for entrepreneurial shaping of the organisation design. It focuses on a dual orientation and integration fields for the creation of cooperation and synergies. It also presents a definition of entrepreneurial shaping of the organisation. For entrepreneurial shaping of the organisation, four central levers (see figure 94) can be derived from the literature study (see also table 10) on the role of intrapreneurship in chapter 3.1 which can be used to secure viability of the entrepreneurial organisation. With a holistic and consistent design of strategy, structure, culture and resources and competencies, the entrepreneurial activities set out in the entrepreneurial shaping of the future can be steered into proactive, reactive and future-oriented adaptations to changes in the business environment.

The entrepreneurial strategy provides for the direction of the organisation and serves as a linking between entrepreneurial organisational design and the entrepreneurial shaping of the future. Central fields of action of entrepreneurial strategy are market, operational and strategic innovations. The entrepreneurial strategy must be designed taking into account current and future company resources and competencies²⁹⁹.

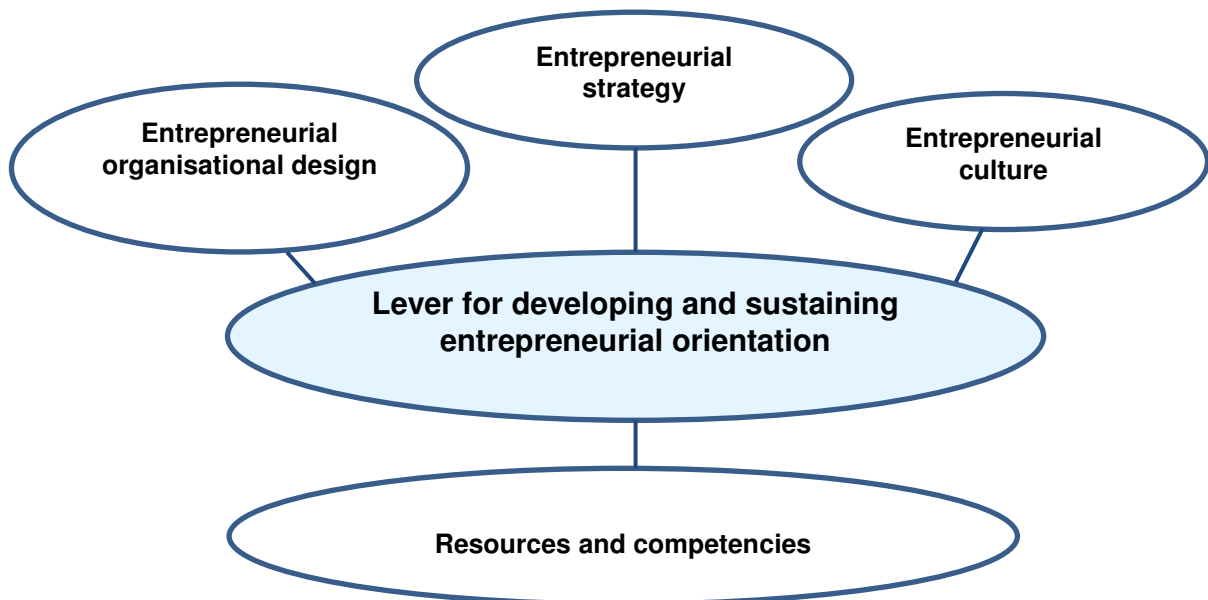


Figure 94: Four central levers for entrepreneurial organisation design

²⁹⁹ For adjustment of organisational competence and for competency needs analysis see inter alia Thurnes (2003).

4. Analysis of the three central tasks of an entrepreneurial organisation

Entrepreneurial organisation design	
Efficiency gains through division of labour <i>(Smith 1982)</i>	Managers design collective learning processes and entrepreneurial experiments <i>(Hamel and Prahalad 1994, Senge 2003, Sathe 2003, Kohlöffel and Rosche 2009)</i>
Innovation by dynamic entrepreneurs <i>(Schumpeter 1950)</i>	Design of structures, systems, culture for promotion of entrepreneurial behaviour <i>(Covin and Slevin 1991)</i>
Use of internal resources and knowledge and coordination and adjustment of internal activities – synergy effects between and within organisational units <i>(Abell 1993, Penrose 1995)</i>	Transfer of meaningful tasks as a reward for entrepreneurial services and for the development of an entrepreneurial culture <i>(Block and MacMillan 1995)</i>
Design of incentive structures for skimming off of entrepreneurial profits by management <i>(Kirzner 1973)</i>	Internal markets and networks for the control of decentralised entrepreneurial activities (structural entrepreneurial management) by individual entrepreneurial managers and employees <i>(Abell 1993, Wunderer 2006)</i>
Design of a flexible and adaptable organisation with decentralised structures <i>(Schwab 1976, Hamel and Prahalad 1994, Oden 1997, Hitt et al 2005, Hentze et al 2005, Thornberry 2006, Maucher 2007, Kohlöffel and Rosche 2009)</i>	Dual strategies: Efficiency in existing businesses and development of new entrepreneurial opportunities on the basis of existing or new competencies <i>(Abell 1993, Hamel and Prahalad 1994, Oden 1997, Birkinshaw 2000, Morris and Kuratko 2002)</i>
Employees as intellectual partners (self-monitoring) and development of short and long-term entrepreneurial strategies with a focus on long-term success <i>(Schwab 1976, Maucher 2007)</i>	Harmonisation of the interests of the organisation with the interests of employees <i>(Trompenaars and Hampden-Turner 1998, Kuhn 2000, Trompenaars 2007, Joyce 2008)</i>
Development of entrepreneurial feel of an entrepreneurial culture <i>(Schwab 1976, Drucker 1985, Trompenaars and Hampden-Turner 1998, Baden-Fuller and Stopford 1994, Wunderer 2006, Trompenaars 2007, Kotter 2009, Kohlöffel and Rosche 2009)</i>	Entrepreneurial management teams with complementary competencies <i>(Trompenaars and Hampden-Turner 1998, Kuhn 2000, Maucher 2007, Trompenaars 2007)</i>
Division of large organisations into small units led by entrepreneurial managers. Use of informal structures in production development and control of activities via communication and conducive incentives. <i>(Peters and Waterman 1982)</i>	Orientation of entrepreneurial managers and employees to the interests of the organisation <i>(Oden 1997)</i>
Cultural and structural design for promotion of entrepreneurial activities as a team performance. Innovation for new products and product improvements and for efficiency increases and cost decreases. Decentralisation of entrepreneurial responsibility and use of synergies by centralisation. <i>(Kanter 1983, 1989, 1997)</i>	Use of international locations for internal and external entrepreneurial activities for optimal resource allocation and achievement of synergies within the whole global company system as well for operation in local and global markets <i>(Birkinshaw 2000)</i>
Revitalisation of the organisation by the development of entrepreneurial management and by recruitment of new entrepreneurial employees and achievement of innovation by all employees <i>(Drucker 1985, Brandt 1986, Thornberry 2006)</i>	Stability in the realisation of operational tasks at normal times and in crisis situations <i>(Weick and Sutcliffe 2007)</i>
Entrepreneurial teams and networks outside of formal structures which bring voluntary innovation and which can build internal capital for future innovation projects from successful entrepreneurial activities <i>(Pinchot 1988)</i>	Synergies from entrepreneurial activities and use of knowledge from other departments for entrepreneurial activities (cooperative intelligence) <i>(Hitt 2005, Joyce 2008)</i>
	Entrepreneurial managers and employees take on various roles and tasks as human capital entrepreneurs in various entrepreneurial teams <i>(Kohlöffel and Rosche 2009)</i>

Table 10: Entrepreneurial organisation design as a task of the entrepreneurial organisation

4. Analysis of the three central tasks of an entrepreneurial organisation

The structural components of the organisation coordinate the division of labour within the organisation. Decision rights must be allocated and the basic structure, procedures and process architecture established. Formal and informal information, communication, change and innovation processes need to be designed and, at the same time, compensation, integration and performance evaluations and control systems defined. Internal and external cross-boundary needs to be determined. The entrepreneurial company culture specifies a basic entrepreneurial direction, supports the coordination of decentralised entrepreneurial activities and the development of emergent entrepreneurial strategies. Entrepreneurial activities and learning from entrepreneurial experiments contribute to the development and unfolding of an entrepreneurial culture.

The starting point of the following analysis of entrepreneurial organisation design is the consideration of a dual orientation (see chapter 4.3.1.1) and change in the organisation (see chapter 4.3.1.2). On this basis, it is possible to define entrepreneurial strategies from the strategic alternatives bearing in mind current and future resources and competencies (see chapter 4.3.1.3). Afterwards, structural organisation design (see chapter 4.3.2.1), central integration fields with the entrepreneurial organisation (see chapter 4.3.2.2) and entrepreneurial culture (see chapter 4.3.2.3) can be considered bearing in mind the implementation of entrepreneurial strategy. With this, the central levers of entrepreneurial strategy, structure, culture and resources and competencies are examined more closely.

4.3.1 Framework conditions, organisation design and change

With the active and emergent development of entrepreneurial strategies, dual orientation (see chapter 4.3.1.1) must be considered and balanced in order to ensure the organisation's viability. Changes in the environment highlight proactive and reactive entrepreneurial activities which reveal the entrepreneurial strategy (see 4.3.1.3) for designing internal and external change (see chapter 4.3.1.2). The entrepreneurial strategy controls the interaction of the organisation with the environment and thus also defines the necessary framework conditions for adaptation to and design of the organisational architecture. The following chapter 4.3.1 describes aspects of the strategy in the context of organisational architecture.

4. Analysis of the three central tasks of an entrepreneurial organisation

4.3.1.1 Dual orientation and internal action fields

From the literature study (see chapter 3), it is possible to identify five dualities (see figure 95) which need to be combined with a holistic design of the four levers for an entrepreneurial organisation (see figure 94). Entrepreneurial activities must be carried out bearing in mind the achievement of short and long term viability (De Geus 2002, Dess and Lumpkin 2003) and need to contribute to optimisation and renewal (Rüegg-Stürm 2004) in existing business, as well as the realisation of new business³⁰⁰. The operational performance processes must be designed as sturdily and panic-proof as possible and at the same time allow adaptations to changes in the business environment (see Weick and Sutcliffe 2007 together with Sheffi 2007, Slack et al 1995, Kaluza and Blecker 2005).

Decisions are taken centrally and decentrally with a global and local orientation. They should be taken where the necessary information is. Certain decision rights can be standardised, in certain decision situations, however, adaptive or emergent structures must be available and enable ad hoc decisions (see Child 2006 together with Brickley et al 2004). The interests of the actors must be balanced with the interests of the organisation (Argyris 1957)³⁰¹.

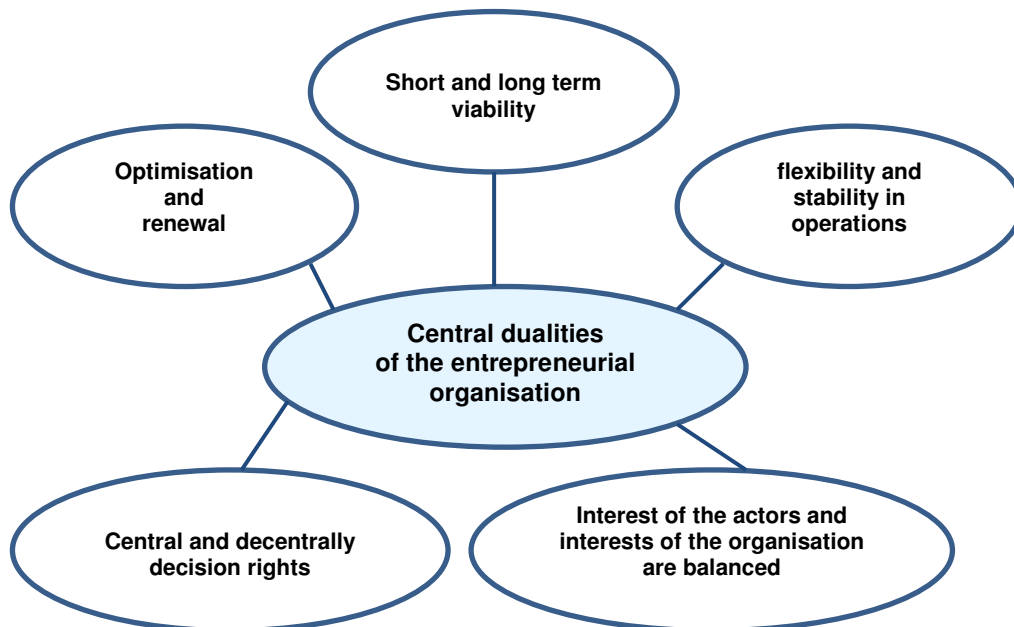


Figure 95: Dual orientation of the entrepreneurial organisation

³⁰⁰ In this, the dual targets of efficiency and effectiveness are reflected.

³⁰¹ The perspectives can also be extended to functions and all stakeholders.

4. Analysis of the three central tasks of an entrepreneurial organisation

The following eight elements can be defined from the literature study (see chapter 3) as internal entrepreneurial action fields for organisation design, bearing in mind the four levers and five dualities of an entrepreneurial organisation:

- (1) Dual strategies for the optimisation and renewal of business;
- (2) Organisation design for division of labour, cooperation, coordination, resource allocation, achievement of operational stability and flexibility and realisation of innovation and adaptation;
- (3) Incentive structures for the harmonisation of the individual interests of the actors and the entire organisation as well as short and long-term orientations;
- (4) Learning structures for individual and collective learning processes, entrepreneurial experiments and for the development of cooperative intelligence;
- (5) Maintenance and development of an entrepreneurial culture through active cultural development³⁰²;
- (6) Human resources management for providing and developing entrepreneurial managers, employees and teams;
- (7) Management of (tangible and intangible) company resources and provision of budgets from successful ventures for future ventures (Intracapital);
- (8) Maintenance and development of core competencies as a basis for entrepreneurial activities.

The objective of entrepreneurial organisation design is the implementation of the targets, strategies, decisions and activities laid down in the entrepreneurial shaping of the future, based on entrepreneurial information gathering. At the centre of this are the design of individual components and operations in the organisation and their interplay for the achievement of efficiency, adaptation and innovation in existing and new business, together with exchanges with the environment.

³⁰² From the literature study on the interaction between the organisation and the environment (see chapter 3.3), it is possible to derive from a systems theory view several cultural elements of an entrepreneurial organisation within the company culture. The following cultural areas can be defined: *information and communication* (Bertalanffy 1968, Morgan 1998), *cooperation* (Bleicher 2004) and *use of diversity and intercultural cooperation* (Vester 2005, Morgan 1998 and also from the literature study on the business environment in chapter 3.2, Dülfer 1997), *innovation and learning* (Wheatley 1999, Miller 1995, Ulrich and Probst 1991) and *identification and motivation* (Wheatley 1999).

4. Analysis of the three central tasks of an entrepreneurial organisation

In what follows, firstly some contexts and targets of organisation design are shown and an organisation framework is presented which outlines the networking and the dynamic interplay of individual organisational components into a holistic organisational system (Chapter 4.3.1.2). In this process, the interplay of organisational technical, political-strategic and cultural aspects of entrepreneurial organisation design will have to be very clearly taken into account. Against this background, the following section will firstly set out some static and dynamic aspects of entrepreneurial strategy bearing in mind the available and future resources and competencies (see Chapter 4.3.1.3). Subsequently, entrepreneurial structure (Chapter 4.3.2.1), integration fields (Chapter 4.3.2.2) and culture design (Chapter 4.3.2.3) is outlined. In this way, it is possible to specify holistic and dynamically determined central levers of entrepreneurial organisation design which take into account changes in the business environment.

4.3.1.2 Shaping the organisation and strategic change

Entrepreneurial organisational design must take into account the internal and external interdependencies. The relations between the components of the organisation and exchange relations between the organisation and the environment must be holistically shaped in order to be able to achieve efficiency, adaptation and innovation of the entrepreneurial organisation in dynamic environments and in existing and new businesses³⁰³. Schein describes organisational efficiency³⁰⁴ as the ability of the organisational system to survive, adapt, maintain itself and to grow. In this process³⁰⁵, the environmental situations that are relevant for the functioning of the organisation must be correctly interpreted, the organisational targets defined, communicated, be understood and accepted by the members of the organisation.

³⁰³ For the implementation of systematic strategy development see for example Nagel (2007).

³⁰⁴ Schein (1980:156) gives a cycle with six individual steps from adaptation to discussion for the protection of efficiency: (1) Achievement of changes in the business environment; (2) Obtention of information for change and forwarding to the relative operational unit; (3) Creative change of the transformation process in accordance with environmental information (with understanding of the actors with the organisational goals, acceptance of change and commitment to the system as a whole and good communication and a trusting culture); (4) Stabilisation of internal changes; (5) Export of new products or services in the business environment which are more appropriate to the environmental changes than what was previously on offer; (6) Receipt of internal and external feedback about the success of the changes by further examination of the external environment and further integration within the organisation.

³⁰⁵ For an integrated management model to manage constant change in technology and engineering effectively see Winzker and Pretorius (2009).

4. Analysis of the three central tasks of an entrepreneurial organisation

Problems from the business environment have to be solved creatively and adjustments to the changing framework conditions achieved in a committed fashion. The aims of the actors, partial units and the organisation should not overlap or contradict each other in this process. The response to changes in the environment should be to modify operations and internal operations and activities should be designed sufficiently flexibly. The efficient conversion of factors of production into marketable goods and services while taking into account changes in the business environment is the core function of an organisation (Naylor 1996). Efficiency in the transformation process requires the design of new processes as well as continuous evaluation and improvement of existing production processes in order to increase input and output efficiency taking into account market signals (Heizer and Render 1999:16-21, Slack et al 1995:116-374,728-762, Niess and Spandau 2005). Organisations can fundamentally separate the operative system³⁰⁶ from changes in the business environment and buffer it by stocking up and down and/or make production very flexible in order to be able to react to changes in the business environment (Slack et al 1995:23-26).

The target is to achieve an efficient use of resources in carrying out every activity³⁰⁷. Production as well as other primary activities and supporting activities must carry out their specific roles as sub-systems (see e. g. Naylor 1996:15-19,37-41)³⁰⁸ efficiently for the aims of the whole organisation and at the same time be brought together. The differentiation between units and functions must be supplemented by integration of the individual parts into one viable whole taking into account changes in the business environment (Lawrence and Lorsch 1986:6-13). The organisational context for the achievement of entrepreneurial activities is then determined by structure and process elements.

³⁰⁶ According to Naylor (1996:14) three decision areas must be taken into account: Planning the sequence, speed and times of operational activities, planning of capacity bearing in mind demand and planning of stock.

³⁰⁷ According to Slack et al (1995:22) all activities could also be described as operations, i.e. as transformation processes.

³⁰⁸ For example, the market side of things has also to be connected with the production function via product development and the design of production processes. With customer needs and basic research and development as a starting point, product ideas can be developed, implementation planned and achieved through production. Slack et al (1995:8-11) name marketing, product development and accountancy and finance alongside production as central functions in this context. Human resources, purchasing and engineering are described as support functions.

4. Analysis of the three central tasks of an entrepreneurial organisation

Khandwalla (1977:260-279) combines the structural and process variables of an organisation into an interdependent organisation design in order to make the strategic targets real. As part of this, various requirements have to be satisfied when designing the organisation. Thus, for example, adaptations have to be carried out taking into consideration the business environment, the age, the size and the type of business, the history of the organisation, the focus of top management and the actors and the culture of the fields of operation. A turbulent business environment requires, for example, flexibility in the formal structures and in production, as well as organic management with informal networks, free communication and information. The variables of the external environment and the demographic variables of the organisation are described by him as situative variables which influence the strategic and structural variables. The strategic variables equally have an effect on the structural variables which, in turn, have an effect on the behaviour of the actors.

For the achievement of innovation, Khandwalla (1977:551-564) believes two different processes are required. Firstly, the creative organisation has to find new solutions and ideas. In addition, open communication, creativity techniques, independent decentralised units for the development of ideas and for entrepreneurial experiments, heterogenous teams, slack resources, contacts with external sources as well as separation of the creative unit from the productive unit can all make a contribution. Implementation of ideas happens after successful evaluation of the ideas taking into account the current and future opportunities and risks in the business environment. For this, it is necessary to have an innovation process and the required resources. To support implementation by agents of change, political processes have to be designed and the change accompanying innovations has to be created and coalitions formed.

According to Tichy (1983), agents of change are also responsible for adjustments of the organisation to changes in the business environment; these agents of change shape changes in products and services, markets, organisation structures and human resources.

4. Analysis of the three central tasks of an entrepreneurial organisation

He defines nine levers for change: (1) gathering information about changes in the environment, (2) the mission for orientation when making strategic decisions, (3) strategy with operational targets for implementation of the mission and strategy at all levels of the organisation, (4) strategy development process with the involvement of the relevant interest groups, (5) adjustment of the actors' tasks and competencies and involvement of new technologies, (6) adjustment of communication and reporting networks, (7) agreement on decisions and conflict resolution in the organisation process, (8) motivation of the actors, (9) design of informal communication and networks.

As a first step, one can analyse which levers have to be adjusted so that one can then determine how the adjustment can take place. Organisation design has to happen from three different perspectives. The technical design problem is resolved by combining the factors of production to create the desired outputs. In this process, targets and strategies, and structures and systems are established. The political allocation problem is resolved by allocation of decision-making competencies and resources. The cultural commitment problem is resolved by the determination and communication of the desired common values and mental models. According to Tichy, the technical, political and cultural design problems³⁰⁹ should be combined with each other and thus, the strategic, structural and cultural aspects interwoven.

All three problems would be resolved permanently and agreed adjustments would be continuously required in all three areas. Through this, there would be three overlapping cycles of organisational change: phases with high uncertainty and high need for adjustment alternate with quiet, problem-free phases. Change is then triggered by entrepreneurial opportunities and threats from the internal or external business environment³¹⁰ (see figure 96).

³⁰⁹ Tichy (1983:10-14) uses a rope with three strands as a metaphor to describe the combination of the technical, political and cultural design problem.

³¹⁰ Tichy (1983:18-19) cites change in strategy with diversification into new businesses and human resources with recruitment or personnel development as an internal source of change. As an external driver, he names in particular industry competition and economic and technological development.

4. Analysis of the three central tasks of an entrepreneurial organisation

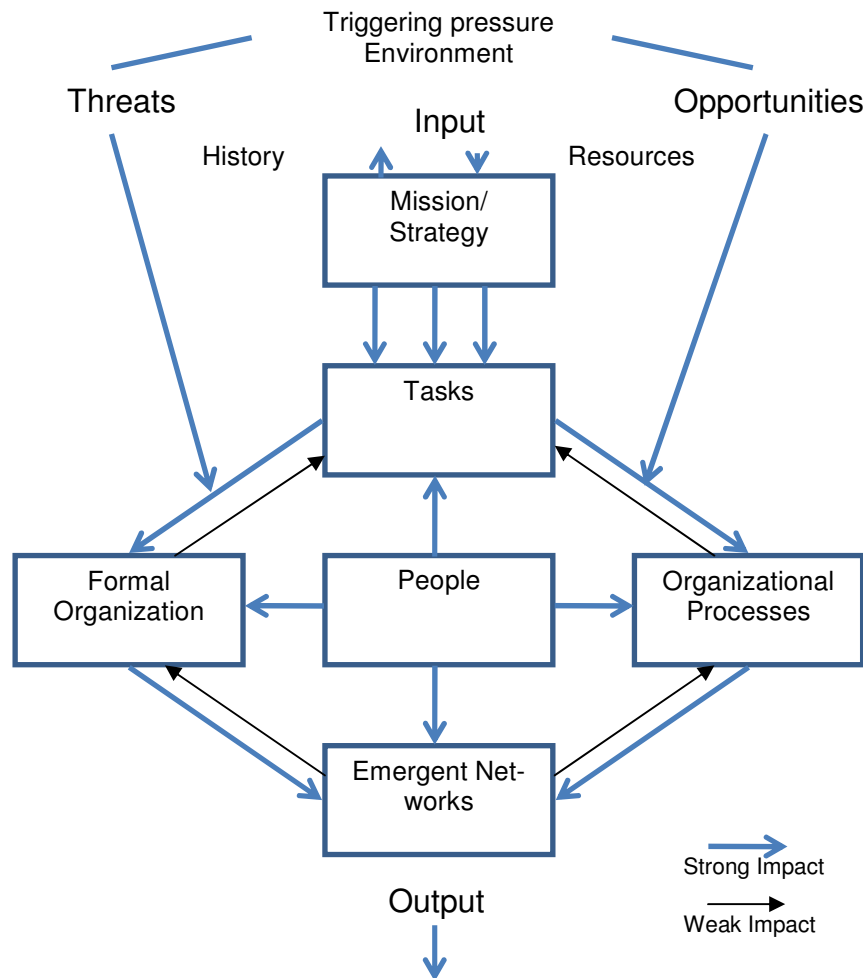


Figure 96: Change within the organisation through opportunities and threats in the business environment according to Tichy (1993:13,73,96)³¹¹

The focus is then on the direction of the mission and strategy, with opportunities and threats as a starting point for adapting the organisation in response to changes in the business environment. The formal organisation structures and explicit organisation processes, the informal, unplanned networks and the qualifications and orientations of the actors integrate the three areas of design. The mission and strategy is implemented with the achievement of individual activities and tasks based on available technology and processes, where upon the division of labour between the individual actors and units have to be coordinated and integrated³¹².

³¹¹ For a description of the components see Tichy (1983:74-94,96).

³¹² Tichy (1983:85-86) distinguishes three mechanisms for integration: (1) Simple mechanisms like rules and procedures; (2) Reduction of the necessity for coordination by strengthening the autonomy of units (also by slack resources); (3) Complex integration mechanisms like coordination units, trans-divisional task forces or matrix structures.

4. Analysis of the three central tasks of an entrepreneurial organisation

This happens with the support of organisation processes for information and communication. All components of entrepreneurial organisation design are intended to be designed coherently and build, in combination with each other, a functional whole with dynamic relationships so that technical, political and cultural problems can be resolved simultaneously (Tichy 1983:73) and the desired output targets met³¹³. In so doing, the needs of the individual actors have to be taken into account.

As well as resources and the environment, Tichy also explicitly names company history³¹⁴ as an input for organisation design. After the initial impulse of change in the organisation, according to Tichy, there follows a phase of adaptation up until the new temporary organisation equilibrium. Within the context of entrepreneurial organisation design, the current situations of the three design problems in the relevant cycle have to be clarified, a desired position has to be defined and the necessary change to the desired position engineered.

Tichy's organisation framework gives a holistic impression of the multi-layered task of entrepreneurial organisation design that adapts the organisation³¹⁵ to opportunities and threats from the business environment. This being understood, the four central levers of entrepreneurial organisation design identified in the literature study (see Chapter 3.1), taken together with the five dualities derived from them, can be further analysed and notionally integrated.

³¹³ Tichy (1983:74,75) cites as criteria for output efficiency of the organisation, the achievement of the organisational targets, compatibility of the technical, political and cultural sub-systems together with the level of satisfaction of the actors with achieving personal targets by being members of the organisation.

³¹⁴ According to Tichy (1983:76), the historical behaviour patterns of an organisation are relatively stable so that an analysis of the methods used in the past to resolve technical, political and cultural design problems can help to predict future behaviour of the organisation. These predictions are then an important input for entrepreneurial organisation design.

³¹⁵ According to Vermeulen et al (2010), a permanent restructuring is a requirement for the promotion of the organisation's adaptability, creativity and ability to innovate. With the restructuring, new informal networks would be set up over time and the curiosity of the employees is fostered. They define three areas of diagnosis that can give hints on a necessary organisation design: (1) Quality of communication and cooperation; (2) Adaptability; (3) Market balance between groups. The organisation design then follows in the three change areas (1) Structure (organisation according to functions, region, customer type or product); (2) Reward system (incentives for individual actors/ teams/ the company, open versus confidential judgments, short-term control versus long-term development, turnover versus value creation) and (3) Processes (authority for decisions, central versus decentralised distribution, localisation of processes, emphases of the processes on customer versus product).

4.3.1.3 Resource-oriented entrepreneurial strategies in a changing environment

The starting point of entrepreneurial organisation design is the shaping of the internal division of labour³¹⁶ for the attainment of efficiency gains and innovation³¹⁷. Entrepreneurial strategies relate thus to the efficient operation and development of existing business³¹⁸ as well as to the selection and pursuit of new business and the implementation of innovation in the selected operational fields. In order for these dual strategies (Abell 1993) to be successful, there must be a renunciation of the primacy of total efficiency (Zahn et al 2005). Firstly, unused potential, duplication of resources and error tolerance are important prerequisites for the pursuit of renewal and must be taken into account within the context of entrepreneurial organisation design.

³¹⁶ The productive forces of the division of labour have already been examined by Smith (1982:10-22). According to Smith, one has to take into account with the division of labour that the individual actors can improve their economic situation and social rank in making their contribution to the whole. Harmonisation of the interests of the actors with the interests of the whole entrepreneurial organisation can be defined as the design target and necessary condition for securing the viability of the organisation in turbulent environments. In place of the *invisible hand* of the market (this is how Smith described the price mechanism that achieved equilibrium of supply and demand in the market), there is within the entrepreneurial organisation, in the post-bureaucratic (Child 2005:ix) coordination mechanism, central (top management) and decentral (managers and employees) control together with control by the structuring strategies, structure, culture and resources and competencies of the entrepreneurial dynamic driven by the organisation.

³¹⁷ Schumpeter (2006:103-180) distinguishes two types of economic action. As well as action and thinking in outmoded ways, which represent passive adjustment and drawing consequences from data, he sees in creative redesign the source for economic development. He describes the interdependence of events in the economy as an entanglement of effects with repercussions and reciprocal effects. Each development creates the prerequisites for subsequent developments. Energetic and dynamic actors with particular motivation for creative design assert themselves against resistance experience recognition through the achievement of their own goals. Entrepreneurial actors are thus a source of innovation and changes in the business world. New things arise through the way of applying existing means. Taking into consideration the current situation and production method, a relatively better situation can be achieved. Technical and commercial production can be improved to a practically unlimited degree. Just seeing new opportunities is not enough and the key is the implementation of new combinations. Schumpeter sees the ability to see new ideas via an emotional imagination as being only anchored in a few economic subjects and even fewer actors would have the necessary spirit and force of action. Entrepreneurial actors achieve correctly selected new combinations in that they change production and organisation processes, enter new markets or improve their competitive position by innovations such as new consumer goods. Schumpeter (1950:134-148,213-219) gives this dynamic development driven by permanent renewal the name of the *process of creative destruction*. The actual competition for existing business consists in renewals of the future. For the entrepreneurial organisation, one can derive that pure striving for efficiency should not always be at the forefront, but rather the best possible performance over a longer period (from 10 years, for example). In doing this, the organisation and the industries and markets worked in must always be considered within the eternal storm of creative destruction and thus, the reciprocal effect between the organisation and the environment must be considered when designing the entrepreneur function of the organisation.

³¹⁸ Slack et al (1995:81-83) also refer to the necessity (in the context of scarce allocated resources) of giving up business areas where appropriate.

4. Analysis of the three central tasks of an entrepreneurial organisation

The strategy itself is also a matter for innovation in turbulent environments. Efficiency improvements and renewals of existing paths are not sufficient for adapting to dynamic developments in the business environment (Zahn et al 2005). Therefore, entrepreneurial organisations must also use new strategies, structures, resources and behaviour for the implementation of new business opportunities. They must anticipate and cope with discontinuity and change in the environment as well as initiate by innovation in the team (Drucker 1978:42-57), use resources productively and divert them in a targeted way; in so doing they have to balance the aims of the organisation with the needs and wishes of the effective actors (Drucker 1978:188-211). The evolution of strategy and strategic decisions (see Mitchell et al 2011) for adjusting to changes in the environment and for the pursuit of entrepreneurial aims comes about via the use of intentional and emergent strategies (Mintzberg 1991a, Burnes 2004). The emergent strategies arising from the decentralised entrepreneurial decisions and problem solutions strengthen the flexibility of the entrepreneurial organisation. The centralised and systematically planned strategies provide the necessary stability. Top management can promote renewal and guide entrepreneurial strategy development³¹⁹ directly by allocation of resources and selection and indirectly by the design of the structure and culture.

Entrepreneurial adjustment to a permanently changing business environment with planned and emergent strategies requires learning processes for the actors and the organisation as a whole (Zahn 2005:80-81). With guided evolutionary strategy development, the necessary space for creative entrepreneurial actors can be guaranteed without having to abandon the overall view of the entrepreneurial organisation. With this, a strategic direction can be pursued and nonetheless, one can attain the necessary strategic flexibility for permanent renewal in the context of change in the environment. The entrepreneurial strategy guides the behaviour of the entire organisation and the entrepreneurial actors in the pursuit of entrepreneurial opportunities and threats. This occurs whilst taking into account changes in the environment – in particular in the industry and competition environment – and the current and future resources and competencies – particularly the strengths and weaknesses of the organisation in relation to competitors (see figure 97).

³¹⁹ For systems strategy development see e.g. Nagel (2007).

4. Analysis of the three central tasks of an entrepreneurial organisation

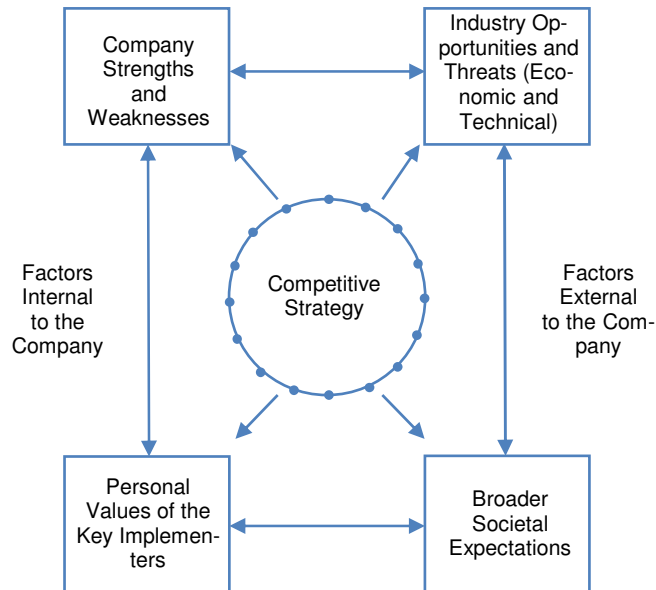


Figure 97: Context for the development of a competitive strategy according to Porter (2004a:xxvi)

According to Porter (2004a), the entrepreneurial strategies have to support the organisation's goals for interaction with the environment (see table 11). For the successful pursuit of opportunities and threats identified and selected in the business environment, the necessary resources and competencies must be available and the individual interests of the entrepreneurial actors must be in harmony with the company goals.

<p>Internal Consistency <i>Are the goals mutually achievable? Do the key operating policies address the goals? Do the key operating policies reinforce each other?</i></p>
<p>Environmental Fit <i>Do the goals and policies exploit industry opportunities? Do the goals and policies deal with industry threats (including the risk of competitive response) to the degree possible with available resources? Does the timing of the goals and policies reflect the ability of the environment to absorb the actions? Are the goals and policies responsive to broader societal concerns?</i></p>
<p>Resource Fit <i>Do the goals and policies match the resources available to the company relative to competitors? Does the timing of the goals and policies reflect the organization's ability to change?</i></p>
<p>Communication and Implementation <i>Are the goals well understood by the key implementers? Is there enough congruence between the goals and policies and the values of the key implementers to insure commitment? Is there sufficient managerial capability to allow for effective implementation?</i></p>

Table 10: Checking the consistency of a competitive strategy according to Porter (2004a:xxvii)

4. Analysis of the three central tasks of an entrepreneurial organisation

In dynamic environments, entrepreneurial organisations must be able to use, re-configure and develop their resources and competencies in a targeted fashion (Zahn et al 2005:85-87). For the use of strategic opportunity potential, knowledge that entrepreneurial actors have and collective action on the basis of common mental models are becoming more and more important. The design of contexts in which entrepreneurial strategies evolve and adapt as well as communication of key beliefs and business principles serve as a compass for decentralised creativity and initiative when exploiting of existing business and development of new business. The operation and renewal of business create a continuous cycle and thus in dynamic environments, a dynamic evolution of the entrepreneurial organisation (Zahn et al 2005:94,95). With such a flexible entrepreneurial strategy, organisations that are open to change could also use market opportunities that are not foreseeable.

Ireland et al (2009:19-46) name the entrepreneurial look forward and evaluation of future developments in the business environment by top management as central strategic resources for the identification and implementation of opportunities. Intangible resources such as contact, image and brand building which are not easily copied by competitors would also be very significant. They see entrepreneurial strategies as a specific strategy type that must not just be selected but whose components must be designed with the whole organisation in mind and be deep-rooted. At the top management level, an entrepreneurial strategic vision must be developed, communicated and exemplified. An entrepreneurial organisation architecture, entrepreneurial processes and the entrepreneurial behaviour of the individual actors must be applied consistently and become effective across the whole organisation. Entrepreneurial organisations would balance current opportunities and future opportunities. Because of this, they would frequently be operating on the limits of a state of chaos. Entrepreneurial strategy then defines itself as the continuous and purposeful identification and pursuit of entrepreneurial opportunities within the entire organisation. Triggers for the entrepreneurial orientation are changes in the business environment, the entrepreneurial vision of top management and the entrepreneurial orientation of the individual actors. Supported by a consistent entrepreneurial design and resource management, a continuous strategic repositioning and permanent competitiveness is achieved (see figure 98).

4. Analysis of the three central tasks of an entrepreneurial organisation

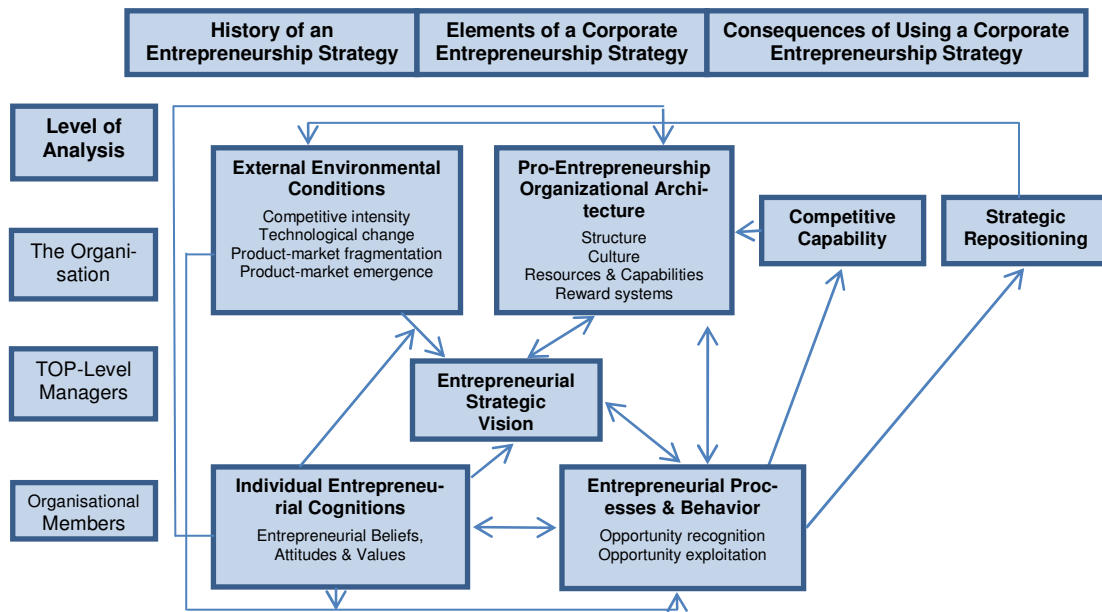


Figure 98: Entrepreneurial strategy according to Ireland et al (2009:24)³²⁰

The connection with organisation design, resources and competencies and change which adjusts the organisation to changes in the external environment has central significance for entrepreneurial strategy³²¹. These aspects will now be briefly examined in order to analyse, on the basis of this, the design of the structural components of the entrepreneurial organisation.

According to Roberts (2004:12-30)³²², observation of alternative entrepreneurial opportunities creates the starting point for strategy formulation. The strategy for exploitation of the selected opportunities can be described by reference to four components. The first component is defined by the goal of the organisation³²³. Then comes the establishment of business or businesses. Here, the central entrepreneurial questions have to be answered: Which products are to be produced with what technology and at which locations, and which customers the products are to be sold to?

³²⁰ Haid (2004) examines corporate entrepreneurship as a strategic management concept for proactively dealing with change. In this process, entrepreneurial willingness and entrepreneurial feel in top management take on extreme significance.

³²¹ Kuratko and Audretsch (2009) give different perspectives in strategic entrepreneurship.

³²² Economic concepts for company strategy are also described by Besanko et al (2007) and Brickley et al (2004:188-224).

³²³ The securing of viability can be defined as the main goal for the concept of the entrepreneurial organisation developed here. Roberts (2004:13-22) names operational goals like profit or shareholder-value. He also refers to the possible wider concepts like pursuit of stakeholder interests. He names performance to satisfy human needs as a benchmark and then places a value maximisation strategy at the forefront which can be achieved with an organisation that is adapted to the environment.

4. Analysis of the three central tasks of an entrepreneurial organisation

The third component is defined by the sustainable competitive advantage of the organisation in relation to price and quality. The fourth component determines how the competitive advantage can be achieved. The strategy particularly determines which of the potential opportunities should not be realised. The implementation of the strategy occurs via the realisation of entrepreneurial activities in the value chain by entrepreneurial actors³²⁴. The framework to this is created by the structure of the organisation with the organisation architecture and routines, as well as the organisation culture. The entrepreneurial activities thus reveal the entrepreneurial organisation's planned or emergent strategies. Roberts asserts that managers at all levels have to work together on the whole organisation design if the entrepreneurial strategy is to be implemented and the required *fit* between the environment, strategy and the organisation. The entire organisation design thus helps the organisation to adapt to changes in the environment (see figure 99).

In turbulent environments, strategy and organisation design can no longer be developed sequentially (Roberts 2004 27-30). The entrepreneurial emergent strategy follows then from entrepreneurial decisions at the various levels of the organisation. In dynamic environments, top management can only give a basic strategic direction as a context for the emergent strategies. The role of the organisation designer is limited then to the design of the lethargic components of the organisation, the organisation culture and processes that enable good entrepreneurial decisions. Strategic information about the desired orientation can lead to additional control of decentralised decisions.

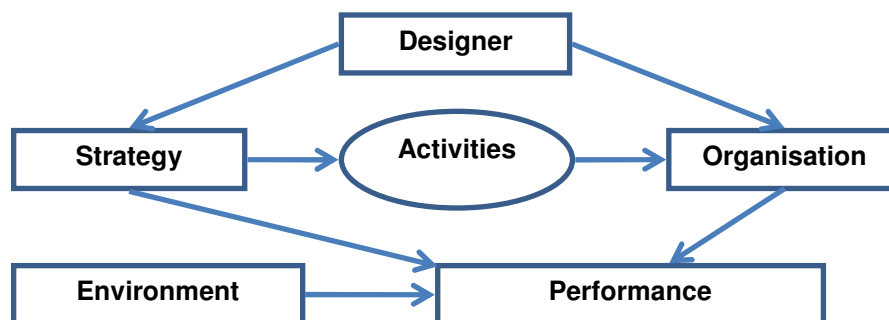


Figure 99: Design problem of the entrepreneurial organisation according to Roberts (2004:19)

³²⁴ With this, strategic human resource management and the characteristics, values, targets and competencies of the individual actors become key (see also e.g. Harzing and Ruysseveldt 1995, Tyson 1995).

4. Analysis of the three central tasks of an entrepreneurial organisation

Changes in external conditions and influences in the relevant industry, the economy as a whole, at the location, in the country or in the world, promote continuous monitoring by entrepreneurial organisations of their own businesses and strategies. Following identification of opportunities and threats in the business environment, according to Andrews (1987), the strategic alternatives must be filtered by the observation of internal restrictions. To this end, the strengths and weaknesses of the organisation must be considered in order to be able to achieve strategic positioning in the product-market environment. Possible strategies could also be developed from the combination of external market opportunities and internal skills and selected taking the intended development path into account.

Andrews (1987:41-45) presents five central questions for the identification of opportunities and risks³²⁵:

- (1) Which central economic, technological and structural characteristics are exhibited by the industry in question:
- (2) What trends suggesting future change in economic and technical characteristics are apparent?
- (3) What is the nature of competition both within the industry and across industries?
- (4) What are the requirements for success in competition in the company's industry?
- (5) Given the technical, economic, social, and political developments that most directly apply, what is the range of strategy available to any company in this industry?

Realisation of the identified strategic options requires resources and competencies. Thus, a strategic choice must be made from the options. The current and future strengths of an organisation, which can be described as the core competencies, must also be reflected in the strategic alternatives. Thus, the economic mission and strategic position in relation to the business environment can be determined by the selection of opportunities, taking into account the resources, competencies and values of an organisation (see figure 100).

³²⁵ According to Andrews (1987) in large companies this analysis should take place decentrally as the necessary knowledge relating to the market and technologies is situated in the decentral areas.

4. Analysis of the three central tasks of an entrepreneurial organisation

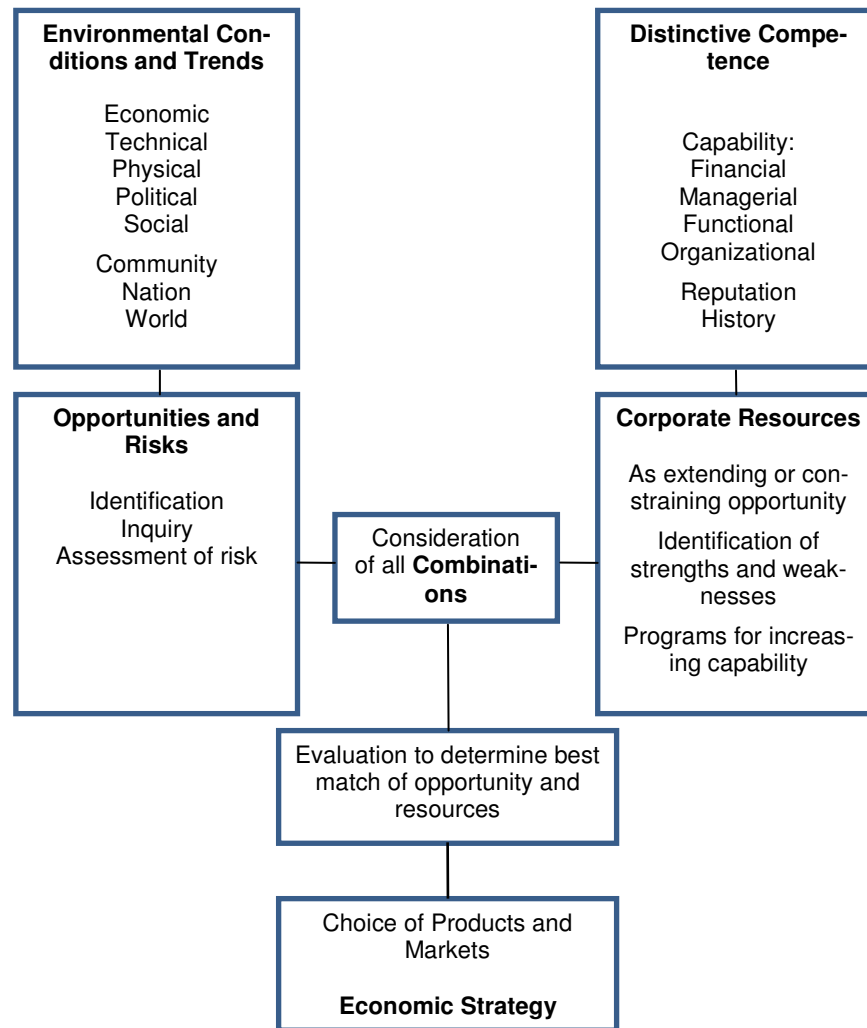


Figure 100: Development of an entrepreneurial strategy according to Andrews (1987:50)

The entrepreneurial strategy thus links the management of internal resources with the external relationships of the organisation, and with implementation of the strategy, taking into account the vision, mission and goals of an organisation, achieves value creation via internal operations (see also Lynch 1997:7-25). With this, the analysis of the environment and the internal company resources take on great significance during the continuous pursuit of emergent strategic initiatives to adjust to the environment. Lynch (1997:232-379) distinguishes three categories of company resources: Human resources, operating resources and financial resources (see Schwenker and Spremann 2008:123-153). It is especially essential when developing an emergent entrepreneurial strategy that the individual actors can deal with change and learn proactively from entrepreneurial activities and experiments. The ability to do this can be supported by the company culture and human resource management (see Jabbour and Santos 2008).

4. Analysis of the three central tasks of an entrepreneurial organisation

The ability of an organisation to use its resources for the achievement of goals is defined by Sanchez and Heene (2004) with the concept of organisational competence. Existing competencies arising from experience, e.g. in customer service, in production development, in flexible production or in innovation processes, should be used as much as possible for value creation and also for the creation of new competencies with new activities. The distinctive combination of resources and skills then define the core competencies as a source of competitive advantage.

Hitt et al (2005) note that the sustainability of competitive advantages arising from the core competencies is dependent on three factors. The quicker that changes in the environment destroy core competencies, the more there will be substitutes for core competencies and the more easily the core competencies of competitors can be imitated; the core competencies are then less sustainable (Dess and Lumpkin 2003). Thus, entrepreneurial organisations must continuously use current core competencies for entrepreneurial activities and develop new skills.

Added to this, tangible resources, such as production technologies, factories, co-ordination and reporting systems and financial means together with intangible resources (Ortiz 2009), such as knowledge and human resource skills, ideas or reputation must be used and combined strategically (Cholle 2012). The creative use of resources and core competencies, as well as learning processes, are thus the basis for securing competitive advantage and the renewal and transformation of the entrepreneurial organisation.

The entrepreneurial strategy guides resources, using internal competencies and external changes as a basis, towards achievement of the goals of the organisation through entrepreneurial activities. According to Quinn (1991), strategic decisions determine the effectiveness of the organisation whilst operations achieve the efficiency of resource utilisation. Mintzberg (1991a) distinguishes between intentionally realised and emergent strategies which together can determine the overall strategy of an organisation.

4. Analysis of the three central tasks of an entrepreneurial organisation

In turbulent environments, organisations must create permanent change and achieve a permanent *fit* between external opportunities, strategy and internal structure (Tushman et al 1991). In so doing, incremental change³²⁶ and fewer adaptations would have to be dealt with just as much as phases of greater discontinuity in the general business environment or in industries with strategy change and shifting of the product cycle. Internal dynamic, or example a change in top management, can also bring about a change in strategy.

Discontinuities could lead to a reform of the mission and values as well as the organisation structure. A more profound organisation change is necessary during elementary changes in the business environment and in crises³²⁷ and must be proactively created by top management. In this process, systematic observation and analysis of the business environment is a prerequisite for the identification of the necessary strategic change. A strong company culture can serve as an anchor in stormy times.

According to Stacey (1996), organisations in turbulent environments cannot easily be deliberately adapted to environmental changes in a stable and harmonious fashion³²⁸. Organisations would have to react reasonably to unforeseen and surprising events even if their formal organisation design is not suitable for this. In uncertain, fast changing and competition-intensive environments, managers have to learn to deal with conflicts, inconsistencies, instability, lack of order and contradictory cultures and continuously adapt their mutual mental models. In addition, the networking and dynamic of the internal and external business environment have to be mutually understood as well as possible by the actors in order to be able to realise emergent innovative strategies within the entire organisation and at various levels³²⁹.

³²⁶ According to Quinn (1991) this process can be controlled proactively, in that actors are selected and the themes and areas of the environment to be observed are allocated. The most important strategic themes and actions can be defined via the reporting process.

³²⁷ For dealing with crises see e.g. Starbuck (1991), Sheffi (2007), Stöger (2009).

³²⁸ From the viewpoint of systems thinking, the organisation is driven by the organisation goals. However, these goals can only be realised in harmony with the environment so that adjustment to the environment, according to Stacey (1996:265,266,279), can also be seen as a driving force. Management information and control systems, as well as a complementary company culture, must achieve harmonisation of the individual actors and integration into the internal business environment.

³²⁹ In this process, it is necessary to create the strategic feedback loop *discover – choose – act*.

4. Analysis of the three central tasks of an entrepreneurial organisation

The overall strategy should also pursue possible deliberate strategies alongside the emergent strategies³³⁰ so that stability and instability can be combined to secure viability. It is also necessary to establish a legitimate organisation system as well as an informal shadow system with its own organisation. The shadow system comes into being because of the inability of the formal system to adapt the organisation to changes in the complex environment. The necessary change and the necessary innovation come about in a process of creative destruction firstly in the shadow system so that it can then be implemented in new formal forms or integrated within the formal system.

According to Stacey (1996:378-389), the shadow system, with a process of spontaneous self-organisation, produces emergent new strategies via organisational learning which brings creative new directions and innovations. In this way, entrepreneurial actors change firstly their own mental model in order then to construct a common mental model in the group which they can use to control adaptation and innovation. The shadow system can be in place of formal structures or in addition to or in competition with formal structures. It takes on the function of a communication network and a community of practice, providing the organisation with the required flexibility.

A look at the interplay between strategy development, the formal system and the shadow system also shows the close connection between the strategy and the structure and the necessity to have a coordinated shaping of the organisation design for the realisation of purposeful and emergent strategies depending on changes in the environment. In the next chapter, the entrepreneurial organisation design is analysed against this background.

³³⁰ Stacey (1996:309-349) describes, using complexity theory, how the development of an organisation can take place in a completely emergent way – without a guiding vision. The strategic direction is determined by itself through group learning and political interaction without a central purpose. Intrapreneurship is based, then, on strong individual actors in groups. Self-organised networks with their own sub-culture are in conflict with the formal organisation structure and empower themselves contrary to teams that are responsible for themselves and which operate within the formal organisation and common culture. Top management has the task of helping the decentralised actors in terms of how to design the future of the organisation via entrepreneurial activities and spontaneous self-organisation. The organisation in a complex environment is then a learning community in which a complete emergent strategy is pursued.

4.3.2 Design and integration fields in the entrepreneurial organisation

For the support and development of entrepreneurial strategies and activities in the context of an environment-strategy-structure-culture-resources-*fit*, an entrepreneurial organisation design must be created (see chapter 4.3.2.1), an entrepreneurial culture developed and maintained (see chapter 4.3.2.3) and a harmonisation of the effective interests in the entrepreneurial processes (see chapter 4.3.2.2) must be achieved.

4.3.2.1 Structure, processes and entrepreneurial organisation design

The entrepreneurial design of the structural components³³¹ of a viable entrepreneurial organisation in global competition happens in coordination with the design of the entrepreneurial strategy and culture and taking into account the five dualities already identified. To secure future company potential, community entrepreneurial action in the business must be a priority at every level of the organisation. Large companies must ensure a strong embodiment of entrepreneurial thinking and action within their organisation.

The individual entrepreneurial managers and employees have the knowledge and ability to take on a central role in securing future competitiveness in a complex world. They are close enough to the customers and to the operational tasks and thus to information relevant for decision-making to make a contribution towards market success. So that intrapreneurship can also be successfully practised, the necessary incentive structures must be created (see Manne 2011). Then, entrepreneurial achievers can develop and entrepreneurial structures³³² can be developed.

³³¹ Roberts (2004:17) names the following components of the organisational architecture; the vertical and horizontal borders of the organisation, the bundling of tasks in jobs, jobs in departments, business units and business divisions, reporting and decision structures, ownership and financing structures, networks, formal and informal routines and processes for information collection and communication, decision structures, resource allocation, performance measurement, control and remuneration systems, operations.

³³² Block and MacMillan (1995:149-156,127-129) name in this context the location of intrapreneurship activities within the company and the incentive structure for intrapreneurs as important parameters.

4. Analysis of the three central tasks of an entrepreneurial organisation

In the following (Chapter 4.3.2.1), firstly the basic structural direction of the entrepreneurial organisation will be described, the key points of an economic arrangement of the organisation design and the central integration fields for harmonising the interests of the individual actors and the organisation as well as the achievement of synergies in cooperation will be detailed (Chapter 4.3.2.2).

According to Child (2005:377-399), the entrepreneurial shaping of the organisation should guide the collective execution of activities in accordance with the goals of the organisation. In doing this, a variety of organisation forms within the organisation can be selected. The individual organisation units must then, in turn, be integrated in order to achieve the strategic needs of efficiency, adaptation and innovation. The characteristics of the business environment in the various business areas determine the required intensity of the three strategic needs and thus the design of the organisation's components.

Child (2005:379) describes efficiency as a permanent need of an organisation. In dynamic environments, product and process innovation together with adaptation of existing business to changes in the business environment are gaining in significance. Depending on the competitive situation, existing products and services would have to be continuously improved and/or new products and services for existing or newly developed markets would have to be realised. Quick adaptation (see Harford 2011) of the organisation to changing framework conditions enables the rapid implementation of entrepreneurial opportunities that have been identified within the existing product portfolio and promotes the extension of ranges via innovation. Whilst in stable environments the focus is on specialisation and performance monitoring for the achievement of efficiency, in dynamic and competition-intense environments, the development and implementation of innovation (see Frese 1992:297-321) as well as the creation of flexibility and thus entrepreneurial orientation are of great importance³³³.

³³³ Child (2005:381-389) states that organisations, which because of the competitive situation do not need high investment, can be organised completely bureaucratically, even when they operate in a dynamic environment. They just have to achieve the necessary level of adaptability in existing business.

4. Analysis of the three central tasks of an entrepreneurial organisation

In addition, Child (2005:380) makes a few recommendations about the creation of this. Employees in the area of idea generation and research and development should be in close contact with the functional areas of existing businesses like production, marketing, customer service and finance. Added to this, the integration power of product champions or cross-departmental development teams can be deployed (Child 2005:79-108)³³⁴.

Further design components (Child 2005:27-51) for strengthening the focus on innovation and the ability to adapt are open and fast communication in the distribution of new information, learning, decentralised initiatives and responsibility in smaller organic units and teams; other components are network structures, reward mechanisms that are subject to team success and strategic alliances when operating in global markets.

Goal setting and agreement of goals is particularly helped by fewer hierarchies and the formation of teams, relation-oriented processes, self-monitoring via culture and human resources management (see also Tyson 1995:41-58)³³⁵. The roles and obligations of the actors should be formulated more generally and broadly to strengthen adaptability. Systems should enable change. Functions other than core competencies should be outsourced and global integration including local initiatives should be developed. Child asserts that every organisation has to establish strategic needs subject to its own positioning within the business environment and execute the corresponding development of the organisation's components. Centralised, specialised and formal structures would have to be supplemented by flexible and decentralised structures. He assigns thus high importance in particular to management and project teams in designing entrepreneurial organisation.

³³⁴ Ireland et al (2009:31) cite flexible rules and procedures and few formal structures as elements of such organic structures. Burns and Stalker (2001:96-125) distinguish organic systems from bureaucratic systems and how circumstances dictate which should be chosen. Organic types could be more of a help to solve problems in changing conditions and react to unforeseen demands. Elements of the organic structure are said to be permanent adjustments and redefinition of tasks in interaction with other actors; network structures in decision-making, control and communication; knowledge and information as the lead principle for the allocation of leadership competencies; commitment of the actors to the task; common mental models which can compensate for the lack of formal structure with the integration of individual activities and actors.

³³⁵ Tyson (1995) speaks of a culture network that guides the actions of the actors. This cultural network can in turn be influenced by active human resources management. Changes on the level of the general business environment would change the common mental models and value systems and thus be directly effective at the level of the organisation.

4. Analysis of the three central tasks of an entrepreneurial organisation

Block and MacMillan (1995:147-159) name various options for the location of a new entrepreneurial business. These range from complete integration into existing operations on the one hand and complete separation into its own unit on the other hand³³⁶. A sharper separation of existing business can help to achieve the necessary attention and resources in the start phase. A higher degree of integration into existing operations in turn enables easier access to existing systems, resources and markets in the growth phase. Accordingly, in the course of the evolution³³⁷ of entrepreneurial activity, the structural integration must be adapted and subsequent integration taken into account at an early stage as existing business.

Using entrepreneurial organisation design, production processes in particular have to be efficiently developed and continuously improved for the deployment of entrepreneurial strategies (Slack et al 1995). For efficient use of resources in all functional areas and in all transformation processes, the necessity for adaptation to changed environment situations in turbulent environments should nevertheless be taken into account (Kaluza and Blecker 2005).

By making production flexible, less of a cushion is required in the other functional areas to nevertheless achieve all other performance goals³³⁸ such as quality, cost, time and reliability. Changed framework conditions and in particular discontinuity in the development of the business environment require proactive and reactive adjustment by the entrepreneurial organisation. This, in turn, requires a high degree of adaptability and ability to change in the system configuration with decentralised decision-making structures within the organisation and the development of organisational slack in the context of cross-plant cooperation (Kaluza and Blecker 2005:6-12,16-18).

³³⁶ According to Floyd and Woodridge (1999) a parallel organisation can promote the development of an entrepreneurial idea within a specific initiative. However, later integration of the initiative in operational activities can lead to bigger problems such that they propose the positioning of intra-preneurship from the outset within the framework of all management activities and the strengthening of it through social relationships.

³³⁷ Block and MacMillan (1995:159) distinguishes four steps: Start-up phase, survival phase, expansion phase and maturing phase.

³³⁸ For concepts to make production and product development like mini factories more flexible, changeable factories, shared product development or customer-oriented production processes, see for example articles in Kaluza and Blecker (2005:137-291).

4. Analysis of the three central tasks of an entrepreneurial organisation

With active resource management, it is possible to achieve holistic coordination and development of the company resources and also to enable current and future entrepreneurial strategies and activities for adapting to changed general conditions (Kellermanns and Floyd 2005).

With reference to the innovative organisation, Mintzberg (1991c) specifies a structure for the entrepreneurial organisation which is driven by change in the business environment. Expert teams are the agents of intrapreneurship and thus of an emergent entrepreneurial strategy. An entrepreneurial organisation can be developed by the use of many entrepreneurial teams. Project teams, organic structures, flexibility, a low level of formality of cooperation, decentralisation of decision-making competencies in combination with specialist competencies are the specification for this structure. Top management is responsible in this process for the higher level relationship with the business environment. This organic and decentralised structure is suitable for dynamic and complex environments. The strategy of the organisation can then be guided by the creation of strategy processes.

Changes in the dynamic business environment and in the company strategy require that entrepreneurial organisations assess the organisation design in various environments and if necessary, are able undertake the necessary adaptations. Changes in the organisation design have an effect on the whole organisation and their effect must be analysed in advance. When monitoring the effects, Brickley et al (2004) believe that the economic behaviour model can help in that the actors behave in their own interests.

If a company gets bigger, the information within the business is asymmetrically distributed and the *Chief Executive Officer*, who is mostly not the owner of the business, does not have the necessary information for all decisions. The *Chief Executive Officer* can then make decisions without knowing all the information, can obtain all the necessary information, which is very expensive and time-consuming, or can delegate the decisions. With delegation to decentralised managers who in turn delegate decisions further, an organisation architecture develops where there are too many interventions giving coordination and incentive problems.

4. Analysis of the three central tasks of an entrepreneurial organisation

Brickley et al (2004) define a conceptual framework with three elements for the identification and resolution of organisational problems in adapting to changes in the business environment:

- Element 1 defines the assignment of decision-making authority within the business. It is recommended that the power of decision is connected to the location where information for good decisions is available³³⁹. After this course of action, decisions about centralisation versus decentralisation can be guided and taken in any situation;
- Element 2 establishes the design of the reward system³⁴⁰ with the basic remuneration system and regulations for other rewards. The design is to be done in such a way that the effective incentive structure for managers and employees also steers self-interested actors to make decisions that increase the value of the company;
- Element 3 determines the performance evaluation of business units, managers and employees. The design of the evaluation system must happen in such a way that it enables the assessment of reward on the basis of individual evaluation and/or performance evaluation of units.

The company-specific development of the three elements³⁴¹ has to take place with them in harmony making the overall organisation design decisive for the adaptability and competitiveness of a business. Brickley et al (2004) compare the three design elements with the three legs of a stool, which must be in equilibrium (see figure 101). If a stool leg or even a design element is changed, the other legs or design elements must be examined and aligned.

³³⁹ According to Roberts (2004:230-240), information is available about customer wishes, suppliers, competition behaviour and production possibilities for decentralised actors and units. Roberts sees information about the general business environment (for example, about political or legal developments, social trends, finance markets) and company politics as being located with corporate management. If decisions are taken where the information is, fast adaptation to changes in the business environment can be achieved.

³⁴⁰ Ireland et al (2009:32) see a powerful lever for strengthening entrepreneurial behaviour in the design of reward mechanisms within the context of entrepreneurial organisation design.

³⁴¹ Brickley et al (2004:640) give the relevant focuses on the three elements for different management techniques. Whilst some techniques can be assigned directly to individual elements (e.g. target setting to performance evaluation, incentive systems to the reward system or empowerment to the definition of decision-making authority), others techniques can exhibit an overall focus (e.g. Total Quality Management or self-regulating teams to decision-making authority and performance evaluation).

4. Analysis of the three central tasks of an entrepreneurial organisation

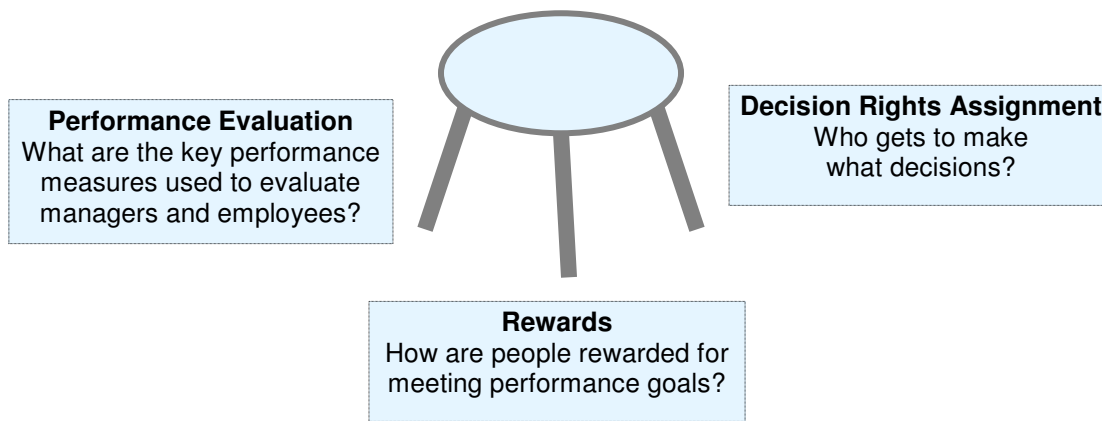


Figure 101: Components of organisational architecture according to Brickley et al (2004:ix)

The concept of entrepreneurial organisation with three central entrepreneurial tasks presented here (see chapter 4) is consistent with the concept of organisational architecture as outlined by Brickley et al (2004:280-486) and supplements their concept of organisation design. Entrepreneurial information gathering can be interpreted as a concept for endogenisation of the shared information status and for development of collective knowledge via information and learning processes. The design of the mutual activity relationships between the status of information and information gathering on the one hand, and the components of the organisational architecture on the other, can be interpreted as an element of entrepreneurial shaping of the future.

Drucker (1985:232-235) proposes that individual innovation performance is measured and that performance of managers is evaluated against this entrepreneurial performance. As a first step, the results of an entrepreneurial activity can be compared to expectations. This feedback enables the innovation project to be steered in the right direction. In the second step, all entrepreneurial activities bundled into a systematic control system and regularly checked (for example, annually). The third step is to measure and evaluate overall innovation performance of the organisation within the context of entrepreneurial management of innovation targets achieved, market performance and market position, as well as the overall profit situation. Every five years, management in the most important areas should be canvassed about contributions to the whole that have already been made and those planned for the future. For the total organisation, a key performance indicator for entrepreneurial success in established organisations could be whether a leading position in the area of innovation has been achieved or retained.

4. Analysis of the three central tasks of an entrepreneurial organisation

Block and MacMillan (1995:131-143) present components for the design of an incentive system for achieving a fit between entrepreneurial activity and the organisation. They name participation, bonus programmes and non-monetary reward mechanisms such as employee awards, greater freedom for creativity and attractive new tasks. Ebert (2006) also examines incentives targetted at innovation in order to directly influence innovative behaviour. As well as praise and censure, he names material instruments such as inventor premia, inventor bonuses and compensation related targets. He refers to the difficult task of determining the bases of evaluation for allocation and evaluation processes as well as the danger of misdirection of the actors' behaviour. Organisational and human resource management instruments such as scope for development and the transfer of decentralised responsibility together with support, training and development of competencies would indirectly increase the degree of innovation and improve the climate of innovation. If decision rights are assigned decentrally to actors or small units (empowerment), according to Roberts (2004:170), the reward system has to be adjusted in such a way that decentralised decisions are taken for the good of the whole organisation.

4.3.2.2 Integration and harmonisation of interests

From what has been discussed so far, it is clear that the design of integration fields, synergies and dualities are extremely significant for the entrepreneurial organisation. Within the context of designing the entrepreneurial future, the integration of the organisation and the turbulent external environment by proactive cultivation of interactive relationships is a key factor³⁴². Entrepreneurial shaping of the future must then be linked with the entrepreneurial shaping of the organisation. In this process, entrepreneurial strategies and decisions are transformed into entrepreneurial activities or a *fit* is attained between decentralised activities and the organisation's central goals.

³⁴² Stiglitz (2010:265-269) sees an important role here for the State to regulate the system of company management in order to achieve harmonisation of the pursuit of social (taking into account the well-being of the whole community) and private (taking into account the use of ideas for increasing the value of a company) returns. He ascertains that advanced industrial nations should be fixed as innovative economies which support research intentions that are directed at the needs of the community.

4. Analysis of the three central tasks of an entrepreneurial organisation

Against this background, when designing the components of an entrepreneurial organisation attention first turns to the attainment of innovation, adaptation and efficiency through flexibility and change in synergy with the environment. When collectively implementing these strategic needs, attention is focused on the internal cooperation and internal synergies (see figure 102). In shaping the entrepreneurial organisation with decentralised entrepreneurial activities, the design of internal integration is therefore of key significance. Descriptions thus far of entrepreneurial organisation design and of the role of intrapreneurship have examined integration within and between functions and departments, taking resources and activities into account, and have also considered the five dualities identified earlier³⁴³.

Schein (1980:28-30) notes that a lack of integration can often be attributed to psychological forces. Formal tasks are assigned through the division of labour. The actors are of course made up of real people with many attitudes, sensitivities and perceptions which cannot be planned for when designing the organisation or which sometimes do not fit in with the goals of the organisation.

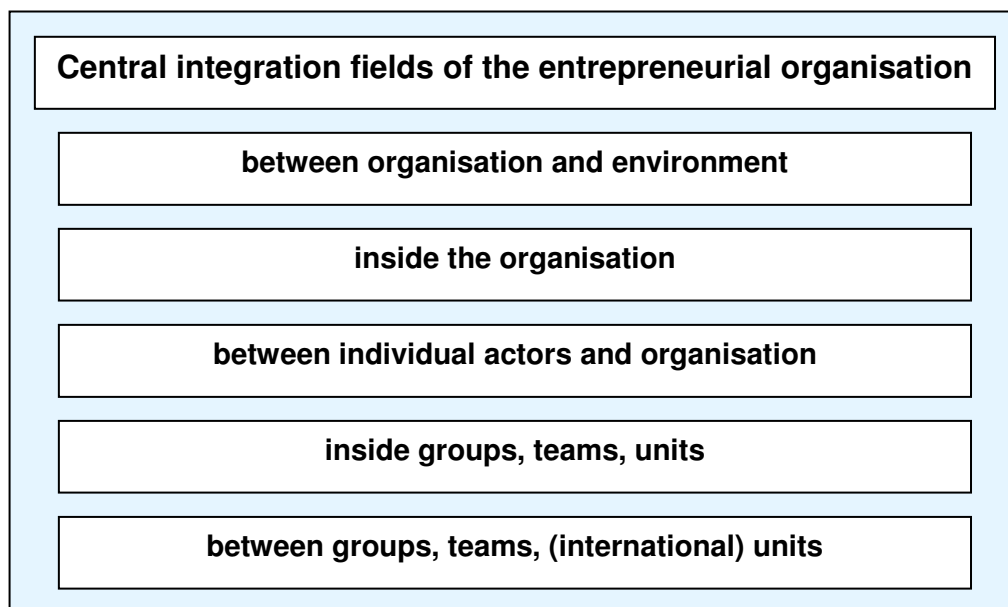


Figure 102: Integration fields for harmonisation of interests and for the creation of cooperation and synergies

³⁴³ See chapter 4.3.1.1. The entrepreneurial organisation exchanges with the business environment to secure short and long term viability, organises flexibility and operational stability, pursues optimisation and renewal in existing and new businesses, makes decisions centrally and decentrally with a global and local focus, pursues the interests of the business and the individual actors.

4. Analysis of the three central tasks of an entrepreneurial organisation

Against the background of these needs, actors resolve existing problems partly by informal relationships and coordination patterns. This is also because the problems often cannot be resolved with formal processes and rules. Loyalty to part units can arise from this and means that the goals of the whole organisation can only be achieved through a rational reordering of the formal structure, stronger communication for total understanding and a balancing of interests. According to Antoncic and Antoncic (2011), employee satisfaction may contribute to firm performance and growth. Integration between individual actors and the organisation (see Yaniv et al 2010) thus defines the core of entrepreneurial organisation design (see Salvatore 2004:11-13). In a further integration step, cooperation of actors in teams and organisational units as well as cooperation between (international) groups and units must be designed. These aspects are examined in the following sections.

For an analysis of the entrepreneurial organisation's design, Argyris (1957) proposes a helpful regulation framework which makes clear a central problem area in the process of developing intrapreneurship: the necessity of harmonising the individual interests of the actors with the interests of the organisation. He defines four interconnected levels of analysis. Within this, the individual actors and the formal organisation are the two fundamental components. For Argyris, these two components together with the group dynamic informal organisation and the overall organisation determine the entrepreneurial behaviour of the organisation as a whole from the interaction of the components. At the level of the individual actors, an internal balance of the components of the individual personality and an external balance of the whole personality with the task and role realised within the business is decisive for behaviour. The individual actor attempts to maintain the internal and external balance when there are changes in his environment and to stabilise his personality by making adaptations (integration) with the formal organisation (Argyris 1957:20-53). The formal organisation is designed with consideration to the chosen company goals so that the structure reflects these goals (Argyris 1957:54-75). According to Argyris, incongruencies between what the formal organisation demands from the actors and the needs of the actors lead to conflict situations. This happens because of individual or collective adjustments such as, for example, work-to-rule until the point of actual denunciation or development of an informal organisation for the securing of lower work performance within a group.

4. Analysis of the three central tasks of an entrepreneurial organisation

This is then at the cost of individual and organisational productivity. Important implications arise for the design of an entrepreneurial organisation. The individual actors have to have the will and be able to realise or support entrepreneurial activities creatively and actively and take responsibility for this³⁴⁴. This means that human resource management has the job of entrepreneurial recruitment and employee development. According to Argyris, many actors are willing to adopt an entrepreneurial focus. With such a focus there is more chance of achieving the personality balance with these individual actors than with a passive focus based purely on fulfilling tasks defined by others.

The formal organisation has to demand and support entrepreneurial behaviour. This results in the task of designing an entrepreneurial organisation that avoids the incongruencies of the personal focuses of individual actors. Creative and entrepreneurial actors do not then have to be compensated via additional monetary incentive systems as frustrating structures are avoided (see Wyk and Adonesi 2008). Consideration of the needs of the individual actors in fulfilling the goals of the whole organisation is thus a central design element of the entrepreneurial organisation: The individual actors use the organisation to fulfil their needs and the organisation at the same time uses the individual actors to secure the viability of the organisation³⁴⁵.

Argyris (1957) therefore demands a more democratic, participative leadership style and more structured and less direct leadership from top management. Thus, the work fields of the actors can be set more broadly and their needs can be better considered (job enlargement). This then leads to a better fulfilment of the goals of the whole organisation. However, Argyris also states that such an approach is limited if the individual actors do not want to identify with the organisation, if they do not strive for any satisfaction at work or cannot derive any personal advantage from having more creative freedom and responsibility.

³⁴⁴ If one follows Frankl's line of argument (2006), individual actors must see a *sense* for the organisation in entrepreneurial thinking and action. According to Stadler (2009), the company culture acting as a *sense area*, can support creativity and performance as well as collaboration agreements and cooperation. From this, the company culture can be adjudged to be an important lever for entrepreneurship (see also the following chapter 4.3.2.3).

³⁴⁵ According to Argyris (1957:211), this fusion of actors and the organisation is attained through effective (structural) leadership and is a requirement for attainment of the goals of the organisation.

4. Analysis of the three central tasks of an entrepreneurial organisation

In the actual company situation a diagnosis of the organisational context must therefore follow which also includes the informal activities and thus analyses the organisation as a whole. Argyris's organisation concept gives important indications for the integration between individual actors and the organisation.

According to Belbin (1996), teams can combine many complementary characteristics that cannot be found in individual actors. Therefore, management teams should guide the organisation as a stable alternative to individual helmsmen. Teams should be formed by actors with various skills. In this way, for example, teams with members who have strong implementation skills can exhibit deficits in terms of creativity and thus lose their effectiveness in dynamic environments (Belbin 1996:48-70). In turn, teams with lots of creators can lack the skills to implement their ideas. A combination of employees (Treven and Mulej 2007) usually attains the best entrepreneurial mix and orientation.

The creation of ideas is done by introverted idea innovators / inventors as well as by extroverted pathfinders / pointsmen who develop other people's ideas further. The evaluator / observer checks and evaluates competing proposals. The implementor then pursues the activities selected in a disciplined way over a long period. Perfectionists see the activities initiated through to their conclusion. For the leadership of the team, Belbin defines two team roles which dominate at different points in time: the chairperson combines and takes care of the pursuit of common goals, the doer takes care of change and activity. Team workers promote cooperation in the team. Belbin's eight team roles give important hints for the efficient development of entrepreneurial teams for the realisation of collective intrapreneurship. The combination of manager roles that are contradictory for individual actors within the entrepreneurial management team enables holistic action. Along with Sumanski et al (2007), acquiring new knowledge in small teams is a key element of success. Entrepreneurial organisations in global business environments must take into account the global context when developing synergies. According to Bartlett and Ghoshal (2002), the individual components of an organisation must be designed consistently and holistically. The formal macro structure defines the fundamental central and decentralised decision rights and responsibilities.

4. Analysis of the three central tasks of an entrepreneurial organisation

The context of the various decisions defines whether the decisions are to be taken centrally and on a global basis or whether a decentralised decision by local management is appropriate. Entrepreneurial organisations that have to assert themselves in dynamic environments should also use a micro structure with project teams for the strengthening of flexibility and adaptability. The targeted development of information and knowledge exchange (see Verbeke and Yuan 2007, Adenfelt and Lagerström 2008) in informal and formal systems and network structures supports the coordination within the global company system. The formal macro structure, the formal and informal micro structure as well as the company culture with common values together coordinate individual and collective activities. Strategic human resource management³⁴⁶ gains in significance for communicating the desired values and perspectives and offering opportunities for the creation of informal networks. Also, conflicts of interests within the organisation have to be resolved³⁴⁷.

According to Bartlett and Ghoshal (2002), the global entrepreneurial organisation must firstly analyse the global trends within the industry in order to identify what forces speak for global integration of businesses, functions or activities and which forces require local adaptation. In addition, they have to see the world as a playground for learning and innovation so that a company network of connected and specialised operations can be developed. In so doing, every business, every function, every country and every activity must be considered and the internal division of labour in negotiating processes has to be established. The common culture then connects the autonomous local and decentralised entrepreneurial units. According to Bartlett and Ghosal (2002), the organisation can also be described as a combination of various manager roles. *Global managers* must identify global opportunities and threats, determine the global entrepreneurial strategy of the businesses, develop and coordinate the competencies and resources as well as control the internal exchange of information and products.

³⁴⁶ According to Bartlett and Ghoshal (2002) recruitment and personnel development for global and local challenges are important success factors.

³⁴⁷ Bartlett and Ghoshal (2002:301-348) give hints for the implementation of consistent entrepreneurial organisation design for the pursuit of global efficiency, national adaptability and about knowledge transfer within a transnational organisation. In addition, they define three central manager roles: (1) Global manager with a view of the whole organisation (global business manager); (2) Manager for international alignment of functions (worldwide functional managers); (3) Local managers who carry entrepreneurial responsibility in foreign branches (country/local managers).

4. Analysis of the three central tasks of an entrepreneurial organisation

Local managers must implement the entrepreneurial strategy locally, identify and implement entrepreneurial opportunities and make local experience available for the total company system. *Functional managers* must promote and implement learning and innovation with a global focus. *Top managers* link and integrate the three manager roles (global manager, local manager, functional manager), develop common values and visions and allocate resources. According to Vora et al (2007), a dual organizational identification of subsidiary managers with both the subsidiary and the whole organisation contribute to coordination, integration, and performance.

4.3.2.3 Entrepreneurial organisational culture

Schein (1992, 2003:137-162) examines the company culture³⁴⁸ in established organisations. Companies have to continuously unlearn and replace dysfunctional assumptions, patterns of thinking and values due to changes in the environment. The growth and development story cannot simply be carried forward on the basis of culture that was built on common experience. Strong sub-cultures³⁴⁹ must be integrated and only those cultural elements adapted for changed environmental conditions strengthened. Incriminating cultural assumptions must be destroyed.

³⁴⁸ According to Schein (2003:31-39,44-72) the values, beliefs and assumptions learned as part of the history of the company and which are held to be necessary for the company's success, are the essence of the company culture and determine the everyday behaviour of the actors. Assumptions exist about mission, strategy and goals in interaction with the environment, about the internal integration of interpersonal relationships in respect of language and common concepts, group boundaries and identity, the character of authority and relations, allocation of rewards and status as well as about the deeper assumptions of the national culture in respect of the relationship between man and nature, reality and truth, the human race, human relations, time and space. Roberts (2004:18), describes the company culture as a social motivation and control system. It contains the fundamental mutual values and sets of beliefs of why the organisation exists, the common mental models of how events are interpreted and the commonly held elementary behaviour norms. Mbigi (2005:18-22), asserts that for successful change in a networked world, existing knowledge, collective learning and cultural and spiritual renewal must be used on the basis of historical roots in organisations and in harmony with society. According to Rensburg (2007), global managers must exhibit a good knowledge of national cultural values in order to be able to not only tolerate various cultures but also to be able to learn from different world views and cultures and develop their own visions.

³⁴⁹ As the various areas of the company have to adapt to their respective environments, sub-cultures based on functions, geography, markets, products or roles also develop over time, parallel to the core culture. Opportunities for communication and dialogue can support understanding and agreement between sub-cultures. However, this is more difficult in large companies if bureaucratic processes increasingly replace personal contact.

4. Analysis of the three central tasks of an entrepreneurial organisation

To do this, a planned company-specific culture change³⁵⁰ has to be introduced by a systematic transformation process (see Schein 2003:115-135). Schein (2003) proposes for the transformation process³⁵¹ that an internal steering committee drafts the necessary change processes as a parallel system for its own business field and defines the actual changes in work processes and with agents of change. The new culture then develops and stabilises with the repeated success of the new assumptions, norms, ways of working and thinking. According to Schein (2003:69-92), the starting point for the creation of an entrepreneurial culture is the drawing up of a culture balance sheet. In so doing, group surveys lead to collective assumptions. The identification of contradictions and conflicts between the behaviour and statements about vision and politics, as well as asking about the reasons for behaviour, lead to the deepest layers of the culture. The identified pattern of basic assumptions must then be evaluated against the achievement of the defined goals. For obstructive assumptions, a plan should be developed to change these cultural elements.

Kobi and Wüthrich (1986) see the compatibility of the company culture with the company strategy as a key area. Within this, a diagnosis, evaluation and shaping of the culture has to take place. An entrepreneurial culture can be founded through the cultural value system of the founders and managers and strengthened through entrepreneurial example. The company culture is formed from sub-cultures and can be adapted to changes in the business environment. At the same time, they can help to evaluate strategic options in the organisation for adapting to changed framework conditions. Individual actors can focus their activities on common cultural norms.

³⁵⁰ This is no simple proposition since, according to Schein (2003), culture in mature companies is also deeply anchored in the structures and processes.

³⁵¹ Change processes require learning and unlearning. In this way, anxiety about learning amongst employees should be reduced by the strengthening of a psychological feeling of confidence. This is achieved through eight parallel steps: (1) The company management formulates and represents a positive vision; (2) Formal training follows new ways of thinking, new attitudes and new skills; (3) Contribution of students to the learning process; (4) Informal training of relevant groups; (5) Practice fields, coaching and feedback; (6) Observation of the desired new behaviour with positive role models; (7) Formation of support groups for dealing with problems; (8) Adaptation of organisation structures and reward systems for new ways of thinking and acting.

4. Analysis of the three central tasks of an entrepreneurial organisation

When diagnosing culture, Kobi and Wüthrich suggest taking cultural symptoms into consideration³⁵² and using diagnosis instruments such as document analysis, tours of the company, surveys, observation and discussion. The evaluation of the culture should happen with reference to eight pillars: customer orientation, employee orientation, performance orientation, innovation orientation, cost orientation, the attitude of the actors to the organisation (company orientation), attitude to technology and supplier orientation. Depending on the desired entrepreneurial strategy, the target characteristics can be established in the eight areas and compared with the actual characteristics ascertained³⁵³.

From this, it is possible to derive some hints for the cultural development necessary or any adjustments to the entrepreneurial strategy. When developing the culture, attitudes have to become trusted, behaviour changed and then the new attitudes stabilised. Entrepreneurial managers can be role models (Deal and Kennedy 1982) for new or desired orientations. Since organisation structures influence the company culture and the culture characterises the organisation philosophy, the entrepreneurial culture and the entrepreneurial organisation design must be in harmony with each other (Kobi and Wüthrich 1986:201).

According to Sackmann (1991) many different concepts of company culture exist. Important tasks of the company culture are the integration of actors within the organisation, commitment of the actors to the organisation goals and the strengthening of adaptability³⁵⁴.

³⁵² According to Kobi and Wüthrich (1986), symptoms for an entrepreneurial orientation can be for example: Entrepreneurial management, promotion of entrepreneurial employees, forwarding of information beyond divisional boundaries, adjustment of strategies to changes in the business environment, decentralised decision-making structures, reward systems related to innovation.

³⁵³ In dynamic environments, a particularly strong innovative orientation is required. As elements and means for the promotion of a culture of innovation, Kobi and Wüthrich (1986:119-190) name openness to new ideas, the willingness to take risks, availability of time for entrepreneurial experiments, regular testing of new ideas in the markets, abandonment of penalties for failures and evaluation of learning processes, awards for champions of innovation, communication of successful entrepreneurial experiments, the employment, promotion and training of entrepreneurial employees.

³⁵⁴ Sackmann (2002) requires an adaptable culture in particular in a turbulent business environment and during the life cycle of an organisation. Necessary changes and challenges in the external environment should be recognised as early as possible so that adjustments can be implemented at the right time. In culture changes and culture design, managers as role models take on an important function: they personalise the (desired) company culture, give orientation for survival in the company, see (future) opportunities, exemplify priorities and set standards.

4. Analysis of the three central tasks of an entrepreneurial organisation

In this process, the company culture takes on a linking function between strategy and organisation processes³⁵⁵. She describes three different cultural perspectives. The holistic perspectives define the cultural system as a value system with behaviour norms and ways of doing business within an organisation. This value system is thus the evolutionary result of historical activities and in turn itself guides future activities. With this perspective the company culture can be designed as a component of the organisation architecture. The variable perspective defines culture through collective activities, rituals, ceremonies, language, stories or legends.

According to the cognitive perspective, the company culture is described with collectively used ideas and theories, i.e. with mutual mental models of reality. Sackmann (2002:33-44) describes the company culture as the result of the collective construction of social reality and sees structural and dynamic aspects of the culture. For this, it develops a cultural concept with two building blocks. The common picture of reality (structural aspect) of a cultural group steers the perception, the thinking and feeling, as well as the action of the actors at a particular point in time. This common mental model can be shaped by social interaction and developed by cultural knowledge (dynamic aspect). Culture enables orientation, interpretation, stability and a reduction of complexity (Sackmann 2002:39).

Cultural knowledge³⁵⁶ is developed, for example, by mutual problem-solving or mutual experience from interaction with the environment. Individual solution proposals can become part of the company culture through communication processes and the assumptions of organisation members. Successes confirm cultural knowledge, failures lead to learning processes adjustment of common cultural knowledge. The company culture can then complement formal structures to support effective coordination within the organisation and help to overcome organisational deficits. It is precisely in complex environments that the company culture can contribute to a reduction in complexity and guide entrepreneurial decisions.

³⁵⁵ The company culture works as a collective thinking template in that the individual actors are the agents of the culture and it also has an influence of strategy development and the design of processes and structures.

³⁵⁶ Sackmann (1991) names for example mutual understanding of situations, terminology, interdependencies, procedures, beliefs.

4. Analysis of the three central tasks of an entrepreneurial organisation

Sackmann refers to the fact that there are various sub-cultures³⁵⁷ within the organisation and as such, as well as founders and top management, all other levels of the organisation have to be included in the examination and design of the company culture.

Because the company culture controls the behaviour of the actors, Davis (1984) believes that to implement the entrepreneurial strategy, it is necessary for the company culture to support the strategic goals and activities and to give the actors the necessary focus through common values and behaviour norms. Thus, the existing culture must be analysed and the connection with strategy systematically observed. He distinguishes the firmly-rooted guiding beliefs within an organisation from what he calls the daily culture. The guiding beliefs consist of universal external beliefs that are independent of the organisation and of internal beliefs relating to the organisation which together guide the daily culture as a company philosophy. According to Davis, the guiding beliefs determine strategy. The daily culture (company climate) is manifested in the rituals of experience and guide the implementation of strategies aimed at the future. The guiding beliefs would be determined by top management. In this way, culture can be used as a lever for strategy. National cultures can penetrate the company culture by different employees.

Understanding and design of the company culture is important for organisational design if the necessary change and required learning for adaptation to change in the business environment are to be achieved (Schein 1992). There are two outstandingly important aspects for the development of entrepreneurial culture:

- (1) Within the organisation, units with differing sub-cultures must be integrated into one consistent whole;
- (2) Taking into account the necessary adaptation in response to external change for securing viability, cultural-related resistance to change must be resolved by cultural change and an innovation and learning culture has to be developed.

³⁵⁷ Sackmann (1991) names sub-cultures with relation to hierarchies and functions. Since individual actors are also members of community, geographical, professional and other systems, forces are at work against a uniform organisation culture. Taking into account varying business environments in which different actors have to work, Sackmann also speaks of cultural groups. Sub-cultures can work independently from each other in a complementary or opposing fashion (see Sackmann 2002:56).

4. Analysis of the three central tasks of an entrepreneurial organisation

The company culture has to give focus in a turbulent environment and at the same time be adapted to changes in the business environment. The starting point for consideration of the company in terms of adapting to changes in the business environment is the common assumption concerning the mission and strategy to be fulfilled in the business environment. Basically, organisations must together define the collective task that they then use to define the exchange relationship with internal and external stakeholders³⁵⁸. Subsequently, common assumptions about operational goals and the ways of pursuing the mutually held mission are developed. The consensus about the criteria for measuring success and the kind of strategic reaction to failure are, according to Schein, further elements of culture development in interaction with the environment. Reactions in times of crisis would lay open the deep cultural assumptions of an organisation. The reaction to crises hence offers a good opportunity for culture development and culture analysis.

The adjustment to the external environment requires strong internal integration within the organisation (Schein 1992:70-93). The organisation must develop a common language, clarify together situations and boundaries in the organisation, define rules, relationships and reward mechanisms in order to determine common assumptions. These assumptions about the necessary external adjustment and internal integration determine the company culture independently.

According to Schein, in turbulent environments, a learning and innovation culture can define a common pattern of thought according to which the organisation has to act as a proactive problem-solver so that it can fulfil its mission using the change and learning (Schein 1992:363-373). In this context, it is also possible to integrate the assumption that trustworthy communication and a free flow of information bring success. Learning managers must themselves first learn new assumptions and serve as examples in order to anchor adaptability in the company culture (Schein 1992:375-392).

³⁵⁸ Schein (1992:53-56) defines owners and providers of capital, suppliers, managers and employees, society and politics, and customers as stakeholders in the business environment.

4. Analysis of the three central tasks of an entrepreneurial organisation

Kotter and Heskett³⁵⁹ speak of adaptable cultures which help organisations to adapt to environmental changes (often uncertain future ones) in order to ensure their viability³⁶⁰. The actors and the entire organisation must help each other in detecting problems and be open for innovation. A trusting, target-oriented and high risk-taking orientation support entrepreneurship and thus adaptation to changes via the determination and exploitation of new opportunities. The necessary initiative at all levels is supported by an entrepreneurial culture³⁶¹.

This initiative for change is to be promoted by leadership and open communication. Adaptable cultures are successful, then, if you define and take account of the environments with the organisation's most important reference groups (Kotter and Heskett 1993:68)³⁶². If reference groups are paid more attention, relevant changes and trends can be discovered more rapidly. The company culture supports readiness to change and is aligned through understanding by management that is conscious of adaptation to changed framework conditions in a way that values which support adaptation are strengthened by success (see figure 103). To strengthen the basic philosophy, suitable compensation systems and performance evaluation processes can be put in place.

Cameron and Quinn (2006) emphasise the relevance of the company culture for the sustainable success of organisations in that it reduces collective uncertainty and creates social order and stability.

³⁵⁹ Kotter and Heskett (1993) distinguish three basic company cultures: Strong cultures have mutual, consistent and very stable values and behaviour rules which hardly change (even if a new chief executive officer takes over); Strategically moderate cultures must be in line with the context, i.e. the strategic alignment of an organisation, of the relevant industry or the selected sector; Adaptable cultures help the organisation to anticipate environmental changes and adapt to them.

³⁶⁰ According to Stadler (2009:79-82), each individual employee must act entrepreneurially in a culture of change and the organisation must play a part in its own area of influence. The values of the individual actors must then be the same as the values of the organisation (see also chapter 4.3.2.2). In addition, it is necessary to have an intensive exchange between the actors, in particular in relation to questions of values.

³⁶¹ Roolath (2006:92-110) ascertains that an entrepreneurial culture is strongly determined by the economic and technical environment and the competition environment. A strong individualistic culture can help innovation as a means of achieving entrepreneurial goals.

³⁶² In a study, Kotter and Heskett (1993:68) identify that organisations with strong customer, shareholder and employee oriented cultures can be judged as strong performers. They conclude that the cultural ideal state in organisations with adaptable cultures is attained if all managers on all hierarchical levels take responsibility and initiative, choose or adapt strategies and tactics which give equal consideration to the interests of reference groups of customers, employees and shareholders.

4. Analysis of the three central tasks of an entrepreneurial organisation

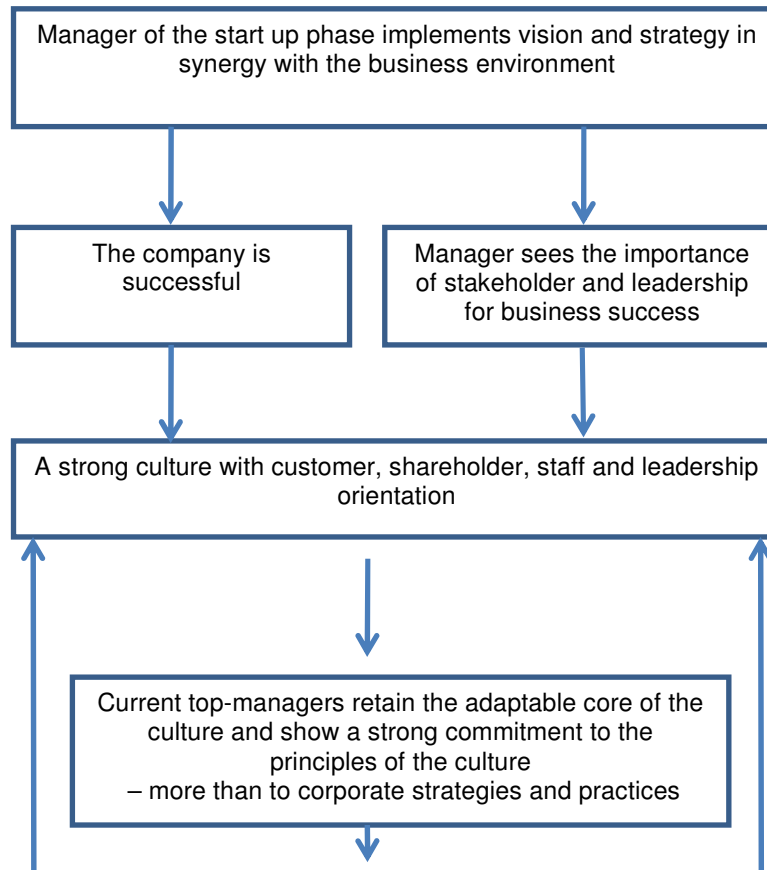


Figure 103: Adaptable cultures according to Kotter and Heskett (1993:81)

At the same time, adjustments of the organisation to changes in the business environment must be accompanied by a change of the organisation culture in order to link the new strategies and structures with the basic goals, values and assumptions and to maintain them in the long-term. They specify a process for culture change (Cameron and Quinn 2006:85-104).

In an assessment of the current and desired future organisation culture (see Sackmann 2007), it is possible to draw up and discuss a diagnosis of the necessary culture change in response to changes in the environment. As a next step, examples of the desired cultural orientation is described in two to three stories. The messages mark the starting point for the change process with actual and visible activities and intensive communication about culture change. For the individual actors as agent of change, behaviour and competencies should be defined which reflect the new culture and thus support the culture change. Cameron and Quinn (2006) emphasise with this the connection between individual changes and culture change in the organisation. They define four fundamental culture types of an organisation (Cameron and Quinn 2006:33-45).

4. Analysis of the three central tasks of an entrepreneurial organisation

Depending on which phase of the life cycle an organisation³⁶³ finds itself in or which actual environmental situation and strategic direction prevails, usually one of the four types will dominate in terms of the effectiveness of an organisation³⁶⁴. The success of an organisation then consolidates the existing cultural orientation or gives an indication of what culture change is needed. Cameron and Quinn define two dimensions for the determination of the four culture types. Some organisations assume that stability, order and control lead to effectiveness, others assume that the focus must be on flexibility, adaptation and dynamics. With the second dimension, there is a distinction between a strong internal orientation with a view to integration and a strong external orientation with a view to differentiation as criteria for effectiveness. The four culture types result then from the combination of the two dimensions and determine different corresponding mechanistic versus organic or integrated (central) versus differentiated (decentral) organisation forms.

Cameron and Quinn's four central culture types³⁶⁵ are firstly a culture that is focused on innovation, adaptation and flexible use of resources (adhocracy culture), secondly one that is focused on competitiveness, market coordination and achievement of results (market culture), thirdly, one that is focused on efficiency, formal rules and hierarchy (hierarchy culture) and finally, one that is focused on participation, teamwork and loyalty between the organisation and the actors (clan culture). One or more culture types would dominate the cultural orientation of an organisation at a particular point in time. Keeping in mind the existing culture profile and the one desired for the future, alongside the culture development it is possible to have holistic coordination with the other elements of the organisation design based on the culture profile (Cameron and Quinn 2006:31-60).

³⁶³ According to Cameron and Quinn (2006:53-54) an organisation in the start phase firstly has an adhocracy culture, then develops a clan culture in addition so that with maturity, the organisation can enter into a hierarchy culture phase. The market culture increases in significance which in turn leads to the formation of sub-cultures.

³⁶⁴ According to Cameron and Quinn (2006:48-49), different cultures define different criteria of effectiveness. In the hierarchy culture, efficiency and elimination of waste and duplication are important. In the market culture, market share, competitiveness and revenues are important. In the clan culture, community and teamwork, staff moral and job satisfaction (involvement, empowerment and commitment) are important. In the adhocracy culture, ideas for new markets and opportunities, innovation and problem-solving are factors which count.

³⁶⁵ For a brief illustration of the four culture profiles see Cameron and Quinn (2006:66).

4. Analysis of the three central tasks of an entrepreneurial organisation

Mintzberg (1991b) describes the company culture as an agent of harmonisation between the individual and organisational goals. The connecting culture takes care of the necessary integration and synergy within the organisation. For Mintzberg, the development of the organisation culture takes place in three phases. Firstly, a group of managers with a strong belief in the common mission is formed. Important events form traditions and stories which strengthen a common understanding and commitment to the company. In the third phase, the actors have developed strong identification and loyalty to the organisation. The living system has developed a company culture³⁶⁶.

According to Ireland et al (2009:31,32), an entrepreneurial culture arises if a top management entrepreneurial strategic vision and an entrepreneurial organisation design lead to individual actors behaving entrepreneurially. In turn, an existing entrepreneurial culture promotes entrepreneurial behaviour amongst the individual actors. Over time, an entrepreneurial culture³⁶⁷ can be developed which helps with the continuous discovery and implementation of opportunities. The entrepreneurial culture can be described as the binding agent for the entrepreneurial organisation design and the entrepreneurial orientation of an organisation and the individual actors.

MacDonald (2008) gives advice on how an entrepreneurial culture (see also Franke 2004) can be developed in a bureaucratic world. The starting point for his thinking is that the individual actor wishes to practise entrepreneurial thinking and action as a personal life philosophy. MacDonald establishes that most organisation systems have a bureaucratic design but can, however, be combined with an entrepreneurial culture. This can be achieved through a personal entrepreneurial management style together with the building of a team in which the actors support each other in the pursuit of individual interests. An entrepreneurial philosophy can be learned and applied at all levels of the organisation.

³⁶⁶ Stacey (1996:290) also describes the culture as a common reminder for the organisation of what has worked and not worked. From this, a recipe for the present and the future can be derived – the common mental model.

³⁶⁷ Ireland et al (2009) name as elements: emotional commitment, ability to implement, striving for recognition, consciousness of responsibility, desire for performance and high standards, mentoring, access to resources, autonomy, tolerance for errors, top management as an example, entrepreneurial thinking and action as a behaviour norm.

4. Analysis of the three central tasks of an entrepreneurial organisation

With the successful implementation of entrepreneurial activities, the entrepreneurial culture develops and strengthens itself. This process can be supported by developing mutual interests between the actors and the organisation and also within the units³⁶⁸; this can be done through the development of entrepreneurial ideas taking future developments into account³⁶⁹, through openness, empowerment, motivation and participation, trust, credibility (constant, consistent and concise) as well as through genuine and systematic communication and information, careful risk management, reward and reasonable payment commensurate with performance and the additional added value, as well as through prioritising and simplification³⁷⁰.

4.3.3 Conclusion: Notes on the entrepreneurial organisation design

Lynch (1997:620-649) examines the context between strategy, structure and culture. He refers to two alternative perspectives according to which the strategy determines the structure of an organisation or the strategy and structure have a mutual influence on each other. Thus, the existing organisation structures can evoke certain strategies and, in turn, prevent others. The experimental adaptation of the organisation to changes in the business environment links strategy development and structure adaptation. Such an emergent strategy process requires an open and less formal organisation structure so that decentralised innovation, adjustment and learning³⁷¹ are promoted³⁷². The adaptation of strategy and structure requires an adjustment of the culture as part of the total process (see also figure 104).

³⁶⁸ According to MacDonald (2008:45-50), this principle can also be practised beyond the boundaries of the organisation in that the organisation or the customer relations set themselves up in accordance with this principle. The key for successful implementation is to see the world as others see it and the will to realise mutual interests. The entrepreneurial spirit can then be captured with three questions: What are the available alternatives? What is the right thing to do? Is what we are doing in parallel?

³⁶⁹ For the visualised future, plans can then be developed as to how the entrepreneurial vision can be realised – see MacDonald (2008:53-66).

³⁷⁰ MacDonald (2008:31-186) calls these supporting aspects the *eleven secrets for building an entrepreneurial culture in a bureaucratic world*. He states that a completely entrepreneurial company can be developed within a bureaucratic organisation – although this is a difficult and frustrating task.

³⁷¹ Entrepreneurial activities that are not particularly closely related to previous business and activities, could, according to Floyd and Woolbridge (1999), define important learning fields for the development of new competencies. They see middle management as drivers of entrepreneurial activities.

³⁷² According to Lynch (1997:640-649) this requires from managers a new managerial understanding that permits emergent strategies and decentralised self-organisation.

4. Analysis of the three central tasks of an entrepreneurial organisation

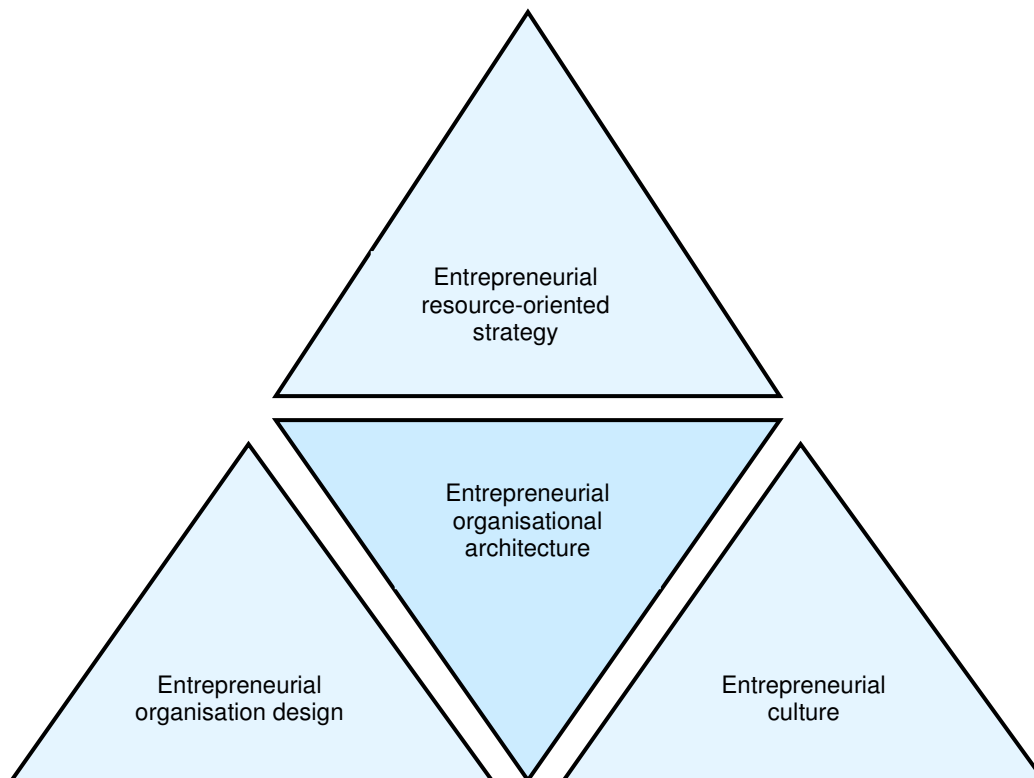


Figure 104: Entrepreneurial organisation design for the environment – strategy – structure – culture – *fit*³⁷³

The entrepreneurial information gathering and learning processes make it possible to define the goals of an entrepreneurial organisation in the context of shaping the entrepreneurial future. The entrepreneurial organisation design determines the order and structure as well as the processes for the implementation of entrepreneurial decisions and activities for the achievement of efficiency. It determines the flexible framework for the creation and implementation of ideas together with an efficient input-output transformation in the operational system.

³⁷³ For the *fit* hypothesis, see for example Bea and Göbel (2002:396-425). They distinguish external and internal (self-dynamic) causes of change and state that every serious change of the situation of an organisation makes organisational change necessary. The organisation structure must then be harmonised with the target system, strategy, manufacturing and information technology as well as the company culture (Intra-System-*fit*) in order to achieve with this a system that is environmentally *fit*. They require explicitly with this the involvement of aspects related with the past, such as the age and state of development of the organisation. Autonomous units can implement entrepreneurial strategies and work in clearly defined markets. The transfer of knowledge and co-operation strategy can be supported by the networking of decentralised, autonomous parts of the company. The organisation structure and organisation culture have a mutual effect on each other. According to Sachs (2000), the dynamic *fit* must be shaped in steady state equilibrium with a mixture of coincidence and intention. Zentes and Swoboda (1999:48-49), give a compact overview on literature about the intra-organisationally designed *fit* approach. Dhliwayo (2010:139-156) defines six organisational factors to ensure an entrepreneurial operational fit: (1) Entrepreneurial Politics; (2) Entrepreneurial Strategy; (3) Human Resources; (4) Structure; (5) Culture; (6) Management and Leadership. Brodbeck (2002) describes self-organising team structures to achieve organisational structural fit.

4. Analysis of the three central tasks of an entrepreneurial organisation

Change in the business environment determines change in the organisation. In particular, changes in the industrial and competition environment affect the opportunities and risks of the organisation and thus the development and implementation of the mission and strategy. Changes in the general macro environment have an effect on sectors as well as on the mental models of the actors and the organisation. They thus influence the entrepreneurial self dynamic in existing and new businesses. Controlled entrepreneurial strategy develops in a planned and emergent way and shows itself in the entrepreneurial activities realised. These activities are the result of reflecting current and future opportunities and threats against the current and future resources and competencies of the organisation.

Entrepreneurial organisation design (see Nayager and Vuuren 2005) enables the creation and implementation of ideas in cross-divisional teams³⁷⁴. According to Bhardwaj (2011), the design of an appropriate reward structure should complement the vision of the entrepreneurial organisation. New business is firstly connected separately and loosely to the formal organisation and with growing maturity, becomes more strongly attached and integrated into the total organisation. Depending on the dynamic and complexity of the business environment and the maturity of the business, both central and decentralised and formal and informal structures are developed. Efficiency and flexibility are connected in the production process and use of resources. When analysing the effects and the development of the organisation design, the economic behaviour model can be used to allocate decision rights and to determine performance evaluation and reward mechanisms. In particular focus is the harmonisation of the interests of the individual actors, the units and the total organisation. Together with the structural design, the organisational culture is extremely important here (Deal and Kennedy 1982).

³⁷⁴ Dess et al (1999) ascertain that too tightly drawn boundaries hinders the necessary flexibility and adaptability of the organisational configuration. Striving for efficiency and effectiveness must be combined and complementary strategic combinations pursued. In so doing, various internal and external organisation types can be used: (1) The modular entrepreneurial organisation concentrates on core activities and cooperates with other entrepreneurial organisations; (2) The virtual entrepreneurial organisation uses complementary competencies within dynamic networks of independent organisations which pursue common goals - modular and virtual structures reduces boundaries between organisations; (3) With internal limits in mind, barrier-free entrepreneurial organisations can strengthen the entrepreneurial orientation via small entrepreneurial organisational units, process teams and interdisciplinary work groups.

4. Analysis of the three central tasks of an entrepreneurial organisation

The entrepreneurial culture and core values (see Collins and Porras 1995) can guide individual and decentralised activities in the direction of the total organisation. For this, the formation of parallel interests between actors and the organisation and the consideration of personal needs when designing the tasks and collaboration can make a contribution. An entrepreneurial culture in particular promotes adjustment and innovation within the organisation. Entrepreneurial thinking and action as a standard and common mental model via the entrepreneurial organisation and the environment are predominant features of the entrepreneurial culture. According to Vance et al (2008), linear (logic and analytic) and nonlinear (intuition, creativity, imagination) thinking can contribute to the development of an entrepreneurial culture. The realisation of successful entrepreneurial activities strengthens the entrepreneurial orientation of the actors and the organisation. Changes in the environment also demand adjustment to the entrepreneurial culture. In addition to this, it is possible to determine a present and target culture via a culture diagnosis, to develop culture change in a focused way and select a culture that is appropriate for the organisation and the environment. Individual entrepreneurial personalities can be used as culture agents. Overall, the entrepreneurial culture can act as a link between the entrepreneurial strategy and structure so that a holistic entrepreneurial orientation can be achieved.

Definition: Entrepreneurial shaping of the organisation

Keeping in mind the organisation's mission and changes in the business environment, the entrepreneurial organisational design supports the dynamic environment – strategy – structure – culture – resources and competencies fit in order to strengthen the interaction between the organisation and the external business environment. The entrepreneurial organisation design strengthens the performance of the organisation to survive in a dynamic and complex environment and determines, together with entrepreneurial information gathering and entrepreneurial shaping of the future, the entrepreneurial orientation of the organisation.

The achievement of the three central tasks of an entrepreneurial organisation, based on the division of labour, must be specified company-specifically. For the organisation as a whole however, general roles can be defined which can specify the implementation of the three tasks and, in specific cases, steer them. In addition, in chapter 5 a role model is developed which can steer the entrepreneurial organisational design. The framework introduced in chapter 5.2 for the specification and analysis of the business environment can support entrepreneurial information gathering.

4. Analysis of the three central tasks of an entrepreneurial organisation

The qualitative systems model presented in chapter 5.3 describes the fundamental interaction between the entrepreneurial organisation and the environment for shaping the entrepreneurial future on aggregated levels. Together with the framework for the business environment and the systems model for interaction between the organisation and the environment in chapter 5 (see figure 105), the role model clarifies the role of intrapreneurship in a global, competitive business environment in permanent change that is impacted by technological developments.

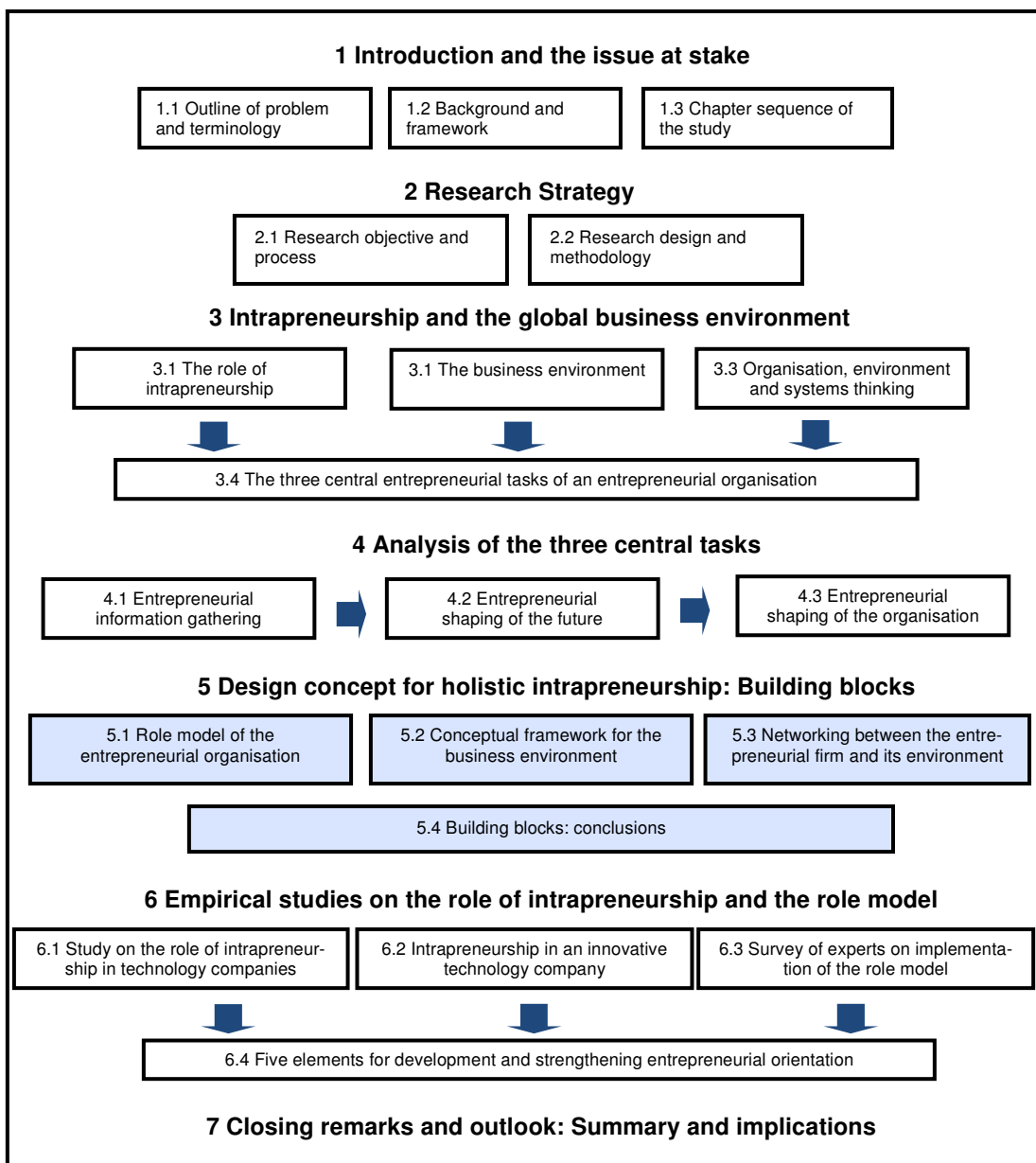


Figure 105: Development process for a holistic intrapreneurship design concept

5. Design concept for holistic intrapreneurship

In chapter 5, a concept for holistic intrapreneurship is derived from the findings so far which describes the role of intrapreneurship in a global business environment and also gives a design framework that can serve a specific entrepreneurial organisation in a specific (cultural) context. The design framework consists of the role model of an entrepreneurial organisation (see chapter 5.1), a conceptual framework for the global business environment (see chapter 5.2), together with a systems model of a vital entrepreneurial organisation in interaction with the global business environment (see chapter 5.3).

5.1 Role model of the entrepreneurial organisation

Based on the literature study in chapter 3 and the analysis of the three entrepreneurial tasks in a global business environment in chapter 4, a role model for the entrepreneurial organisation (see figure 106) is developed in the following synthesis (Platzek et al 2010)³⁷⁵. In addition, the entrepreneurial roles that have to be fulfilled holistically by the entrepreneurial organisation as a corporate actor³⁷⁶ are identified and described. The implementation of these roles using division of labour takes place for individual entrepreneurial organisations in a way that is dependent on the specific situation³⁷⁷. The company-specific sharing of roles and tasks between all members of the organisation requires a systematic and holistic selection and use of specific talents, an entrepreneurial development of the personnel portfolio (Roffe 1999) and support for cooperative and entrepreneurial teams and team members.

³⁷⁵ The design concept with role model was discussed and presented at the International Scientific Conference Business and Management, May 13-14, 2010, in Vilnius, Lithuania.

³⁷⁶ For the microeconomic concept of the corporate actor see for example Homann and Suchanek (2005), for microeconomics, for example, Morgan (2006) and for an evolutionary perspective Nelson and Winter (1982), who direct their attention less on individual actors and more particularly on the routines in the organisation that have to be permanently modified or replaced to ensure the survival of the organisation in the (selective) environment.

³⁷⁷ According to Wunderer (2006:279) globalisation also enables the global design of external network relationships and cooperations in virtual organisations. According to Draeger-Ernst (2003), all employees should contribute to entrepreneurial orientation if possible.

5. Design concept for holistic intrapreneurship

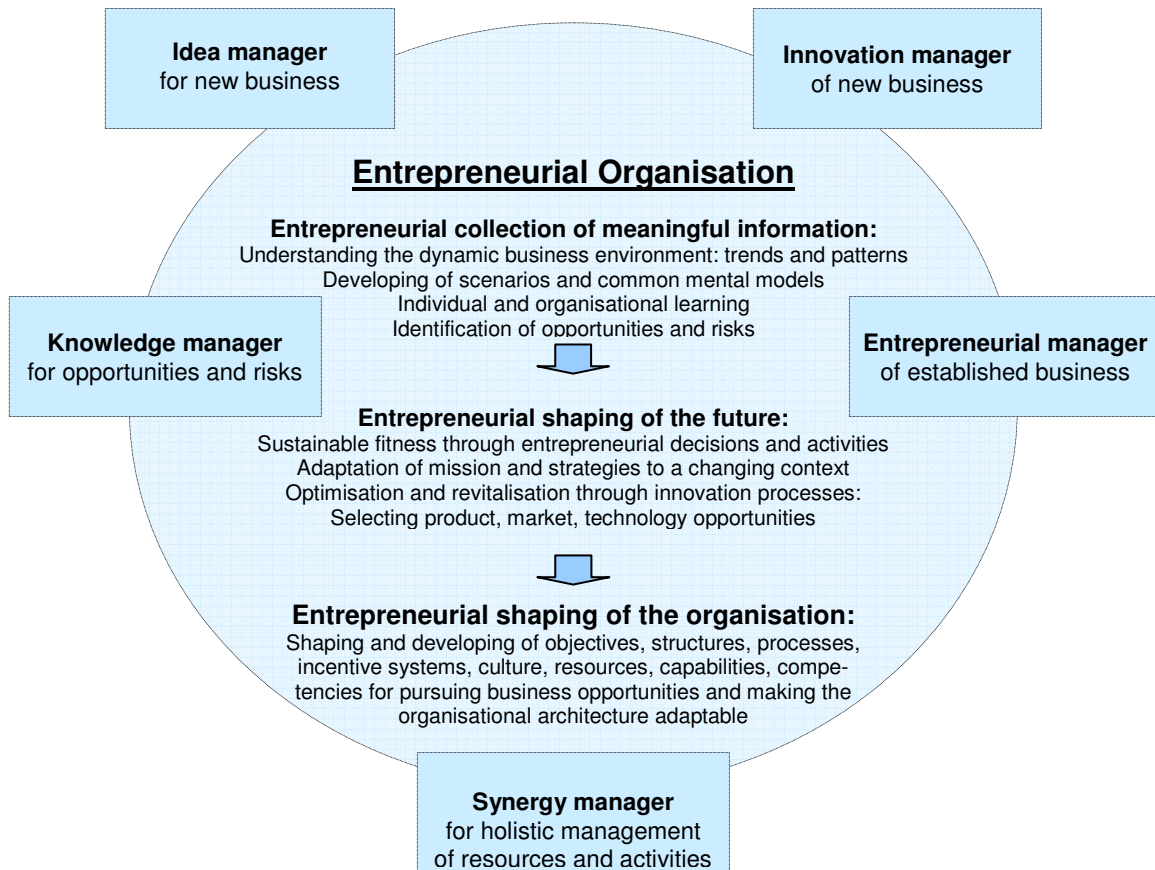


Figure 106: Role model for the entrepreneurial organisation

The role model can be interpreted as a synthesis between the individualistic and the collectivistic approaches of intrapreneurship that one can find in the literature³⁷⁸. It captures several roles of intrapreneurship identified in the relevant work of various authors and in the view of the global competitive business environment in an integrative framework. The role model gives a framework to perform the three entrepreneurial tasks and gives a general orientation to create the entrepreneurial organisation in a specific way and in a specific context.

³⁷⁸ For a discussion of the relationship between individualism and collectivism as a focus of entrepreneurial culture and thus also of the entrepreneurial direction of the organisation, see Morris et al (1993). The authors support the hypothesis that the strongest entrepreneurial orientation is achieved if there is a balance between individualism and collectivism. They specify that, in practice, change in entrepreneurial organisations is very much driven by individual entrepreneurial actors working together with other organisation members. With coalitions, it is possible to pursue mutual targets and individual and collective innovative orientation can be used. Various levels of entrepreneurial action (organisation versus individual) are examined for example by McKenzie et al (2007) taking into account the application of entrepreneurial thinking and action, including outside the economic system.

5. Design concept for holistic intrapreneurship

The knowledge manager³⁷⁹ collects and analyses systematically relevant information³⁸⁰ about the internal (Johnson and Scholes 1993, Pedler et al 1997, Dess and Lumpkin 2003, Porter 2004b, Hitt et al 2005) and external business environment (Fahey and Narayanan 1986, Graf 1999 and 2000, Palmer 2002, Senge 2003, Porter 2004a, Morrison 2006, Parr Rud 2009) to create, identify, share, apply, and store knowledge (Checkland and Holwell 1998, Krogh et al 2000, Heisig 2009) about customers, suppliers, markets and industries, competitors as well as mental models, trends and scenarios about the general macro environment. This knowledge helps to identify opportunities and risks for new businesses and in established businesses³⁸¹. Individual and organisational learning (Argyris and Schön 1999) from entrepreneurial activities (Block and MacMillan 1995, Argyris 1999) and the working-place (Raelin 2008), crisis (De Geus 2002), the present (Naisbitt 2007) and from the emerging future (Scharmer 2009) also creates knowledge and future options. The knowledge manager needs a global perspective (Thurow 2004), has to link information from different disciplines³⁸² (Palmer and Hartley 2002), and acquires knowledge from external alliance partners (Zhang et al 2010).

³⁷⁹ According to Floyd and Wooldridge (1999), relevant information and knowledge can ensue in particular from the informal exchange between actors who are not necessarily connected. Subjective experience would then also have to become part of collective experience by acceptance of the initiatives so that ideas can in fact be realised via a social network. Knowledge through learning can then come from the entrepreneurial initiatives and experiments. According to Herrmann-Pillath (2002:30-35,346-350), as well as division of labour in production, productive sharing of knowledge for the generation of new knowledge in a dynamic world is also gaining in significance. Entrepreneurial action then must be to a great extent communicative action. Even when the future remains uncertain, according to Saffo (2007), the most important information can be collected and evaluated by complying with six rules: (1) Visualisation of possibilities in the future that result from a certain situation and concentration on probable events (uncertainty diagram); (2) Consideration of changes which at first slowly and from a certain point very quickly determine the success chances of entrepreneurial opportunities (S-curve of development); (3) Events that do not fit into the current picture can be weak signals for big change (openness for contradictions); (4) Openness for adjustment of fixed opinions; (5) Consideration of past events for recognition of templates as a basis decisions focused on the future; (6) Acceptance of dealing with situations where prognoses are barely possible. Following the six rules, it is possible to correctly assess prognoses and identify opportunities and risks.

³⁸⁰ For a comprehensive and practical summary of tools for knowledge management, see Kilian et al (2007)

³⁸¹ Beschoner and Pfriem (2000:16) describe knowledge as today's most important entrepreneurial resource. According to Rathe and Witt (2000), the knowledge acquired is saved in the hierarchy of routines.

³⁸² Holtbrügge and Welge (2010) describe the flow of knowledge between company units in global companies with four types of organisational role templates: (1) *Local innovators* are responsible for the development of locally relevant knowledge; (2) *Implementers* use knowledge from other company units; (3) *Global innovators* make knowledge available to other company units; (4) *Integrating actors* use knowledge from the whole company and make their own knowledge available to other company units. For knowledge transfer between organisations see Martinkenaite (2010).

5. Design concept for holistic intrapreneurship

The idea manager³⁸³ has to think up new things creatively (Peters and Waterman 1982, Fillis 2010) to recognize and assess opportunities and risks in a discovery process (Smith and Di Gregorio 2002). He can use the information from the knowledge manager for agenda setting and create the match between the idea and the organisational strategy (Andrews 1987) and design (Rogers 2003). To evaluate and select the opportunities, he has to check the feasibility, the economic potential and the fit to strategy (Block and MacMillan 1995). The idea manager can use creativity techniques (De Bono 1989 and 1995, Aerssen 2009), training and publications (Block and MacMillan 1995) or a disciplined and organized process (Drucker 1985) to increase the flow of ideas. He can also use simulation and experiments to find ideas (Andersson et al 2010³⁸⁴). The idea manager has to think systematically about entering new markets and creating new products, services and industries (Kim and Mauborgne 2005).

The innovation manager³⁸⁵ has to consider different types of innovations (Lassen and Nielsen 2009) and different contexts (Ortt and Duin 2008) to design the implementation (Wunderer and Bruch 2000). He has to look for resources, guide the new idea through the stages of implementation (Rogers 2003, Frank 2006) and design the innovation process (Johannessen 2009, Wulfen 2011) cross traditional company boundaries in an innovation arena with cyclic interaction between changes in science and industry, technology and markets (Berkhout et al 2006).

³⁸³ According to Pretorius et al (2005), the relationship between creativity and innovation must be fashioned for the successful realisation of creative ideas. They describe this relationship as an overlapping creative process that connects activities and enables the discovery of an opportunity, the identification of an entrepreneurial idea, the invention of the entrepreneurial activity and the commercialisation of the activity to completion of the innovation. Witt (1987) concerns himself with the search for innovation from the viewpoint of evolutionary economics. For the economics of knowledge in the context of creativity and renewal process, see Geisendorf (2004).

³⁸⁴ In this process, they connect knowledge with entrepreneurship and describe knowledge in action as innovation. Leaders must take care of common targets, cooperation and the entrepreneurial passion of the actors, *Doers* must, as those responsible for entrepreneurial initiatives, organise resources for entrepreneurial opportunities and operational managers have to work on existing business.

³⁸⁵ Kiechl (1990) states that the tasks of finding ideas and implementing them in practice are often associated with each other (Čančer and Mulej 2006). Entrepreneurial actors would mostly implement their own ideas as the spiritual creators. Neugebauer (1997) advocates a separation of the two roles and stresses that implementation of the idea is an entrepreneurial process. For the interplay between creativity and innovation see also for example Struwig (2003). According to Baumol (2002b), a partnership between smaller companies that generate groundbreaking innovations and larger companies that develop the groundbreaking innovations further within the context of innovation routines can be used for systematic innovation. For idea generation in teams see Girotra et al 2010.

5. Design concept for holistic intrapreneurship

He can use corporate laboratories for product engineering and development (Best 2001). The innovation manager³⁸⁶ has to implement many ideas, because innovation success is a numbers game (Peters and Waterman 1982). He acts in the field of non-routine and often separate from the day-to-day business (Narayanan 2001). The innovation manager can focus internally on strategy, structure, processes, capabilities (organisational rejuvenation, business model reconstruction, strategic renewal) or externally on products and markets (sustained regeneration, domain redefinition) in order to innovate (Morris et al 2008), create an innovation system (Duin et al 2007), and execute new businesses (Govindarajan and Trimble 2005).

The entrepreneurial manager in established businesses³⁸⁷ designs job-sharing, coordination and motivation within the businesses (Picot et al 1997). He has to develop a clear picture of the internal value chain and the costs added at each stage to reveal leverage points for cost reduction – an analogous analysis beyond the organisation points to leverage points in the external business system³⁸⁸ (Abell 1993). Therefore, he has to look at all floating activities of the value chain internally as well as across the organisation to design transparent and efficient relationships inside the firm and with the network partners (Womack and Jones 1997).

³⁸⁶ According to Hartschen et al (2009), the initiation phase, idea finding, idea selection and evaluation as well as the rough concept can be assigned to the idea finder in the context of the innovation process. The implementation concept phase as well the realisation and market introduction can be assigned to the role of the innovation manager (idea implementer). In the role model presented, the innovation manager (idea implementer) is also responsible for the growth phase up until achievement of the innovation. The role of processing of search fields is intended explicitly in the model for the knowledge manager. According to Hartschen et al (2009), market-oriented, competency-oriented or customer-oriented search fields can be determined in the initiation phase. Creativity methods can help with idea creation. In selecting and assessing ideas, strategic considerations should be firmed up into an idea portfolio. By drawing up a rough concept, alternative entrepreneurial activities can be specified and evaluated particularly taking strategic *fit* and cost-effectiveness into account. Internal cooperation, implementation activities and market-specific measures are planned in the implementation concept. In this process, the detailing of products and services, product concepts, market launch concepts and infrastructure and location planning take place to underpin the pursuit of entrepreneurial strategies. The realisation and market entry phase requires high transparency in processes, open communication and cross-divisional agreement. Hartschen et al (2009) see the checking if there is a possibility of multiplication of innovation in other existing or new areas as the last point in the innovation process. This aspect can be allocated to the synergy manager in the role model presented.

³⁸⁷ According to Koontz et al (1980:78-82) the basic tasks are planning, staffing, leading, controlling, coordination. According to Sanchez and Heene (2004:66-121) the focus is on (1) the business concept (who will be served, with what, and how), (2) the organisation concept (resources, organisation design, controls and incentives), (3) the core processes (putting the business concept and organisation concept into action).

³⁸⁸ According to Priddat (2000), the internal and external division of labour can be better organised via market relationships in order to lead employees towards entrepreneurial action and customer orientation.

5. Design concept for holistic intrapreneurship

The entrepreneurial manager in established businesses also has to create and improve the processes of the organisation in a holistic way, in accordance with the strategy, to create value for customers and to adapt the organisation to external change through learning and redesign of the processes (Hammer 1997). The entrepreneurial manager in established businesses designs its operations and the supply chain with a special focus on flexibility to adapt quickly to a changing and risky business environment and to realize continuous improvements³⁸⁹ to reduce costs and to achieve efficiency (Slack et al 1995, Kaluza and Blecker 2005, Poulter 2006). He optimizes, modifies or increases its existing activities and makes effective decisions to solve basic problems in its businesses (Drucker 2007). The entrepreneurial manager has a strong focus on results and identifies what activities should be ceased (Malik 2000). He makes decisions on outsourcing of value-chain activities and support activities, and creates formal and informal networks to integrate processes (Child 2005).

The synergy manager³⁹⁰ designs job-sharing, coordination³⁹¹ and motivation between departments (Picot et al 1997), between organisations (Wunderer 2006), between subsidiaries and between the subsidiary and its parent organisation (Birkinshaw 2000). He finds a balance between the short-term and the long-term planning in turbulent times (Kotler and Caslione 2009), as well as between the entrepreneurial benefits of decentralization and the benefits of recognizing and exploiting corporate synergies e.g., across product lines in any function or through sharing a (common) resource³⁹² (Abell 1993) and knowledge (Osterloh and Frost 2000b).

³⁸⁹ For idea management and suggestions by employees for improving production and processes see for example Fiedler-Winter (2001).

³⁹⁰ According to Benecke et al (2007), synergy can be described as a concept for value augmentation by the shaping of a holistic organisation system. Within this, top managers have an extremely important role in designing and implementing a vision for synergy within the organisation. Departmentalism and self-interest of actors are often obstacles in the holistic creation of synergies. Entrepreneurial organisation design must support holistic thinking and action and shape the incentive structure in force in such a way that individual and collective interests are harmonised and are in harmony with the targets of the organisation.

³⁹¹ For a prediction of cooperation and behaviour regulation through emotions see Frank (1992).

³⁹² Non-copiable or hard to copy company-specific resource bundles represent the sustainable competitive advantages of an organisation. The unique resource bundles can, for example, be accounted for by the history of the company. A multipersonal anchoring and company-specific embedding secure organisation knowledge.

5. Design concept for holistic intrapreneurship

He secures the organisation's position in the future³⁹³ through building competencies and realizing entrepreneurial activities which need more resources than a single business unit has (Hamel and Prahalad 1994). He realizes synergies between entrepreneurial activities, as well as between new businesses and established businesses³⁹⁴ (Porter 2004b). The synergy manager has to fulfil three strategic needs - efficiency, innovation, and adaptability – to realize business activities with reference to the changed context in which the businesses operate (Child 2005).

The synergy manager structures effective organisations through the assignment of decision rights within the company, methods of rewarding individuals and the design of systems to evaluate the performance of individuals and units³⁹⁵ (Brickley et al 2004). He has to set the boundaries of the whole organisation (what businesses should it do) and to decide on what basis the organisation should compete to determine the design of the internal organisation (Besanko et al 2007). He creates long-term partnerships with customers and suppliers, links people in different parts of the internal organisation and realizes a *fit* among the strategy, the organisational design and the relevant business environment³⁹⁶ through sorting out which of the identified opportunities the entrepreneurial organisation should pursue (Roberts 2004).

Holistic Intrapreneurship requires fulfilling the five entrepreneurial roles in an integrated manner and in interaction with the external business environment. Thus, it is necessary to focus on the external business arena in the following chapter 5.2.

³⁹³ Stadler (2007) examines long-term successful and large European companies in the past and compares them to less successful companies, identifying four principles of long-term success: (1) Efficiency in existing businesses was more important than innovation for concluding new business; (2) Diversification of operational activities and a broad base of suppliers and customers; (3) Permanent non-repetition of mistakes; (4) Plan and implement changes in small steps. Against the background of examinations thus far, there follows advice concerning dynamic changes in the global business environment which make a differentiated evaluation when taking on recipes for success from the past appear sensible.

³⁹⁴ Bergmann and Daub (2006) combine a stable routine system that is remote from the market with an innovation system close to the market that gives latitude for innovation. Effective routines can be formed and experiences used using competency management. Developments and self-organised learning processes can take place and new opportunities used using innovation.

³⁹⁵ For application of economic concepts in the organisational context see also Nellis and Parker (2002).

³⁹⁶ According to Malik (2000:88-100), holistic thinking is the prerequisite here for entrepreneurial action.

5.2 Conceptual framework to describe and analyse the global business environment

In the current chapter, the synthesis presents a framework to describe and analyse the global business environment and a process model for a holistic view on the three entrepreneurial tasks. The entrepreneurial organisation has to play the entrepreneurial roles (see chapter 5.1) in interplay with its external business environment which is in a permanent state of change. This brings new opportunities and risks as well as the need for adaptation in established businesses. Understanding today's global and dynamic business environment is essential for the entrepreneurial organisation and it is a result of the entrepreneurial collection of meaningful information³⁹⁷. A clear picture of the external business environment helps to develop a common mental model about the business arena and offers a foundation for thinking about the proactive and reactive entrepreneurial activities representing the result of the entrepreneurial creation of the future; the focus is on the exchange between the entrepreneurial organisation and its environment. To realize these entrepreneurial activities it is necessary to design and adapt the internal business environment. The permanently changing business environment makes it necessary to continuously redesign the organisational architecture. A conceptual framework of the business environment helps to create a specific picture of the organisation in its environment to act on the entrepreneurial roles and to pursue the entrepreneurial tasks.

In the literature (see chapter 3.2), there are numerous concepts to describe (Kerr and Littlefield 1974, Weinshall 1977, Fayerweather 1978, Ulrich and Probst 1991, Tepstra and David 1991, Malik 2008) and to analyze (Fahey and Narayanan 1986, Johnson and Scholes 1993, Rugman 2006, Louw and Venter 2006, Daniels et al 2007) the business environment. Some authors focus on the availability of resources for the organisation (Emery and Trist 1965, Aldrich 2008), others on the attributes of the external environment like turbulence, hostility, complexity that determines uncertainty (Khandwalla 1977, Ansoff 2007) and diversity (Trompenaars and Hampden-Turner 1998, Hofstede 2001, Schuster and Copeland 2006).

³⁹⁷ According to Bollmann (2001:16-20), most companies concentrate on internal company processes. In dynamic and global markets, information experts must, however, collect and analyse more information in order to achieve a targetted evolution through planned use of opportunities.

5. Design concept for holistic intrapreneurship

A common distinction to define the fields of influence and interaction between the organisation and its environment is made between a general (contextual) macro environment and an immediate (operational) micro environment (Worthington and Britton 2000, Hitt et al 2005). The macro environment is built by the political/legal, economic³⁹⁸, sociocultural, technological, and physical segments (Dülfer 1997). The micro environment contains the competitive or industry environment and the task environment of the organisation (Fahey and Narayanan 1986, Porter 2004a).

For the global organisation the local communities³⁹⁹, the nation states⁴⁰⁰, the world regions and the whole world are relevant geographical dimensions of the environment (Graf 2005, Morrison 2006). This makes a systems view on the business environment very useful (Miller 1995, Haines 1998). The internal business environment can be described in particular through processes (Porter 2004b), structures (Mintzberg 1993, Child 2005) and other arrangements like strategy (Porter 2004a), culture (Schein 2003) as well as orientation on optimisation and renewal (Rüegg-Stürm 2004). Ghemawat (2007)⁴⁰¹ classifies countries through cultural, geographical, political and economic differences in comparison with the home location of a company. Global companies have to place their focus on the interplay between local and cross-border interaction if they wish to master challenges in individual countries which are, in turn, part of an integrated world. According to Kanter (2012) participating in the local ecosystem via cooperation in centres of knowledge creation and innovation zones help enterprises to grow.

³⁹⁸ For the analysis of economic segments, economic indicators can be used – see for example Stutely (2006), Roux (2008).

³⁹⁹ Best (2001:69-85) describes an internal/external dynamic between the entrepreneurial organisation and the region and describes this dynamic as *open systems networking*. This brings decentralised phases for the entrepreneurial organisation with entrepreneurial experiments and phases with top-down decisions for internal (production) and external (market) entrepreneurial activities and innovation and development for the region.

⁴⁰⁰ Mets (2006:70-90) points out that particularly in small economies, the success factors of the external and internal business environment should be designed and considered together. Within this, entrepreneurial organisations in smaller economies can use knowledge and competencies as well as cluster infrastructures and technology-based industries (Wong et al 2006) for a permanent entrepreneurial development process. Global companies can use their branches for entrepreneurial experiments and thus provide for efficient processes at the level of the organisation as a whole through coaching and mentoring.

⁴⁰¹ He names three central strategies with which global companies can use country differences in working the market and production: (1) Adapting to regional differences; (2) Aggregation of similar countries in geographical regions to benefit from economies of scale; (3) Arbitrage strategies to use the country difference in order to take profit of absolute cost advantages.

5. Design concept for holistic intrapreneurship

To get a holistic picture of the global business environment of a specific organisation (see Figure 107), it is necessary to define four dimensions. The first dimension focuses on the geographic areas in which the organisation operates⁴⁰². Environments for operations are the global economy, world regions, nation states and local communities⁴⁰³. The second dimension focuses on the fields for the operational interplay⁴⁰⁴ between the organisation and its environment.

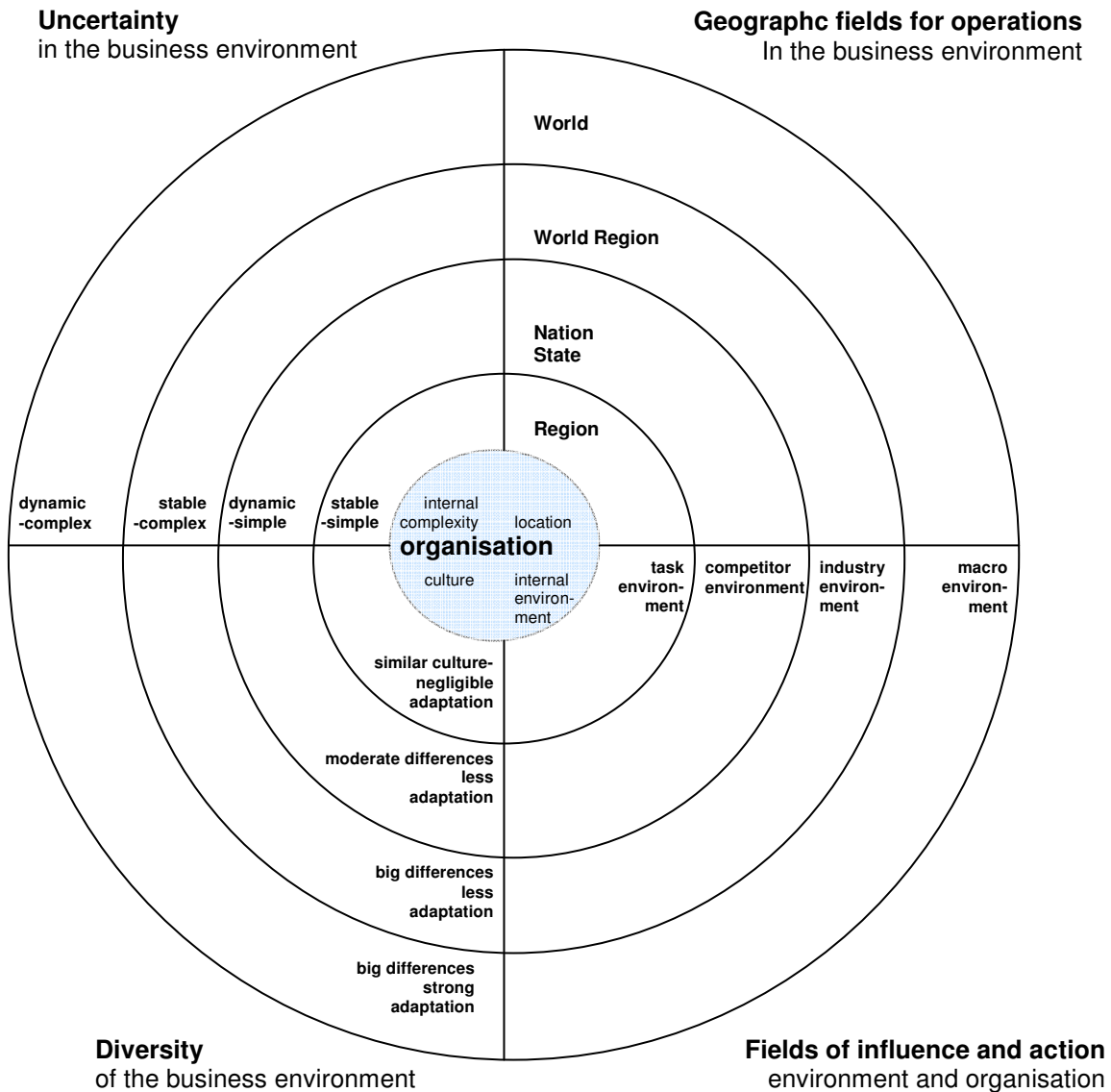


Figure 107: A framework for the global business environment

⁴⁰² For economic location decisions see e.g. Petersen and Lewis (1999).

⁴⁰³ For the role of the local cluster in the innovation process of global entrepreneurial organisations see for example Porter and Sölvell (1998).

⁴⁰⁴ According to Sachs (2000) success in an organisation today is particularly dependent on the ability to anchor itself in economic and society networks (company clusters). Entrepreneurial organisations then drive changes and growth in the region.

5. Design concept for holistic intrapreneurship

The relevant general macro environment and the specific micro environment define these fields of influence and interaction for the exchange between the organisation and its external business environment. The third and fourth dimensions focus on the attributes of uncertainty and diversity. The entrepreneurial organisation has to assess the cultural diversity and the uncertainty of the business environment (Shrestha et al 2007). This assessment has important implications for the required cultural adaptation of the entrepreneurial activities and the optimisation of the organisational design in several geographic areas. Furthermore, entrepreneurial opportunities can be identified on the basis of cultural differences and the necessary intensity of the organisation's entrepreneurial orientation can be determined with particular reference to the dynamic of the external business environment (Lawrence and Lorsch 1986, Roolath 2006:93-100, Morris et al 2008)⁴⁰⁵.

The conceptual framework presented can provide a vital entrepreneurial learning organisation (Platzek et al 2011b) with a land map for analysis using an inside-outside-inside-approach (see figure 108). The creation of a symbiosis between the vital entrepreneurial learning organisation and the external business environment requires an analysis and shaping of the networking between the organisation and the environment. Thus, the following chapter 5.3 focuses on the exploration of the relationship between the organisation and the external business arena and the exchange of goods, services, and information.

In chapter 5.3.1.1, a total system with 16 internal variables (entrepreneurial organisation) and 16 external variables (global business environment) is introduced. The analysis of this system is done using two methods. Chapter 5.3.1.2 and Chapter 5.3.1.3 sketch a sensitivity analysis to clarify the bilateral relationships and the cybernetic role of the variables. Chapter 5.3.2 presents a qualitative analysis to clarify the basic networking in the system explored and to research a word model and qualitative system model (via aggregation of the total system).

⁴⁰⁵ Gupta et al (2008), define four success factors for a global company: (1) Worldwide identification of market opportunities and working the market as market leader; (2) Transferring global presence into competitive advantages; (3) Use of opportunities from cultural and geographical differences with a global perspective; (4) Focus on (future) global growth markets like China and India.

5. Design concept for holistic intrapreneurship

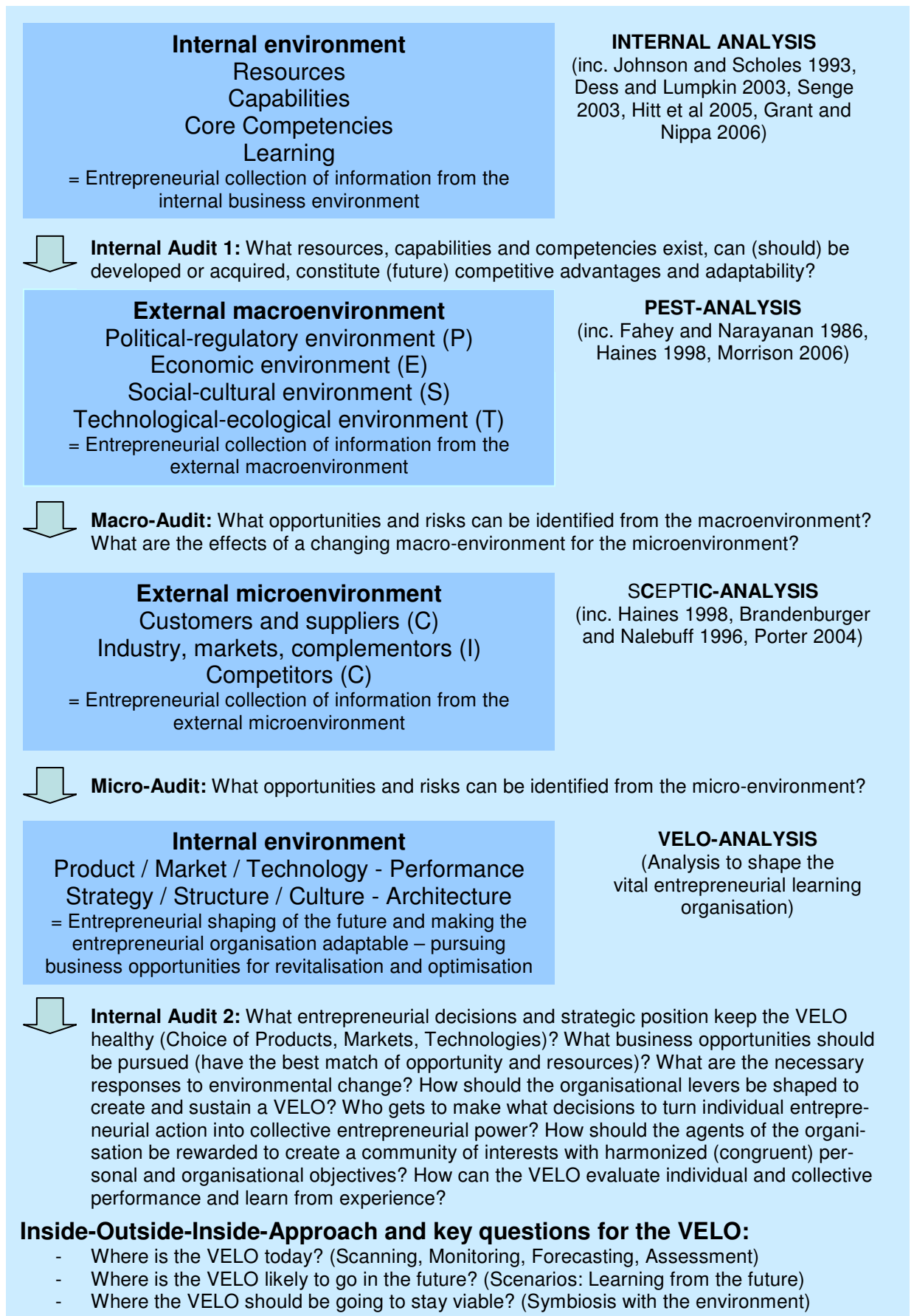


Figure 108: Process model for a holistic view on the three central entrepreneurial tasks of the vital entrepreneurial learning organisation (VELO)

5.3 Networking and interaction between the entrepreneurial organisation and the global business environment

The central focus in this chapter is to explore the interaction between the entrepreneurial organisation and the global business environment. The entrepreneurial organisation shapes the exchange with the external business environment in order to secure viability. In so doing, the viable entrepreneurial organisation takes the internal and external networking into consideration when identifying and implementing entrepreneurial activities. Consideration of the networking and interaction between the entrepreneurial organisation and the external business environment occurs in two steps. Firstly, in chapter 5.3.1, a set of variables for a system model is derived on the basis of findings to date in the literature study (chapters 3 and 4) and this analyses the bilateral activity relationship and outlines the role of the individual system variables. To do this, Vester's sensitivity model is applied⁴⁰⁶. Through aggregation, the system variables are converted into a qualitative system model in a second step (see chapter 5.3.2). The qualitative system model of the viable entrepreneurial organisation shows the fundamental exchange with the external business environment in new and existing businesses.

5.3.1 Bilateral action relationships and the role of system variables

With the sensitivity model, Vester (2005:187-263) develops a guide for dealing with complexity. It is possible with this process for the contexts and the dynamic of a complex system to be made clear at various systems levels⁴⁰⁷. The compilation of a systems model usually begins, in Vester's view, with a brainstorming session of all concerned.

⁴⁰⁶ See Vester (2005) and the corresponding IT tools.

⁴⁰⁷ With this, Vester (2005) develops a tool which, unlike world models (see Forrester 1971, for example), can be applied to various problems. For the sensitivity model, computer-aided tools have been developed with which the behaviour of systems can be challenged and decisions about system influences can be checked. Thus, system compatible measures can be prepared and implemented in specific contexts for the exploitation of opportunities and the avoidance of risks. Vester defines four steps for this: system specification, template compilation, interpretation and evaluation, and strategy. The starting point is then the system specification with the identification of a few representative key factors. On the second level, interactions are examined and system networking visualised. On the third level, there is a system evaluation that takes into consideration the optimisation of viability. In addition, Vester defines eight ground rules for viability (see chapter 3.3.9). On the fourth level, based on the system evaluation, solution strategies are highlighted.

5. Design concept for holistic intrapreneurship

This way of implementing the systems approach makes it possible for the relevant system to be specified, the effective influencing variables to be investigated and visualised, and the lever for increasing viability of the company system to be identified. With the sensitivity analysis methodology, subjective perceptions can be interactively collected and the sets of variables relevant for the system can be developed. In further work steps, a consensus about the interactions and strength of the influencing factors (see figure 110 and figure 111) can be developed in an influence matrix (see figure 109) and their roles in the systems (see figure 112 and 113). From the analysis of the bilateral activities, a specific picture of the system behaviour and the roles of the individual variables emerges.

In what follows, an alternative implementation of the sensitivity analysis for the general system specification is outlined. On the basis of the literature study, it is possible to develop the steps of the sensitivity analysis (Vester 2005) required for system specification. With this, a general reference system⁴⁰⁸ which can supply initial findings about bilateral activity relations is presented⁴⁰⁹.

5.3.1.1 Entrepreneurial organisation, environment and set of variables

From the literature study (see chapter 3), it is possible, using logical deduction and qualitative examination (Bortz and Döring 1995) and also taking biocybernetic ground rules (Vester 2005) for the optimisation of an entrepreneurial organisation's viability into account, to identify a collection of variables with 32 components for specification of the total system (entrepreneurial organisation and the external business environment). Within this, 16 variables each allude to the entrepreneurial organisation as a corporate actor for the achievement of an entrepreneurial orientation through efficiency, innovation and adaptation, as well as to the global business environment as a playing field for current and future opportunities and risks.

⁴⁰⁸ The reference system for the entrepreneurial organisation takes into consideration the biocybernetic ground rules (and a filtering of the collection of variables with a criterion matrix for checking completeness taking into account life areas, physical and dynamic basic criteria and system relationships) and can thus complement the biocybernetic evaluation with a view to securing viability so that a permanent orientation model is built from the reference system and biocybernetic ground rules for the viable entrepreneurial organisation.

⁴⁰⁹ With this reference system, it is also possible to involve the relevant actors, for example, in the development of a specific company model within a specific context.

5. Design concept for holistic intrapreneurship

For the entrepreneurial organisation, there is a definition of variables in the four areas of entrepreneurial strategy, entrepreneurial structure, entrepreneurial culture as well as resources and competencies. Through globalisation, global networking of the general business environment is continuously determining the development possibilities of global companies. Their operation fields are determined by specific local situations and micro environments. For the global business environment, there is a definition of variables in the four areas of the global general business environment, local general business environment, industry and competition environment, together with the task environment. These variables describe the total system (entrepreneurial organisation and external business environment). They are categorised and include the following:

The corporate actor: entrepreneurial organisation

Entrepreneurial strategy⁴¹⁰

1. Entrepreneurial activities in existing businesses to secure efficiency⁴¹¹
2. Entrepreneurial activities for market innovation processes to strengthen strategic effectiveness⁴¹²
3. Evolution of the objectives and mission (the system identity)⁴¹³ for securing the long-term viability and orientation towards selected community values

Entrepreneurial structure⁴¹⁴

4. Viable organisation design⁴¹⁵
5. Harmonious incentive structure⁴¹⁶
6. Development-oriented and learning structures that promote adaptability⁴¹⁷

⁴¹⁰ See chapter 4.3.1 and Tichy (1983), Mintzberg (1991a), Abell (1993), Porter (2004a), Ireland (2009)

⁴¹¹ In particular the design of the Input-Output relationship, regulation processes and technological adaptation as a reaction to changes in the business environment.

⁴¹² In particular market research, technological research and development, product adaptation, product portfolio adaptation, adaptation of way of working the market, structural change with new products and new markets via processes of self-organisation and use of internal dynamics for the preservation of identity/ fulfilment of mission.

⁴¹³ According to Stöger (2009), organisations have to change their company purpose if the rules of play in the markets and demand change fundamentally. Thus, the central questions for a company have to be reconsidered after a crisis.

⁴¹⁴ See chapter 4.3.2 and particularly Argyris (1957), Beer (1979, 1995), Belbin (1996), Morgan (1998), Bartlett and Ghoshal (2002), Senge (2003), Brickley et al (2004), Child (2005)

⁴¹⁵ Particularly entrepreneurial management structures with central and decentralised decision structures, flexibility, division of labour, systems and (production) processes, synergies, holographic (constant, extendable) structures with free resources for innovation, decisions about company boundaries and the cooperation in virtual organisations and alliances - see chapters 3.3.4 and 4.3.2.1 as well as Mintzberg (1979:285-287) and Schanz (1994).

⁴¹⁶ Particularly harmonisation of interests between individual actors and the organisation and harmonisation of short-term and long-term orientation amongst the actors (see chapter 4.3.2.2).

5. Design concept for holistic intrapreneurship

Entrepreneurial culture⁴¹⁸

7. Distinctive information culture
8. Open communication culture
9. Trusting culture of cooperation
10. Dynamic innovation culture (that promotes creativity and implementation)
11. Culture that promotes identification and motivation
12. Individual and organisational learning culture

Resources and competency-*fit*⁴¹⁹ for the processing of current and future opportunities and risk for the implementation of the entrepreneurial strategy

13. Human resources-*fit*⁴²⁰
14. Company resources-*fit*⁴²¹
15. Intangible resources-*fit*⁴²²
16. Strengths, weaknesses and core competencies of the organisation-*fit*⁴²³

The operation field: current and future external business environment as a source for opportunities and risks⁴²⁴

Global general business environment⁴²⁵

17. Changes in global economic framework conditions⁴²⁶
18. Changes in global technological framework conditions⁴²⁷

⁴¹⁷ Particularly development and adaptation of common mental models, structures for individual and collective learning, exchange of knowledge and application for entrepreneurial activities.

⁴¹⁸ See chapters 3.3 and 4.3.2 as well as Kobi and Wüthrich (1986), Kotter and Heskett (1993), Schein (2003), MacDonald (2008), Stadler (2009)

⁴¹⁹ See chapter 4.3.1 and particularly Andrews (1987), Penrose (1995), Sanchez and Heene (2004), Hitt et al (2005), Wunderer (2006)

⁴²⁰ Particularly, a workforce with entrepreneurial orientation and individual entrepreneurial competencies in decentralised units and in top management, staff recruitment and employee development for the implementation of future entrepreneurial strategies.

⁴²¹ Particularly, taking physical resources into account (e. g. production systems, locations, logistics) and financial resources (sources and use of capital and intracapital).

⁴²² Particularly taking into account the company image and brand names, relationships and networks.

⁴²³ Particularly taking into account the current and future core competencies to secure or achieve competitive advantages and for the analysis of strengths and weaknesses to make use of opportunities and encounter risks.

⁴²⁴ Particularly the character of the relevant business environment taking into account networking, dynamic, complexity, diversity and extension of the operation fields (world, economic region, countries, regions).

⁴²⁵ See chapter 3.2 (particularly chapter 3.2.2.6, world and economic region levels of analysis) and particularly Rugmann and Collinson (2006), Dülfer and Jöstingmeier (2008), Morrison (2006), Graf (2005), Stiglitz (2010)

⁴²⁶ For example global economic development, globalisation of real markets, global finance architecture.

5. Design concept for holistic intrapreneurship

- 19. Changes in global political and legal framework conditions⁴²⁸
- 20. Changes in global socio-cultural and societal framework conditions⁴²⁹
- 21. Changes in ecological framework conditions and the natural environment⁴³⁰
- Local general business environment⁴³¹
 - 22. Changes in local economic framework conditions and location qualities⁴³²
 - 23. Changes in local technological framework conditions⁴³³
 - 24. Changes in local political and legal framework conditions⁴³⁴
 - 25. Changes in local socio-cultural and societal framework conditions⁴³⁵
 - 26. Changes in local ecological framework conditions, the natural environment and the geographical situation⁴³⁶
- Industry and competitive environment⁴³⁷
 - 27. Changes in the industry environment and industry life cycle
 - 28. Changes in the competition situation and position⁴³⁸
- Task environment⁴³⁹
 - 29. Changes on the customer side⁴⁴⁰
 - 30. Changes on the supplier side⁴⁴¹
 - 31. Changes on the financial market⁴⁴²
 - 32. Changes on the personnel market⁴⁴³

⁴²⁷ For example international patent protection, global research associations, globally available technology status.

⁴²⁸ Particularly taking account of global institutions such as WTO, IMF, UNO (see chapter 3.2.2.6).

⁴²⁹ For example also in the implementation of human rights or international work standards, demographic development, corruption and criminality.

⁴³⁰ For example examination of the effects of climate change.

⁴³¹ See chapter 3.2. (particularly chapter 3.2.2.6, economy and local market levels of analysis) and particularly Fahey and Narayanan (1986), Mets (2006), Daniels et al (2007).

⁴³² For example, the design of economic structure change, finance market regulation and of the interplay between the state and the economy.

⁴³³ For example, technology clusters and national (comparative) advantages.

⁴³⁴ For example, the design of the health system and energy policy.

⁴³⁵ For example, dealing with demographic change.

⁴³⁶ For example, dealing with climate change (Porter and Reinhardt 2007).

⁴³⁷ See chapter 3.2 and particularly Vernon (1966), Andrews (1987), Porter (2004a).

⁴³⁸ Particularly current and potential competitors, market entry barriers, current and potential competitive products, threats by substitutes, global competition, positioning.

⁴³⁹ See chapter 3.2 and particularly Ulrich and Fluri (1995), Slack et al (1995), Brandenburger and Nalebuff (1996).

⁴⁴⁰ For example, globalisation of the product markets, market power of the customers.

⁴⁴¹ For example, global sourcing, market power of suppliers.

⁴⁴² For example, capital access, finance conditions.

⁴⁴³ For example, availability and mobility of the employee, location selection and relocations by the employer.

5. Design concept for holistic intrapreneurship

To analyse the system, it is useful to apply the method of the sensitivity analysis (Vester 2005). The first step in the research process is to value the bilateral influences between the variables (see chapter 5.3.1.2). The second step is to identify the (buffering, critical, active, reactive) role of the variables⁴⁴⁴ (see chapter 5.3.1.3) to get a first impression of the networking between organisation and environment.

5.3.1.2 Entering data into the system with the influence matrix: interactions between the system variables

The influence matrix⁴⁴⁵ challenges the bilateral action relationships. In addition, the strength of the effects of change of a variable on all other variables is assessed (see Ulrich and Probst 1991:143). The effect is evaluated with values between 0 and 3. If variable B changes significantly due to a weak influence by variable A, this is assigned with a value of 3 (strong relationship). If the changes are equal, a value of 2 is assigned (medium relationship). If variable B changes only slightly due to the effect of a strong influence of variable A, a value of 1 is assigned. If there is no apparent effect, little effect or if there is a long time delay, a value of 0 is assigned (no relationship). The influence of a variable on all other variables is represented by the row of that variable (active sum). The column of a variable shows how intensively that variable is influenced by the other variables (passive sum). A variable with a high active sum (AS) has a bigger leverage effect on the system. A variable with a high passive sum (PS) changes significantly if something in the system changes. Taking into account findings from the literature study and action research, values for the influence matrix of the presented total system (see chapter 5.3.1.2) can be ascertained (see figure 109) and a system evaluation can be implemented by an evaluation of the influence matrix and by looking at the active and passive sum of all variables (see figure 110).

⁴⁴⁴ Vester (1990:37) describes four combinations of influences: (1) Variables which strongly influence the other variables, but are weakly influenced by the other variables (active variables); (2) Variables which weakly influence the other variables, but are strongly influenced by the other variables (reactive variables); (3) Variables which strongly influence the other variables and which are strongly influenced by other variables (critical variables); (4) Variables which weakly influence the other variables and which are weakly influenced by other variables (buffering variables). According to Ulrich and Probst (1991:145) this classification helps to identify levers to shape the situation.

⁴⁴⁵ Vester (2005:195) describes this work tool for networked thinking, originally developed in 1970, as a *paper computer* or *cross-impact-matrix*.

5. Design concept for holistic intrapreneurship

Influence of variable to variable	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	AS	P			
1 Innovation in operations	X	1	1	2	2	2	2	2	2	2	1	1	1	2	1	1	1	0	0	0	0	0	0	0	0	0	0	2	2	2	2	2	1	33	1452		
2 Innovation in markets	1	X	2	2	2	2	2	2	2	3	3	3	3	2	2	2	0	0	0	0	0	0	1	1	1	1	1	3	3	3	3	3	2	56	3640		
3 Organisational evolution	1	3	X	2	2	2	2	2	2	3	3	3	2	2	2	0	0	0	0	0	0	0	0	0	0	0	0	2	2	2	2	2	2	45	2835		
4 Organisational design	2	2	2	X	2	2	2	2	2	2	2	2	2	2	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	30	1350		
5 Incentive structure	2	1	1	2	X	1	2	2	2	2	2	2	2	2	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	27	1161	
6 Learning structure	1	3	2	2	X	2	2	2	3	2	3	2	3	2	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	35	1505
7 Information culture	2	2	2	2	2	X	2	2	2	2	2	2	2	2	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	30	1110	
8 Communication culture	2	2	2	2	2	2	X	2	2	2	2	2	2	2	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	30	1110	
9 Cooperation culture	3	3	3	2	2	2	2	X	2	2	3	2	2	2	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	34	1360	
10 Innovation culture	2	3	3	3	3	3	2	2	X	2	3	3	3	3	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	1720
11 Guiding culture	2	2	2	2	2	2	2	2	X	2	2	2	2	2	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	30	1140	
12 Learning culture	2	3	3	2	2	3	2	2	3	3	2	X	3	2	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	38	1558
13 Human Resources	3	3	3	2	2	2	2	3	3	3	3	X	2	3	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	41	1886	
14 Tangible Resources	2	2	2	2	2	2	2	2	2	2	2	X	2	2	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	32	1344	
15 Intangible Resources	2	2	2	2	2	2	2	2	2	2	2	X	2	2	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	32	1440
16 Competencies	3	3	3	2	2	2	2	2	2	2	2	2	2	2	2	X	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	34	1326
17 Global economy	0	1	2	1	0	0	0	0	1	0	0	0	0	0	0	0	X	2	1	1	2	2	2	2	1	1	1	2	2	2	2	2	2	2	2	30	600
18 Global technologies	0	1	2	1	0	0	1	0	0	0	0	0	0	0	0	0	2	X	1	1	1	1	2	1	1	1	2	2	2	2	2	2	2	2	28	532	
19 Global regulatory system	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	X	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	19	304
20 Global society	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	X	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	19	304
21 Natural Environment	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	X	1	1	1	1	1	2	1	1	1	1	1	1	1	1	19	342
22 Local economy	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	1	1	1	X	2	1	1	1	2	2	2	2	2	2	2	2	2	27	513
23 Technology clusters	0	2	1	0	0	0	0	0	1	0	0	0	0	0	0	0	2	2	1	1	1	2	X	1	1	1	2	2	2	2	2	2	2	2	2	27	540
24 Local regulatory system	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	X	1	1	2	2	2	2	2	2	2	2	2	23	391
25 Local society	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	X	1	2	2	2	2	2	2	2	2	2	23	391
26 Local geographic situation	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	2	2	2	2	2	2	2	X	2	2	2	2	2	2	2	2	2	32	544
27 Industry situation	2	3	3	2	2	2	1	1	1	1	1	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	X	3	2	2	2	2	2	2	2	48	1632
28 Competitive situation	3	3	3	2	2	2	1	1	1	1	1	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	2	X	2	2	2	2	2	2	48	1680
29 Product / Service markets	3	3	3	2	2	2	1	1	1	1	1	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	2	X	2	2	2	2	2	2	48	1680
30 Factor markets	3	2	2	2	2	2	1	1	1	1	1	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	X	2	2	2	2	45	1575	
31 Financial markets	2	2	2	2	2	2	1	1	1	1	1	2	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	2	2	2	X	2	2	2	45	1395	
32 Labour markets	2	2	2	2	2	2	1	1	1	1	1	2	2	2	2	1	1	1	1	1	1	1	1	1	1	1	2	2	2	2	X	2	2	2	45	1485	
	44	65	63	45	43	43	37	40	43	38	41	46	42	45	39	20	19	16	16	18	19	20	17	17	17	34	35	35	35	35	31	33		PS			
	75	86	71	67	63	81	81	81	85	93	79	93	89	76	71	87	150	147	119	119	106	142	135	135	135	188	141	137	129	145	136			Q x 100			

Figure 109: Influence matrix for networking of an entrepreneurial organisation with the global business environment⁴⁴⁶

The market innovation variable (number 2) features a very high active sum with regard to the entrepreneurial organisation. Thus, it is possible here to identify a highly proactive lever on the system: market innovation strongly influences the other variables and therefore the total system. The organisational evolution (number 3), innovation and learning culture (number 10, 12) and human resources variables (number 13) also exhibit high active sums. Thus, it becomes clear according to this analysis that the strategic variable of market innovation and organisational evolution, supported by an innovation and learning culture, and human resources, can particularly represent a proactive entrepreneurial orientation (see figure 110).

In terms of the global business environment, looking at the active sum of the relevant variables (number 17 to 32) it becomes clear that changes in the micro environment in particular determine the dynamics of the system (see figure 110): Changes in the industry (number 27), competition (number 28) and task environments (product and factor markets, number 29, 30, 31, 32) require the entrepreneurial organisation to have a strong, active market orientation. The variables of market innovation (number 2) and organisational evolution (number 3) can be identified as variables with high passive sums (see also figure 110).

⁴⁴⁶ The Q-Value (Q) is the quotient of active sums (AS) to passive sums (PS). The P-Value (P) is the product of active and passive sums.

5. Design concept for holistic intrapreneurship

Thus, these two variables are strongly influenced by the other variables and therefore by changes in the total system. Further examples of high passive sums are operational innovation (number 1) for the strengthening of efficiency, tangible (number 14) and intangible company resources (number 15) and human resources (number 13). Further levers for reactive adaptation are organisation design (number 4), incentive (number 5) and learning structures (number 6) together with an innovation (number 10) and learning culture (number 12). The macro and micro environment are less influenced by the system than they influence the system. Within this, the micro environment exhibits a greater reactive dynamic than the macro environment. The information (number 7) and communication culture (number 8) are driven by events in the system.

Overall, it becomes evident (see figure 110) that changes in the global business environment have greater effects on the entrepreneurial organisation (the variables 17 to 32 have a higher active sum than passive sum) vice-versa (the variables 1 to 16 have a higher passive sum than active sum) and thus require a strong adaptive orientation in the entrepreneurial organisation. At the same time, the potential of proactive entrepreneurial activities to strengthen viability (high active sum of the variables 2, 3, 10, 12, 13) and the dynamic forces of the micro environment (high active sum of the variables 27 to 32) becomes clear.

Amount (active)	List of variables	Amount (passive)
	1 Innovation in operations	44
56	2 Innovation in markets	65
45	3 Organisational evolution	63
30	4 Organisational design	45
27	5 Incentive structure	43
35	6 Learning structure	43
30	7 Information culture	37
30	8 Communication culture	37
34	9 Cooperation culture	40
40	10 Innovation culture	43
30	11 Guiding culture	38
38	12 Learning culture	41
41	13 Human Resources	46
32	14 Tangible Resources	42
32	15 Intangible Resources	45
34	16 Competencies	39
30	17 Global economy	20
28	18 Global technologies	19
19	19 Global regulatory system	16
19	20 Global society	16
19	21 Natural Environment	18
27	22 Local economy	19
27	23 Technology clusters	20
23	24 Local regulatory system	17
23	25 Local society	17
32	26 Local geographic situation	17
48	27 Industry situation	34
48	28 Competitive situation	35
48	29 Product / Service markets	35
45	30 Factor markets	35
45	31 Financial markets	31
45	32 Labour markets	33

Figure 110: Table of strength of influence within the sensitivity analysis for networking the entrepreneurial organisation with the global business environment

5. Design concept for holistic intrapreneurship

An entrepreneurial strategy taking into consideration *market innovation* for the development of new business and *organisation evolution* for strategic renewal is particularly supported by an *innovative culture* and *human resources* (high active and passive sum – see figure 110). Active sums and passive sums can be examined in combination for a further assessment of the variables (see Vester 2005:230-232) in the search for directional levers for the total system. The relationship (quotient) of active to passive sums (see also figure 109) reflects the active or reactive character of a variable (Q-Value), i.e., whether a variable within the system has something active to say or rather, whether they follow changes (reactive). The product of active and passive sums (P-Value) gives a clue to the contribution of a variable to the system's behaviour (see also figure 109). The higher the product, the more influence the variable has on the system (critical). The lower the product, the less the variable influences the system (buffering). Figure 111 shows the respective influence index of the system components from the theoretical exploration in this research via a sensitivity analysis for networking the entrepreneurial organisation with the global business environment.

ACTIVE	REACTIVE	Q-Value	CRITICAL	BUFFERING	P-Value
Highly active			Highly critical		
			2 Innovation in markets		3640
			3 Organisational evolution		2835
Active			Critical		
	26 Local geographic situation	1,88	13 Human Resources		1886
Little active			10 Innovation culture		1720
	17 Global economy	1,50	28 Competitive situation		1680
	18 Global technologies	1,47	29 Product/Service markets		1680
	31 Financial markets	1,45	Little critical		
	22 Regional economy	1,42	27 Industry situation		1632
	27 Industry situation	1,41	30 Factor markets		1575
	29 Product/Service markets	1,37	12 Learning culture		1558
	28 Competitive situation	1,37	6 Learning structure		1505
	32 Labour markets	1,36	32 Factor markets		1485
	24 Local regulatory system	1,35	1 Innovation in operations		1452
	25 Local society	1,35	15 Intangible Resources		1440
	23 Technology clusters	1,35	31 Financial markets		1395
Neutral			9 Cooperation culture		1360
	30 Factor markets	1,29	4 Organisational design		1350
	19 Global regulatory system	1,19	14 Tangible Resources		1344
	20 Global society	1,19	16 Competencies		1326
	21 Natural environment	1,06	5 Incentive structure		1161
	10 Innovation culture	1,06	Neutral		
	12 Learning culture	0,93	11 Guiding culture		1140
	13 Human Resources	0,89	8 Communication culture		1110
	16 Competencies	0,87	7 Information culture		1110
	2 Innovation in markets	0,86	Weak buffering		
	9 Cooperation culture	0,85	17 Global economy		600
	6 Learning structure	0,81	26 Local geographic situation		544
	7 Information culture	0,81	23 Technological clusters		540
	8 Communication culture	0,81	18 Global technologies		532
	11 Guiding culture	0,79	22 Local economy		513
	14 Tangible Resources	0,76			
	1 Innovation in operations	0,75			

Figure 111: Influence index in the sensitivity analysis for networking the entrepreneurial organisation with the global business environment

5. Design concept for holistic intrapreneurship

Market innovations, organisational evolution, human resources, innovation culture, competition and the product markets are important for the system's behaviour. In chapter 5.3.1.3, the next step of the research is carried out in order to describe the attributes of the variables in the total system (entrepreneurial organisation and environment) using a two-dimensional diagram with the active and passive sum of the variables.

5.3.1.3 The role of the key variables in the system

It is possible to establish the position of each individual variable and see what the effect on the system in focus is (active, passive, critical or buffering)⁴⁴⁷. With this, critical points and levers can be identified, the character of the system can be observed and hints on strategy can be derived⁴⁴⁸. The general cybernetic interpretation of role distribution of the relevant position in a system is shown in figure 112.

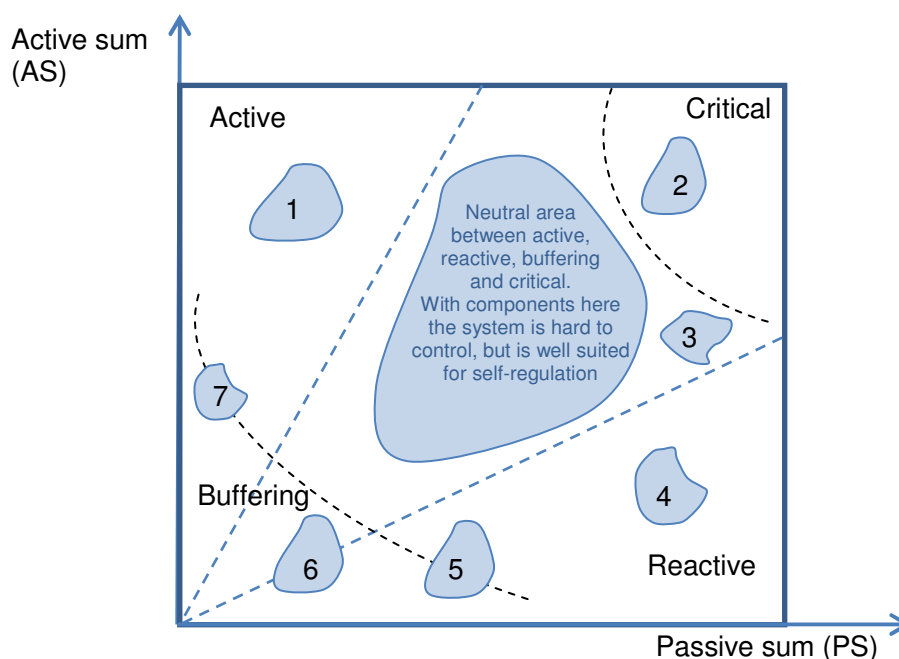


Figure 112: Interpretation of role distribution according to Vester⁴⁴⁹

⁴⁴⁷ According to Vester (2005:234-238) the 50 fields each have a general description by way of a cybernetic illustration allocated to them. The positions of the individual variables result from the total network so that each variable receives a special position.

⁴⁴⁸ According to Vester (2005:195) in specific cases and using interactive workshops, this evaluation gives indications for a (recursive) correction of the choice and definition of the variables.

⁴⁴⁹ Vester (2005:235). Interpretation: 1st area for shift levers which stabilise the system following a successful change; 2nd area for accelerators and catalysators that are suitable for starting things off as initial igniters; 3rd Critical-reactive area; 4th area of cosmetic corrections (treatment of symptoms); 5th area of agent indicators, suited for experiments; 6th area of unnecessary involvement; 7th area of weak shift levers with few side effects.

5. Design concept for holistic intrapreneurship

The sensitivity analysis in this research for networking the entrepreneurial organisation with the global business environment shows that the internal variables market innovation (number 3), organisational evolution (number 3), human resources (number 13) and innovation culture (number 10) are critical for the development and regulation of the presented system (see figure 113). These variables can be used for initial ignition and as an accelerator for development of the organisational system (high active sum) as well as for adaptation (high passiv sum) to a changing competitive situation (number 28) and dynamic product or service markets (number 29). Location decisions and conditions are important for activities (number 26).

With the sensitivity analysis thus far, it was possible to describe the individual components of the networking between the entrepreneurial organisation and the business environment and to clarify the role of the individual variables. This framework can be used to determine the components and their role in specific cases and to develop a specific interrelationship⁴⁵⁰. In the next chapter, the interplay of all relationships is described. This research process uses a qualitative framework and a method of aggregation to compact the system (Bossel 2004).

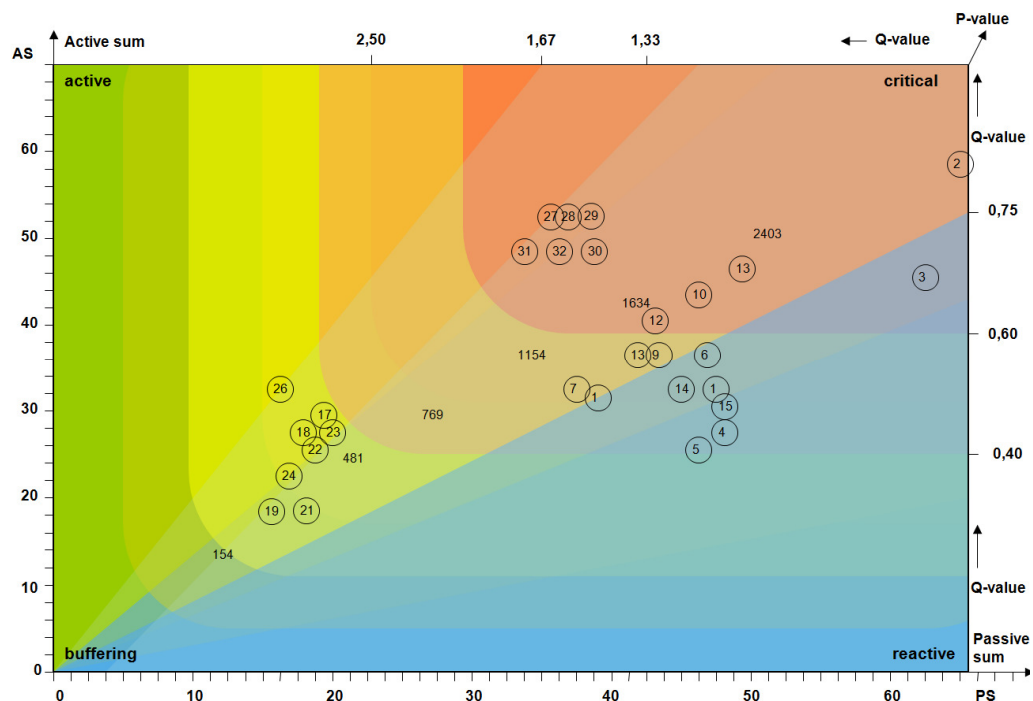


Figure 113: Role distribution of variables in the sensitivity analysis for networking the entrepreneurial organisation with the global business environment

⁴⁵⁰ For an examination of interrelationships with effect chains and feedback in the framework of the sensitivity model see Vester (2005:239-263).

5.3.2 Reduction of complexity and qualitative system model

On the basis of the considerations and examinations in the previous section, in the following section the fundamental relationships for reducing the complexity of the system specification are investigated through aggregation and transfer them into a qualitative system model via a word model⁴⁵¹. Additionally, a word model is formulated in section 5.3.2.1 and the fundamental system relationships are outlined; in section 5.3.2.2, a qualitative system model is derived.

5.3.2.1 Statement of problem, purpose of model and reduction of complexity

To specify the interaction and networking between the organisation and the environment on an aggregate level and to clearly show the lever for intrapreneurship, this section outlines a qualitative system model of the viable entrepreneurial organisation in a dynamic global business environment. In order to secure viability, entrepreneurial organisations recognise and shape the networking of the organisation with the environment (externally produced dynamic) and the momentum within the organisation (internally produced dynamic)⁴⁵².

In terms of implementing entrepreneurial strategy, the entrepreneurial momentum is particularly supported by the four levers for intrapreneurship, these being entrepreneurial strategy, entrepreneurial structure, entrepreneurial culture, and (current and future) resources and competencies.

⁴⁵¹ This procedure is focused on Bossel (2004).

⁴⁵² For fundamental systems dynamics see, inter alia, Bossel (2004:40-50,231-250). To secure the viability of an organisation, he defines six basic key values which accord with the characteristics of the system environment: 1. The key value of *existence* in the normal (relatively stable) environment requires the organisation to realise a purpose for the system; 2. The key value of *effectiveness* in an environment of scarce resources requires efficiency from the organisation in its own processes and in its interaction with the environment; 3. The key value of *freedom of action* in an environment characterised by variety requires a variety of (decentral) behaviours from the organisation in order to be able to react to various challenges; 4. The key value of *security* in an environment characterised by insecurity from random fluctuations requires extensive independence from unstable environmental factors and adaptations in internal processes as well as shaping the external environment; 5. The key value of *ability to change* in an environment characterised by change requires from the organisation conduct and structure changes or also changes of identity for the securing of viability and development of the organisation; 6. The key value of *co-existence* in a world with network structures with division of labour and partnerships requires from an organisation consideration of the interests and development of their partner in their own behaviour. In order to secure long-term viability and development competence, organisation systems must fulfil all key values to the minimum degree so that the key values and assistance with decisions for designing entrepreneurial organisations can be used.

5. Design concept for holistic intrapreneurship

The qualitative model describes this networking and momentum and shows how the entrepreneurial organisation uses networking and interaction so that it can seize chances and counter threats from the external business environment. With this, the exploration shows how entrepreneurial activities secure the viability of the organisation in synergy with the business environment taking into account feedback loops for the achievement of a stable dynamic. The following model⁴⁵³ for further discussion also imparts orientation knowledge for the specific dynamic design of an entrepreneurial organisation in a business environment in change. The dynamic and networked global business environment presents opportunities and threats for an entrepreneurial organisation. To secure the organisation's viability in a complex business environment, the organisation has to develop its interaction with the environment in a focused way and use the existing network. Development of the four internal levers of strategy, structure, culture and (current and future) resources and competencies promotes a momentum inside the organisation and also promotes the entrepreneurial orientation of the organisation and its actors. The entrepreneurial actors (in decentralised units, top managers) pursue opportunities and threats from the dynamic business environment.

The entrepreneurial organisation can exploit its internal entrepreneurial momentum together with changes in the external business environment for proactive and reactive entrepreneurial activities. The viability of the organisation can be retained as a permanent feature by dynamically exploiting opportunities and countering threats in synergy with the external business environment. The characteristics of the business environment determine the design of the four levers and the required intensity of the organisation's entrepreneurial orientation. The business environment can be sub-divided into a micro environment and a macro environment. For the purposes of the analysis, the general macro environment can be sub-divided into the four segments of political-legal, socio-cultural, technological and economic framework. The dynamic of change is driven by globalisation and technological developments. The micro environment is divided into the industry, competition and task environments.

⁴⁵³ This procedure goes back to Bossel (2004), who describes such a model as *word model*.

5. Design concept for holistic intrapreneurship

The industry and competition environments can be sub-divided into segments of market entry barriers, threats from substitution, industry life cycles and product life cycles. The task environment can be sub-divided by the parameters of the market power of suppliers, market power of customers, the financial market and the labour market. The general macro environment has a particular influence on the industry, the competition environment and the task environment and, also via the formation of common mental models of the macro environment, on the organisation. The micro environment represents an external operational field for entrepreneurial activities in existing businesses and a source of new opportunities and risks which interacts directly with the entrepreneurial organisation.

For the reduction of complexity, the following eight fundamental system elements can be identified from the system specification, applying aggregation:

1. General macro environment (globalisation, technological development);
2. Specific micro environment: Industry, competition and task environments (competitive pressure);
3. Opportunities (and threats) for new entrepreneurial activities (renewal);
4. Threats (and opportunities) for existing businesses (optimisation);
5. Entrepreneurial activities of decentral units;
6. Entrepreneurial top management;
7. Entrepreneurial momentum (strategy, structure, culture, current and future resources and competencies);
8. Viability of the organisation;

It is possible to define 16 direct activity relationships within the individual elements:

1. Changes in the general business environment increase the dynamic in the industry, competition and task environments (micro environment);
2. An increasing dynamic in the industry, competition and task environments brings new entrepreneurial opportunities for entrepreneurial organisations and form the potential for renewal;
3. An increasing dynamic in the industry, competition and task environments brings new threats and increases competition and cost pressure (necessity for optimisation) for existing businesses;

5. Design concept for holistic intrapreneurship

4. Entrepreneurial organisations use new opportunities with time delays and change the micro environment by the process of creative destruction: New products squeeze out old products, new industries squeeze out old industries⁴⁵⁴;
5. Entrepreneurial organisations counter threats in existing businesses via optimisation with time delays and achieve a short-term competitive advantage in the micro environment⁴⁵⁵;
6. Entrepreneurial decentralised units realise activities for optimisation;
7. Entrepreneurial decentralised units realise entrepreneurial activities for renewal;
8. If opportunities are realised, the competition dynamic in the industry (with maturity) increases (profits attract potential competitors/limits of growth);
9. If entrepreneurial activities for renewal are realised, (long-term) viability is strengthened;
10. If entrepreneurial activities for optimisation are realised, (short-term) viability is strengthened;
11. An entrepreneurial orientation of top management strengthens (via direct management processes) entrepreneurial activities for optimisation;
12. An entrepreneurial orientation of top management strengthens (via direct management processes) entrepreneurial activities for renewal;
13. An entrepreneurial orientation of top management strengthens (via structural management) entrepreneurial momentum;
14. If the entrepreneurial momentum increases, entrepreneurial orientation of top management is also strengthened;
15. If entrepreneurial momentum increases, the entrepreneurial activities of the decentralised units are strengthened;
16. Entrepreneurial activities in decentralised units strengthen entrepreneurial momentum.

In the following chapter, it is possible to derive from these connections a qualitative model for specification of the fundamental activity relationships.

⁴⁵⁴ According to Senge (2003:118-142) entrepreneurial activities for renewal in dynamic environments can be described as a *fundamental solution* to secure the viability of the organisation.

⁴⁵⁵ According to Senge (2003:131-142), entrepreneurial activities in existing businesses in dynamic environments can be stereotyped as *problem postponement* and serve to gain time for the realisation of the basic innovation solutions.

5.3.2.2 Model of a viable entrepreneurial organisation

The system structure developed in the previous section is described and illustrated in this section using a graph for specification of the interaction and networking of the entrepreneurial organisation with the business environment (see figure 114). Viewing the entrepreneurial organisation as an open system (Duncan 1975, Schein 1980), the entrepreneurial focus is on the exchange of inputs and outputs (products, services, information) between the organisation and its macro and micro environment as well as on the internal adaptation of the organisational goals and architecture to support this exchange (Thompson and McEwen 1958, Schreyögg 1995, Thompson 2003, Aldrich 2008). The dynamics of the business environment influences especially the technological basis of production and the market situation (Burns and Stalker 2001) for new and established businesses.

The situation in the business environment determines the structure of the entrepreneurial organisation (Chandler 1962, Mintzberg 1993) to create entrepreneurial activities and to achieve a strategic *fit* between different parts of the organisation⁴⁵⁶ (Dess and Lumpkin 2003) as well as between the organisation and its environment (Kieser and Kubicek 1983). The entrepreneurial organisation acts to develop new competencies and resources to foster entrepreneurial activities induced through the top management as well as through decentral autonomous entrepreneurial behaviour (Hitt et al 2005, Czernich and Zander 2009). Karimi et al (2010) classify the prerequisites of entrepreneurial behaviour in the three categories organisational factors, behavioral factors, and environmental factors. Thus, the entrepreneurial behaviour of the organisation can be stimulated through a changing external business environment (Johnson and Scholes 1993) as well as through an internal dynamic (Schumpeter 1950 and 2006, Bossel 2004) based on organisational levers like entrepreneurial strategy, structure, culture, resources and competencies. The entrepreneurial organisation as a whole living organisation learns about and adapts to the changing environment, builds sustainable and constructive relationships within the organisation and with entities in the external business environment (De Geus 2002).

⁴⁵⁶ Evolutionary economics is also concerned with the relationship between the individual and the organisation and also between the organisation and the environment - see inter alia, Beschorner and Priem (2000).

5. Design concept for holistic intrapreneurship

From the systems, strategy and contingency literature, it is possible to deduce relevant variables for the qualitative model⁴⁵⁷ of the vital entrepreneurial organisation and its business environment as a dynamic landscape for opportunities and risks. The entrepreneurial organisation has to manage the exchange between the organisation and the external environment in established and new businesses⁴⁵⁸ to stay vital, as well as to create an entrepreneurial posture as a momentum of its own. The general macro environment contains the global and local political/regulatory, economic, social and technological/ecological dimension. The industry and task environment contains the relevant variables of the micro environment such as industry and competitive dynamics, as well as the buy-side and the sell-side of the entrepreneurial organisation.

This helps to identify the indirect and direct influences of the external environment on the organisation (Palmer and Hartley 2002). The general macro environment influences the industry and the competitive environment directly and the organisations operating in this industry more indirectly. The relevant micro environment with industry, competitive and task environment interact with the entrepreneurial organisation more directly (Osborn et al 1980). Changes in the micro environment have an influence firstly on the entrepreneurial opportunities and threats in existing businesses. Here, optimisation within existing businesses and thus efficiency improvements are at the forefront. Entrepreneurial organisations react to increasing competitive pressure by the use of new technology for process innovations. In time, these bring about an improvement in cost efficiency and thus improved competitiveness in existing markets and with existing products.

⁴⁵⁷ There is no direct link between the two complementary methods used in the research process sensitivity analysis (chapter 5.3.1) and qualitative analysis (chapter 5.3.2). The variables identified in the total system (chapter 5.3.1) serve as an input to the theoretical exploration in the aggregation process to deduce the qualitative model in chapter 5.3.2. Both analyses give complementary insights (sensitivity analysis on the role of the variables in the total system, qualitative analysis on the networking of the total system on an aggregated level to derive the basic interaction between the entrepreneurial organisation and the global business environment).

⁴⁵⁸ For a brief characterisation of new entrepreneurial ventures compared to small established businesses, see Nieman (2006). According to Malik (2006:246-256), management of new businesses is not significantly different from management of existing ones. New businesses must be uncompromisingly defined in terms of their market and a greater focus must be placed on the realisation of ideas. Large companies would then have the possibility to conduct permanent innovations systematically taking into account certain fundamental requirements for success. As examples, he names market leadership, room for new creations, separation of old from new, seeking opportunity from problems, positive evaluation of deviations from plan, experimentation.

5. Design concept for holistic intrapreneurship

Therefore, an important contribution is made to the (short-term) viability of the organisation. For the long-term viability⁴⁵⁹ of the organisation, it is necessary to identify the current situation and the upcoming changes and trends in the business environment and to develop existing or new markets with new products as quickly as possible. Competitors that follow in turn increase the competitive pressure such that in industries that are just establishing themselves, entrepreneurial activities for optimisation become more and more necessary⁴⁶⁰. To secure the long-term viability of the organisation⁴⁶¹ in a dynamic environment, entrepreneurial organisations should continuously generate new and marketable products and develop new markets. New opportunities in international markets result from globalisation, although competitive pressure exhibits an increasingly global dimension. The top management and decentralized, autonomous entrepreneurial units (Axelrod and Cohen 2000)⁴⁶² induce entrepreneurial activities (Heinonen 2007). These activities are coordinated and stimulated through the organisational design and the corresponding internal dynamics (Hayek 1986:57-79, Probst 1987, Stacey 2011). These internal entrepreneurial dynamics⁴⁶³ depend on:

- The entrepreneurial strategy in established and new businesses and the evolution of the organisations mission over time;
- The entrepreneurial architecture⁴⁶⁴ with the formal and informal structures as well as the incentive and learning structures;

⁴⁵⁹ Bollmann (2001:17) requires a strong focus on long-term viability in complex environments.

⁴⁶⁰ Burke et al (2010) thus require a combination of competition strategies in existing markets (to slow down the fall in profits) using existing means for the conquest of new markets.

⁴⁶¹ Simon (1996:19) describes the securing of long-term company existence as the most important company objective. He studies unknown world market leaders and ascertains that market leadership is attained if many activities are made just a little bit better, a global marketing of products with higher quality for narrow markets results, greater innovativeness ensues and management teams with greater continuity and long-term objectives are in evidence. Simon (2007) then ascertains that proximity to customers is a central element of the successful *hidden champions* under examination and who increasingly offer systems solutions. Driving forces for innovation are the market and technology together with decentral structures where high performers are free to behave entrepreneurially. In addition to this there are ambitious company objectives, a high degree of vertical integration where the customer is used as an important source of ideas. With national locations there is a motivational mutual dependence between the company and the employees.

⁴⁶² According to Vannotti (1992:40) intrapreneurs must on the one hand be disciplined and follow a vision, but they must also be independent and successfully interpret the vision.

⁴⁶³ According to Vermeulen (2010) the internal momentum can in particular be strengthened by a personal dynamic.

⁴⁶⁴ For Vanotti (1992:39-40) the design of the organisation shape is of great significance. However, the actors and the commonly held vision are key for effective intrapreneurship. Entrepreneurial actors carry, then, a restricted responsibility for decisions, are part of the whole, bear restricted personal risk in terms of their own careers and identify with the organisational unit they are responsible for.

5. Design concept for holistic intrapreneurship

- The entrepreneurial culture⁴⁶⁵ with a focus on information, communication, cooperation, innovation, learning, identification and motivation⁴⁶⁶;
- The entrepreneurial exploitation of resources and competencies⁴⁶⁷.

The qualitative model (see figure 114) links the entrepreneurial organisation with its environment and presents the exchange through entrepreneurial activities in new and established businesses on a highly aggregated level.

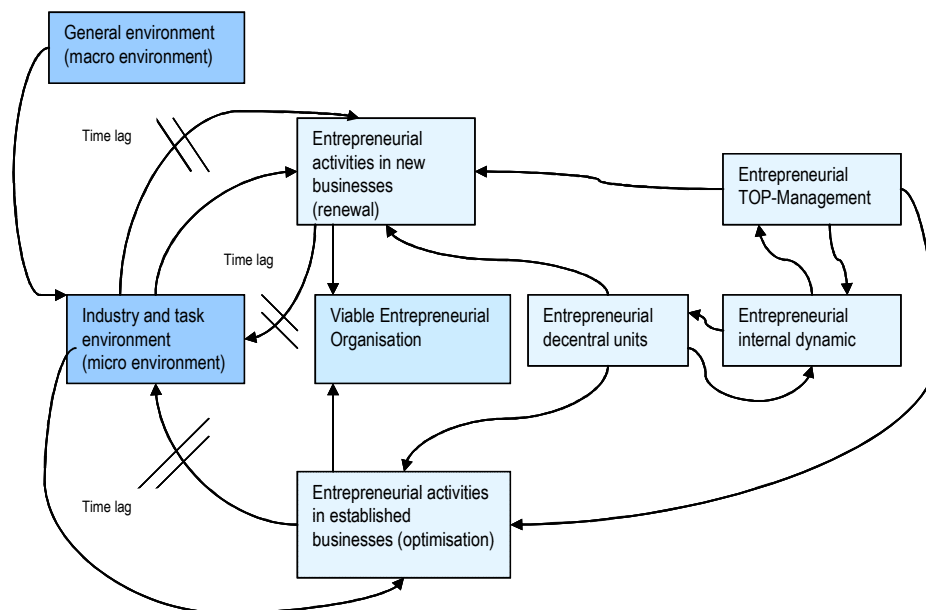


Figure 114: The viable entrepreneurial organisation and the business environment⁴⁶⁸

⁴⁶⁵ According to Rathe and Witt (2000:160-165), common mental models and collectively shared interpretation templates arise from the individual and collective learning processes. For the growth process in an organisation, the ability to generate and use knowledge is decisive.

⁴⁶⁶ Vannotti (1992) sees a commonly held vision and mutual trust as the basis with which entrepreneurial actors as agents of change responsibly shape product innovations and changes and thereby extend their competencies. For this, they need, in particular, freedom of action within laid-down guidelines, flat hierarchies and direct reporting, decentralisation of responsibility and decision-making, the controller as co-pilot, error tolerance, open access to information and recognition of and willingness to take risks in the company.

⁴⁶⁷ For the influence of top management on intrapreneurship, see also Schmelter (2009). Mintzberg (2009) states that in most cases, employees only need have a minimum of management and that the development of a feeling of togetherness should be at the forefront of management tasks.

⁴⁶⁸ The model considers in a complementary way both variants for steering the entrepreneurial organisation through entrepreneurial activities: The realisation of decisions and measures by instruction (in less complex environments) as well as by systemic evolutionary self-regulation within the context of moulded advantageous and guiding conditions (effective momentum in complex environments). For a comparison of both basic paradigms of *construction* and *evolution* - see Malik (2004:101-150). The time lags via theoretical exploration introduced in the model reflect patterns in the real world, where there is no perfect information and information gathering and reactions need time. Systems thinking helps the entrepreneurial organisation to be aware of such existing structures and archetypes (Senge 2006:92-112): In established business, the competitive and industry environment gives constant pressure for (lagging) adaptation (archetype shifting the burden); new businesses (lagging innovation) can be interpreted as the fundamental solution, but the schumpeterian gains of innovation attract new competitors (archetypical limits to growth) and brings (lagging) need for adaptation (the business evolves to an established business).

5.4 Conclusion: Building blocks for the vital entrepreneurial learning organisation

Firstly, today's business environment demands intrapreneurship and innovation from companies, embedded in a holistic management approach. Secondly, successful intrapreneurship requires a strong focus on the external and internal business environment to find and work on entrepreneurial opportunities and risks to build new competitive advantages, as well as to adapt the firm to a changing and turbulent world. Entrepreneurial firms have to achieve a dynamic *fit* between the firm's internal configuration (organisational architecture, culture, resources and capabilities including technology) and the strategic exchange with their external business environment (in both directions). Therefore, entrepreneurial organisations can use and develop internal entrepreneurial systems dynamics to support emerging entrepreneurial activities as well as an explicit initiating of entrepreneurial activities through the top management and through decentralized unities and venture teams (see Beugelsdijk 2007).

Holistic intrapreneurship means to act on three basic entrepreneurial tasks:

- (1) Entrepreneurial collection of information: Identifying opportunities and risks;
- (2) Entrepreneurial creation of the future: Entrepreneurial decisions for efficiency, adaptation and innovation;
- (3) Building the organisational architecture of the entrepreneurial organisation.

There is no one best way to design an entrepreneurial organisation, so every organisation has to build their own organisation's design using cultural diversity in global market places. Entrepreneurial organisations adapt this organisational architecture and the strategies for interacting with the external business environment permanently to respond and act on the continuous change in the macro and micro environment. The conceptual role model of the entrepreneurial firm introduced here as a first building block is a general framework to address the entrepreneurial roles that a firm has to fulfil in a specific way to perform an entrepreneurial orientation.

5. Design concept for holistic intrapreneurship

This unique forming (entrepreneurial shaping of the organisation) depends heavily on the cultural context and the specific environment in which it operates (see Scheepers, Hough and Bloom 2007). The conceptual model defines five entrepreneurial roles:

- (1) Knowledge manager - scanning, monitoring, forecasting and assessment: understand the (future) global business environment and the means for the organisation;
- (2) Idea manager - thinking up new things: identify new opportunities and risks in the global business environment
- (3) Innovation manager - doing new things: put new opportunities into practice and manage risks;
- (4) Entrepreneurial manager – carrying out established business with an entrepreneurial posture: managing optimisation, risks, flexibility and adaptation;
- (5) Synergy manager – holistic management of resources and activities: organisational design for job-sharing, specializing and learning, coordination and motivation with harmonized organisational and individualistic objectives, as well as taking advantage of (cultural) diversity.

To get a holistic picture of the environment and for an entrepreneurial collection of meaningful information, it is useful to focus on the second building block developed – the framework of the global business environment with four dimensions:

- (1) Geographic dimension of the business environment: how global are the current and future operations and industries? Where are the current and future markets and playing fields?
- (2) Fields of influence and interaction between the organisation and its business environment: how can one describe and understand the business environment? What is the operational (micro) and what is the relevant general (macro) environment?
- (3) Uncertainty in the business environment: how dynamic and complex is the environment? What entrepreneurial intensity is sufficient?
- (4) Cultural dimension of the business environment: how can the entrepreneurial organisation use the diversity? What adaptations are required?

5. Design concept for holistic intrapreneurship

The Model of a viable entrepreneurial organisation describes, as a third building block, the exchange between the entrepreneurial organisation and its external environment (entrepreneurial creation of the future) in both directions. Entrepreneurial activities in established businesses help to improve the short-term viability of the entrepreneurial organisation. The long-term viability depends on a continuous stream of new businesses, especially in a globally competitive technological business environment. The model includes structural elements to support positive entrepreneurial dynamics. Thus, the three entrepreneurial tasks, linked to the three theoretical constructs of the role model, the framework for the business environment and the qualitative model of the viable entrepreneurial organisation can together be used to describe together the role of intrapreneurship in a global business environment. The role model and the three basic entrepreneurial tasks can be used as a guideline to evaluate and assess the basic actions to achieve an entrepreneurial posture in technology firms in a holistic way. It is also a starting point for building a specific firm model in a unique cultural context. This model may also be extended to include cross cultural effects. Using the framework developed for understanding the global business environment and the model of the viable entrepreneurial organisation in its environment, the entrepreneurial organisation can identify the specific lever for long-term vitality.

In chapter 6, the theoretical findings are examined in detail by an empirical study taking a look at the practice of globally active technology companies (see figure 115). Firstly, there is a cross-company written survey of managers and employees on the role of intrapreneurship (study 1 in chapter 6.1) and a written survey of managers and employees in a highly innovative company as a reference group (study 2 in chapter 6.2). Subsequently, experts are questioned about the implementation of the role model in a specific organisational context and the information gathered is evaluated qualitatively with a cross-company focus (study 3 in chapter 6.3). The findings from the studies are used to complement, by way of a digression (see chapter 6.4), the design concept for holistic intrapreneurship (see chapter 5) using an outline for the development and strengthening of a vital entrepreneurial learning organisation.

5. Design concept for holistic intrapreneurship

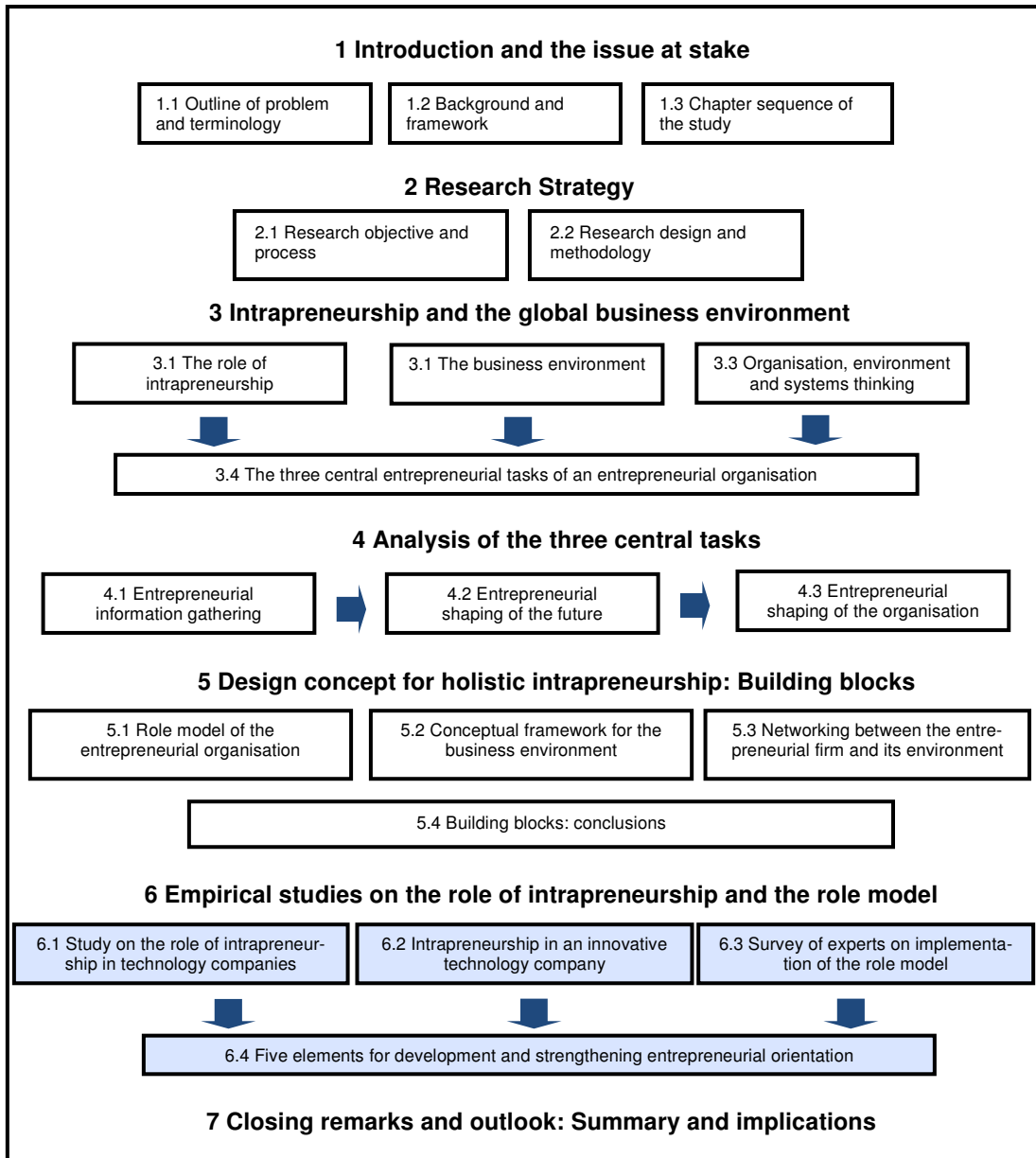


Figure 115: Empirical exploration on the role of intrapreneurship and the role model

6. Studies on the role of intrapreneurship and on the role model

The empirical study in this chapter looks at the role of intrapreneurship and the implementation of the developed role model in a number of technology companies operating globally. It also describes the resulting consequences outlined in five elements for development and strengthening entrepreneurial orientation to synthesize the findings of the study. In line with Cooper and Schindler (2010:80-99), a methodical research design has been selected with which it is possible, in a global business environment, to reflect in company practice the three central tasks of an entrepreneurial organisation and the role model of an entrepreneurial organisation developed in the synthesis (chapter 5). The role model can help to examine the entrepreneurial orientation of the organisations surveyed, taking their environments into account, and to consider the five roles of an entrepreneurial organisation for implementation of the three central entrepreneurial tasks in the light of what happens in practice.

The starting point of the study is a management dilemma characterised by the fact that companies have to continuously and systematically identify and process opportunities and risks in an increasingly dynamic and complex business environment. Ever more internal and external adaptations to changes in the environment have to be proactively initiated and entrepreneurial decisions that are necessary for long-term viability have to be taken, keeping in mind products, markets and technology. In order for the required decentralised decisions to be effective for the good of the whole organisation, it is not enough for only strategy and the business environment to be developed coherently, the same has to happen with the organisation culture and the organisation architecture. The individual interests of the individual actors have to be in tune with the objectives of organisation. In order to resolve the management dilemma, organisations have to fulfil in practice the three central tasks of an entrepreneurial organisation derived from the literature study in chapter 3 and which are analysed in general terms in chapter 4. The management question that follows is; how can the necessary entrepreneurial orientation of the whole organisation be attained? In response to this question, the role model in interaction with the external business environment can provide the necessary orientation.

6. Studies on the role of intrapreneurship

For holistic intrapreneurship, organisations must design the five roles using division of labour such that the three central tasks of an entrepreneurial organisation are realised in a focused way and in interaction with the business environment. Entrepreneurial information gathering, shaping of the future and entrepreneurial organisation design must be fulfilled interactively in such a way that the viability of the entrepreneurial organisation is permanent. The theoretical findings developed in chapters 3 to 5 and which were compacted into the role model of an entrepreneurial organisation, are used in the empirical study to ascertain some indicators on the role of intrapreneurship and implementation of the role model as an indicator for holistic entrepreneurial orientation in practice.

The empirical research design that was conceived and implemented for this relates to three consciously selected random samples and contains three studies of the implementation of intrapreneurship in technology companies in the Bodensee-Oberschwaben region of southern Germany (see Appendix A.4). As a convenience sample⁴⁶⁹ (see Cooper and Schindler 1998:245) for the first (quantitative) study, 100 managers from various management levels in 50 different technology companies were selected; they are or were all following a general management course (MBA). This sample was chosen because the participants' companies represent a cross-section of technology companies in the Bodensee-Oberschwaben region. The survey was carried out in two stages. As a convenience sample for the second (quantitative) study, 75 managers and employees from a highly-innovative company in the Bodensee-Oberschwaben region were surveyed (as a reference group), these representing a cross-section of employees with management and project responsibilities in the organisation. The convenience sample for the third (qualitative) study consisted of twenty managers from technology companies in the Bodensee-Oberschwaben region.

⁴⁶⁹ The empirical research on the role of intrapreneurship in companies is sensible. Thus, the research design was chosen to study the role of intrapreneurship and to identify deficits in implementation of the developed role model (see chapter 5.1) in a specific (cultural) context and on an aggregated level (see chapter 6.1 and chapter 6.2.). Chapter 6.3 explores (also on an aggregated level) how companies in the Bodensee-Oberschwaben region implement the five roles of the role model. Further case study research can complement this pioneering (more general) study using the new role model to investigate how entrepreneurial organisations implement the role model in detail and what can be learnt from best practices. Since the author of the study is a member of the MBA programme management board, it was possible to use this sample for the study on an aggregated level.

6. Studies on the role of intrapreneurship

The managers represent the spheres of strategic personnel and company development in their organisation. The organisations surveyed are members of the programme advisory board for continuing education at the Ravensburg-Weingarten University. Data collection in the first and second studies was via a written questionnaire with a rating scale (1 – yes, full agreement to 5 – no agreement), for the sample with managers and employees from various technology companies was done by e-mail survey⁴⁷⁰, and in the sample of managers staff in an innovative technology company (reference group), the data was collected personally. Data collection for the third (exploratory) study (experts survey for implementation of the role model) was done using a questionnaire and interview guidelines. Data recording and analysis providing a basis for survey evaluation was achieved using the *inkidu* electronic survey system from the Ravensburg-Weingarten University.

The empirical studies in the Bodensee-Oberschwaben region give some important indications on the role of intrapreneurship and implementation of the role model. The specific design of the role model and thus for the design of the entrepreneurial division of labour, must be company-specific in each individual case and must take each respective context into consideration (especially the cultural ones). Chapter 6.1 shows how far the intrapreneurship concept presented here and an entrepreneurial orientation of technology companies in the Bodensee-Oberschwaben region are already in place with the purpose of resolving the management dilemma originating from entrepreneurial interaction with the business environment and achieving the long-term viability of the organisation. The evaluation of the reference group of managers and project workers in a highly innovative technology company in chapter 6.2 gives some additional insights. On the basis of the experts survey with managers from successful technology companies (via qualitative data analysis), chapter 6.3 outlines how the role model can be implemented in practice. The findings from the empirical studies place the five roles of intrapreneurship in the proactive adaptation of the organisation to changed framework conditions into a practical context and lead to further interesting and continuing company research projects for the implementation of the role model in specific contexts.

⁴⁷⁰ The e-mail survey method was chosen because there was already a permanent internet-based exchange with the sample participants and the appropriate contact details were already available.

6. Studies on the role of intrapreneurship

6.1 Study on the role of intrapreneurship in technology companies

In the written survey⁴⁷¹ (first study), various aspects of the entrepreneurial orientation (Pinchot 1988, Wunderer 2006) of and in technology companies from the Bodensee-Oberschwaben region are examined. There is an investigation of whether and in what form intrapreneurship plays a part in the companies studied. It is explored how far the characteristics of an entrepreneurial organisation already exist in the companies surveyed and what potential obstacles to intrapreneurship are present.

This provides hints on implementing the three central tasks of entrepreneurial information gathering, and shaping of the future and the organisation. In all the figures in this chapter m indicates the mean Likert score, s is the standard deviation and n indicates the sample size for the relevant questions.

With the help of the role model, the implementation of the five manager roles is considered. In the literature there is often a distinction between elite and collective intrapreneurship. It ensues from the survey that there is often employee potential for elite intrapreneurship. Individual intrapreneurs receive little support, however, from the organisations (see figure 116).

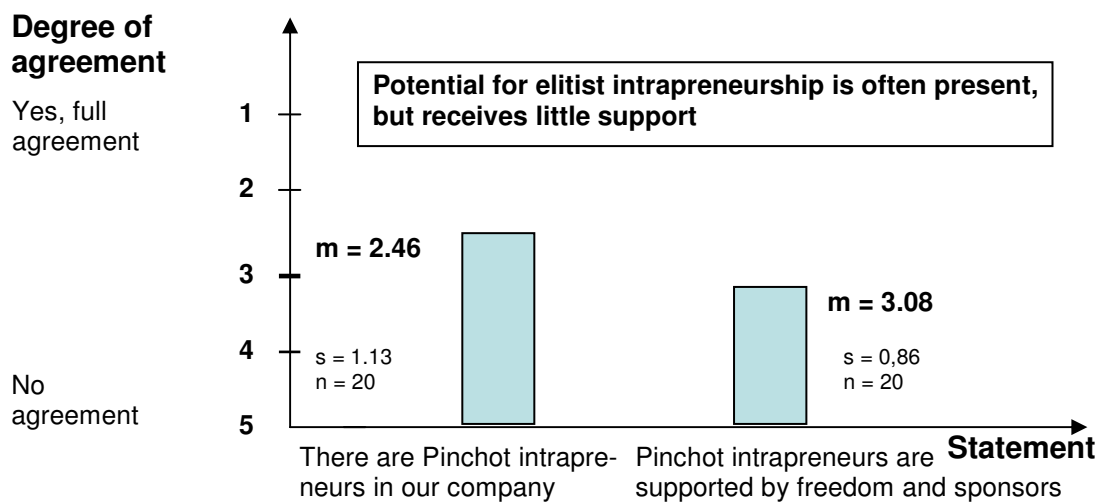


Figure 116: Potential of Pinchot intrapreneurs and degree of support in global technology companies in Bodensee-Oberschwaben region

⁴⁷¹ The response rate is 20 % (sample: $n = 20$). The values in the figures show the mean (m : arithmetic average). The average standard deviation (s) is 1.08.

6. Studies on the role of intrapreneurship

Managers in the technology companies in the Bodensee-Oberschwaben region are required to have an entrepreneurial orientation. However, it emerges from the survey that intrapreneurship at the level of managers is only rarely achieved. A basic entrepreneurial orientation is also expected from the employees but is rarely achieved. A lack of support for intrapreneurship by organisations certainly gives a clue of what is an important reason for this discrepancy (see figure 117).

Degree of agreement

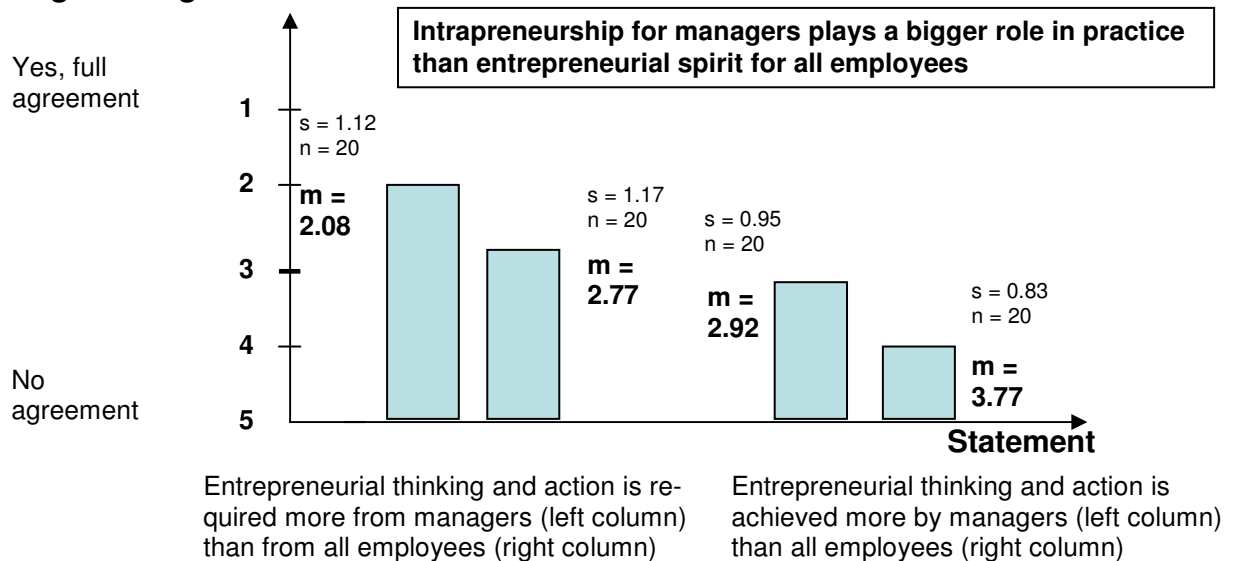


Figure 117: Elitist versus collective intrapreneurship in global technology companies in the Bodensee-Oberschwaben region

Thus, figure 117 gives compact information about the discrepancy between the required and achieved entrepreneurial orientation of managers and employees and makes it easy to see that entrepreneurial managers should play an important role in building and developing an entrepreneurial organisation. Entrepreneurial action as a community task attracts less agreement than intrapreneurship driven by managers (see figures 118 and 119). This is strengthened by the fact that managers only lend support to the entrepreneurial orientation of their employees to a minor degree (see figure 118).

6. Studies on the role of intrapreneurship

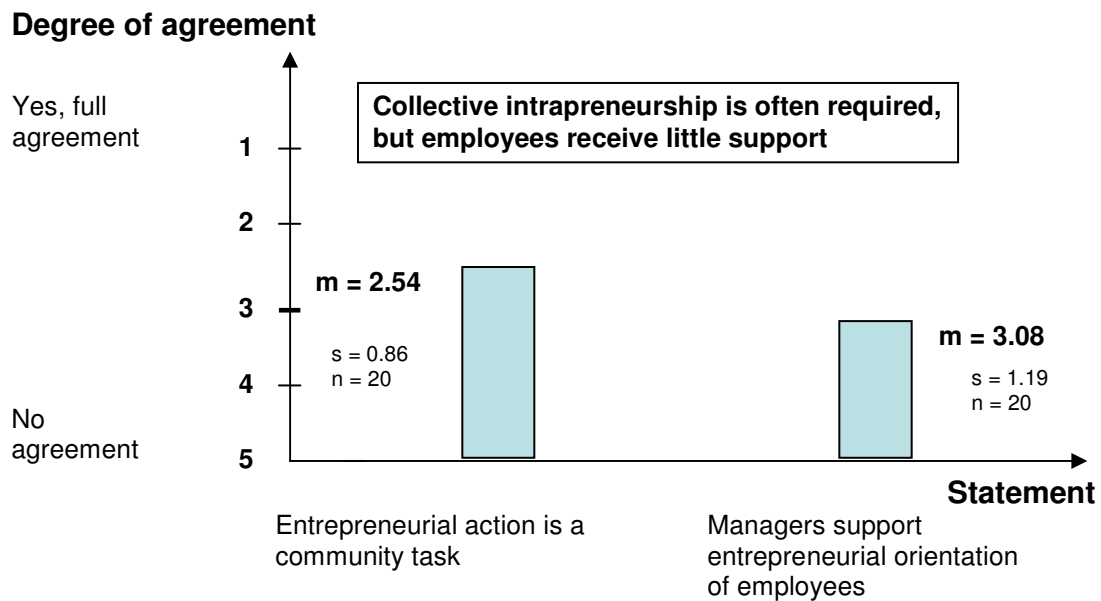


Figure 118: Entrepreneurial action as community task in global technology companies in the Bodensee-Oberschwaben region

It is possible to derive here ten characteristics of an entrepreneurial organisation from the literature study in chapter 3⁴⁷². As part of the empirical study, the managers surveyed evaluated their organisation against these ten characteristics, which implicitly include the three entrepreneurial tasks and five roles of an entrepreneurial organisation. Thus, these ten characteristics can serve as indicators of entrepreneurial orientation. The survey shows that, overall, there is only a low level of entrepreneurial orientation in the technology companies from the Bodensee-Oberschwaben region (see figure 119). The ten characteristics can be assigned to the three entrepreneurial tasks (see chapter 4) and to the role model (see chapter 5) in order to derive from the survey some implications on the role of intrapreneurship.

⁴⁷² These characteristics are not directly related to the theoretical analysis in chapter 4 or the model building in chapter 5. They follow on from a reflection on the description of intrapreneurship in the literature (see chapter 3 and the appendix). The first and second empirical study is realised in parallel to the theoretical research process in chapters 4 and 5. This makes it possible to enrich the theoretical (see the derived five elements for the development and strengthening of a vital entrepreneurial learning organisation in chapter 6.4) and empirical research process (see qualitative exploration on the role model in chapter 6.3).

6. Studies on the role of intrapreneurship

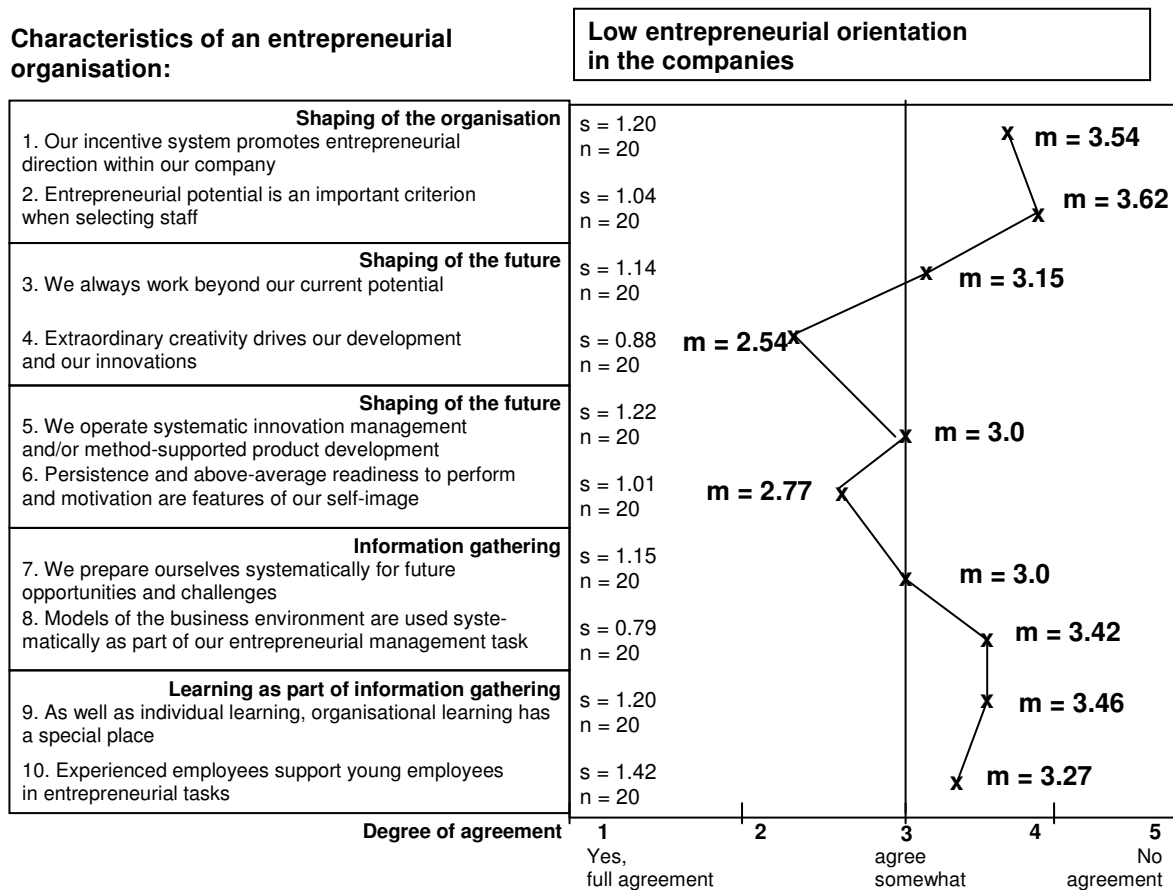


Figure 119: Entrepreneurial profile of global technology companies in the Bodensee-Oberschwaben region

Where the task of entrepreneurial shaping of the future (corresponding characteristics 3,4,5,6) is properly carried out in relative terms, there is inadequate outward orientation in the process of entrepreneurial information gathering (corresponding characteristics 7,8) and inadequate entrepreneurial organisation design (corresponding characteristics 1,2,9,10). Thus, the foundations for entrepreneurial shaping of the future and for an organisational *fit* between the three central entrepreneurial tasks are lacking. With regard to the role model, it is clear that the perception of the roles of idea finder and idea implementer (corresponding characteristics 4, 5, 6) and the role of entrepreneurial manager in existing businesses (corresponding characteristics 3, 6) is still relatively well rated. The roles of knowledge manager for opportunities and threats (corresponding characteristics 7, 8) and, in particular, the synergy manager (corresponding characteristics 1, 2, 9, 10) are inadequately applied, according to the study. This implicitly derived conclusions are to a large extent confirmed by the explicit monitoring in the survey (see figure 120) subsequent to implementation of the five roles of the entrepreneurial organisation.

6. Studies on the role of intrapreneurship

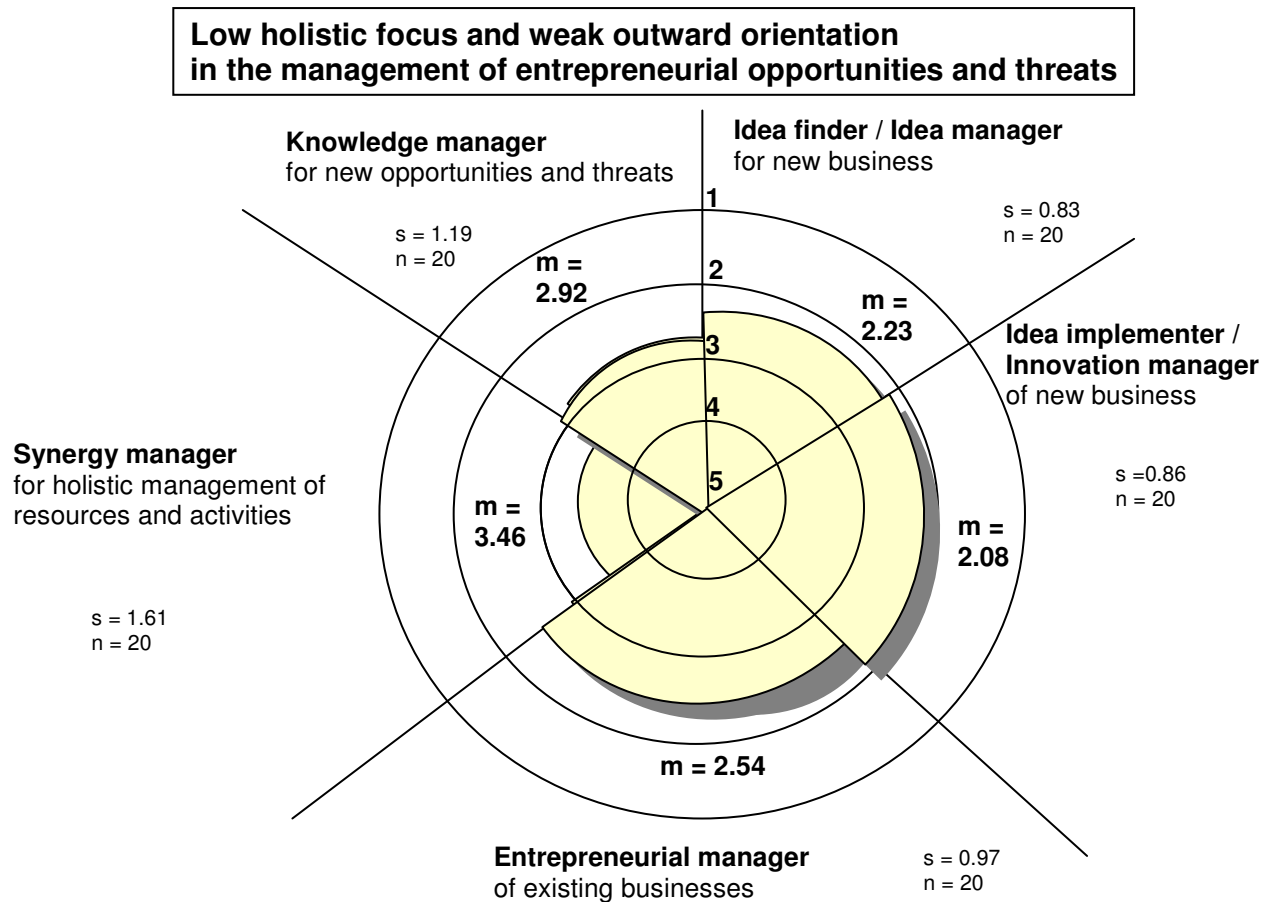


Figure 120: Manager roles in intrapreneurship system: Entrepreneurial profile of globally active technology companies in the Bodensee-Oberschwaben region

The study thus documents a management dilemma. The company particularly requires entrepreneurial orientation from its managers. This, however, was not achieved. Furthermore, managers only demand entrepreneurial orientation from their employees to a minor extent. It is, therefore, clear that as well as an inadequate structural organisation design, people management is not applied in a particularly supportive way in terms of attaining an entrepreneurial orientation in the company.

In the survey (see figure 121), it was possible to highlight three structural constraints. To some degree, the organisations are constrained by bureaucratic structures and lack of incentive in their entrepreneurial development. Inadequate definition of responsibilities and accountabilities was named as the biggest constraint. The exit of particularly entrepreneurial employees to start their own businesses was not a main issue.

6. Studies on the role of intrapreneurship

Characteristics of lack of support for intrapreneurship:

No support for intrapreneurship via structural design

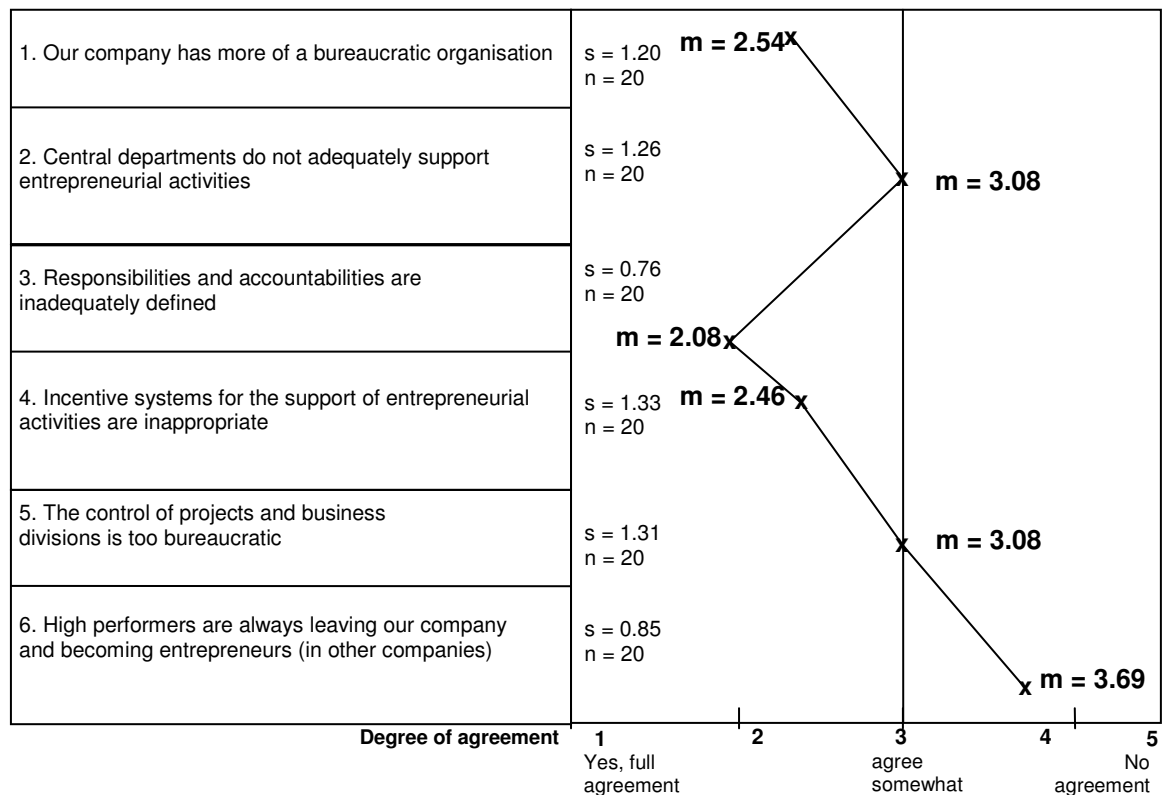


Figure 121: Structural constraints for entrepreneurial thinking and action in globally active technology companies in the Bodensee-Oberschwaben region

In view of the poor implementation of the synergy manager role, the frequent lack of incentive and the inadequate design of the division of tasks as constraints on the road to a stronger entrepreneurial orientation, entrepreneurial arrangement of cooperation within the organisation can be identified as a central field of action for the technology companies in the Bodensee-Oberschwaben region.

Within this, the creation of a culture of cooperation has to take a major role in order to support the development of an adaptable, entrepreneurial culture. Since the technology companies in the Bodensee-Oberschwaben region particularly require an entrepreneurial orientation from their managers, the individual entrepreneurial potential of managers, as well organisation design and leadership, moves into focus as a necessary requirement for an entrepreneurial management orientation (see also figure 122).

6. Studies on the role of intrapreneurship

Characteristics of intrapreneurs according to Pinchot:

High potential for intrapreneurship as per Pinchot

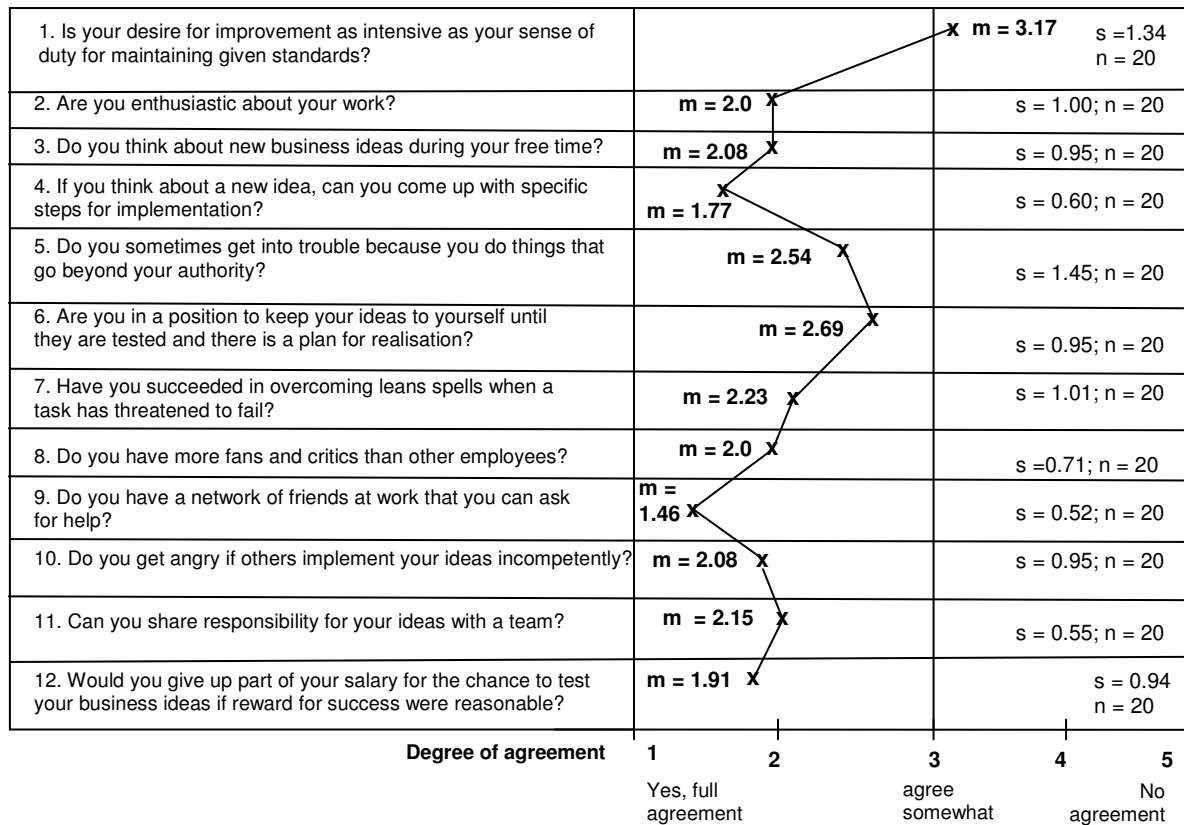


Figure 122: Intrapreneurs as per Pinchot (1988) working for globally active technology companies in the Bodensee-Oberschwaben region

The survey results suggest that there is a high entrepreneurial orientation amongst managers in the companies surveyed and that, with a balanced arrangement of the intrapreneurship system with clear rules of cooperation, it would be possible to achieve an entrepreneurial orientation across the whole organisation. Thus, as a result of the culture, it would be more appropriate to consider an individualistic foundation with entrepreneurial managers as drivers of entrepreneurial activities as well as integrating employees for the reinforcement of an entrepreneurial orientation of the organisation as a whole; the implementation of the five roles of the entrepreneurial organisation would be achieved by a division of labour approach. Equally, taking the low level of outward orientation into account, the development of a strong cooperative and outward looking orientation in the actors appears to be the core field of entrepreneurial culture design to supplement the country-specific cultural features (see Phatak, Bhagat and Kashlak 2009)⁴⁷³.

⁴⁷³ The culture-related orientations identified match the theoretical concepts and stylised facts on the classification of cultural differences in various world regions examined in chapter 3.2.1.3.

6. Studies on the role of intrapreneurship

Thanks to this, the entrepreneurial organisation is able to perform the three central entrepreneurial tasks for securing long-term viability successfully and continuously. The study shows that there is a little unexploited potential for elitist intrapreneurship in the technology companies in the Bodensee-Oberschwaben region and also that the actors have a low degree of outward orientation⁴⁷⁴. What is more, collective intrapreneurship is barely achieved - even if it is often desired - and thus overall, there is a low level of entrepreneurial orientation amongst the companies studied. A look at the role model makes it clear that the missing entrepreneurial orientation could bring significant problems in the future. In an increasingly dynamic and networked internal and external business environment, the role of *knowledge manager for new opportunities and threats* and that of *synergies manager* are taking on increasing significance.

It becomes clear, however, that the organisations of the sample have currently the biggest deficits in terms of a holistic entrepreneurial orientation. In particular, a systematic outward orientation has to be combined with entrepreneurial initiatives. This theme defines what will become important scientific and practical research areas in the future. Against this background, and as a direct consequence of the empirical study, chapter 6.4 shows a concept with five elements to develop a vital entrepreneurial learning organisation. In the chapter directly following this chapter (6.2), there is a second empirical study on the role of intrapreneurship in a highly innovative technology company which aims to examine whether the basic findings of the first study can be confirmed and whether approaches for the development of an entrepreneurial orientation can be identified now.

An experts' survey in chapter 6.3 rounds off this look at the role of intrapreneurship in technology companies in the Bodensee-Oberschwaben region. Future research in other regions, particularly in the various international economic regions, can uncover important cross-cultural implications for the practical implementation of the holistic concept for intrapreneurship in specific contexts presented here.

⁴⁷⁴ This aspect matches with the general cultural expectations according to Trompenaars and Hampden-Turner (1998) according to which, one can expect a strong individualistic characteristic in combination with a strong inward orientation in the above cultural context.

6. Studies on the role of intrapreneurship

6.2 Intrapreneurship in an innovative technology company

In the second empirical study⁴⁷⁵, 75 managers and project workers in a highly innovative company⁴⁷⁶ in the Bodensee-Oberschwaben region were asked about the role of intrapreneurship as a bench mark (reference group). Data collection was via a written survey using a questionnaire with a rating scale (1 – full agreement to 5 – no agreement). The questioning of this reference group confirms, to a large extent, the findings of the baseline study in chapter 6.1: There exists a basic potential for elitist intrapreneurship. This form of intrapreneurship, however, receives little support (see figure 123).

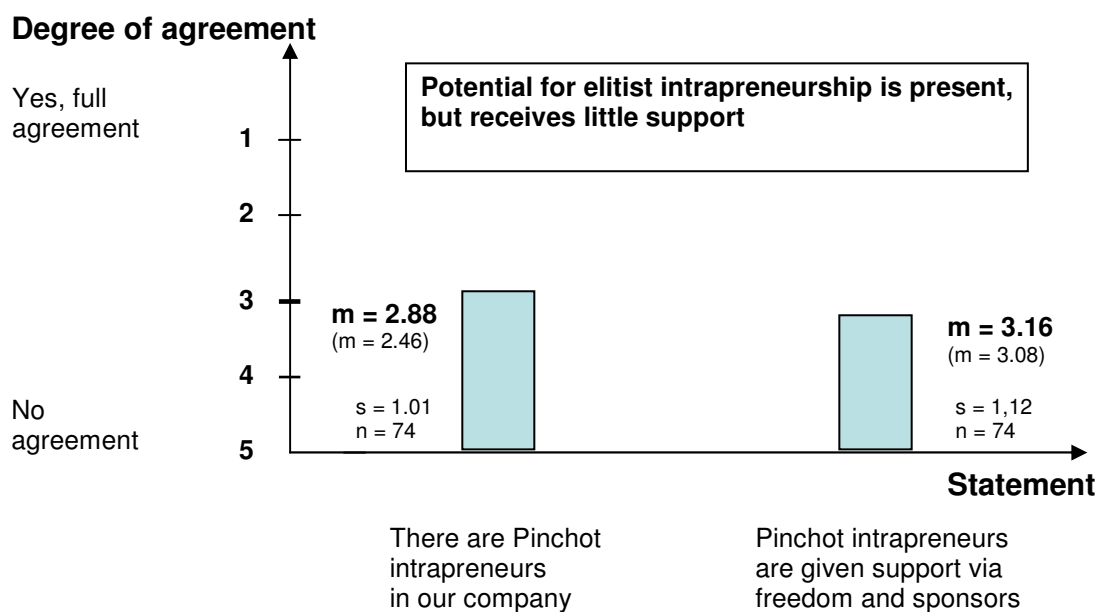


Figure 123: Frequency of Pinchot intrapreneurs and degree of support in a highly innovative technology company in the Bodensee-Oberschwaben region

In the highly innovative company, a stronger collective and holistic entrepreneurial orientation is strived for and, compared to the baseline study, is achieved to a somewhat greater degree (see figure 124).

⁴⁷⁵ The response rate is 98.67 % (**sample: n = 74**). The (bold) values in the charts show the **mean (m: arithmetic average)**. To facilitate comparison of the two studies in chapters 6.1 and 6.2, the values for globally active technology companies are shown on the graph in brackets. The **average standard deviation (s)** is 0.98.

⁴⁷⁶ The company is global, innovative and has a strong, competitive technological base.

6. Studies on the role of intrapreneurship

Degree of agreement

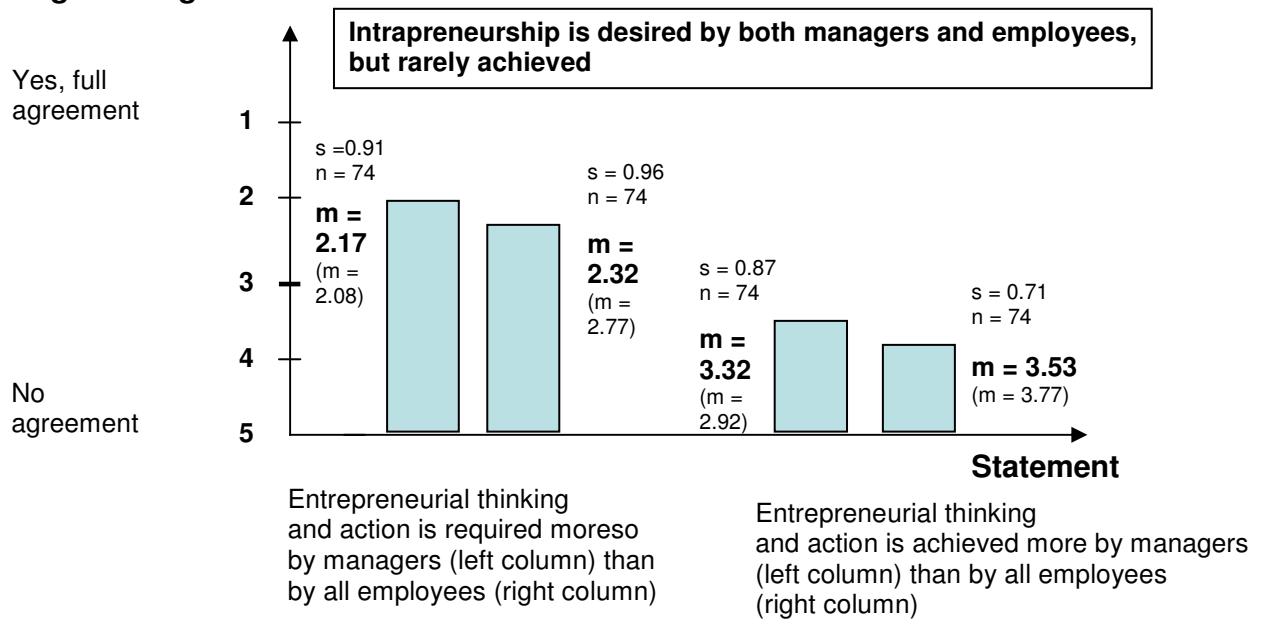


Figure 124: Elitist versus collective intrapreneurship in a highly innovative technology company in the Bodensee-Oberschwaben region

Collective intrapreneurship is therefore required more in this organisation and also receives greater support from management (see figure 125).

Degree of agreement

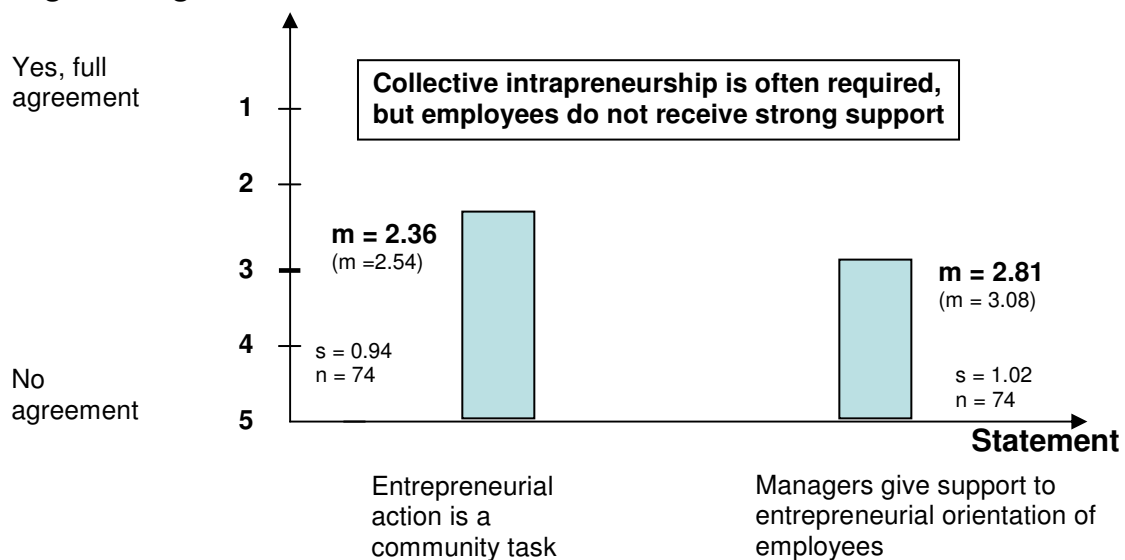


Figure 125: Entrepreneurial action as a community task in a highly innovative technology company in the Bodensee-Oberschwaben region

The highly innovative company sees intrapreneurship as more than a community task, managers have greater entrepreneurial orientation, they give more intensive support to employees and are drivers of entrepreneurial orientation in their organisation.

6. Studies on the role of intrapreneurship

As part of this, it can be seen that there is an ongoing need to develop managers and employees in terms of strengthening entrepreneurial orientation. Since elitist intrapreneurship receives little support, this form of intrapreneurship appears to be less desired and tolerated here. It is clear from figure 126⁴⁷⁷ that the highly innovative company as compared with the first (baseline) study (see chapter 6.1), exhibits overall a greater entrepreneurial orientation. The respective peculiarities of the characteristics of an entrepreneurial organisation follow, however, a similar pattern. A greater outward orientation and thus, a more intensive entrepreneurial organisation design calls for greater consideration of and greater harmony with the role of entrepreneurial shaping of the future. It is also clear that there is a stronger focus on entrepreneurial human resource management with individual and organisational learning. This point could provide an explanation and a design hint for developing stronger entrepreneurial orientation.

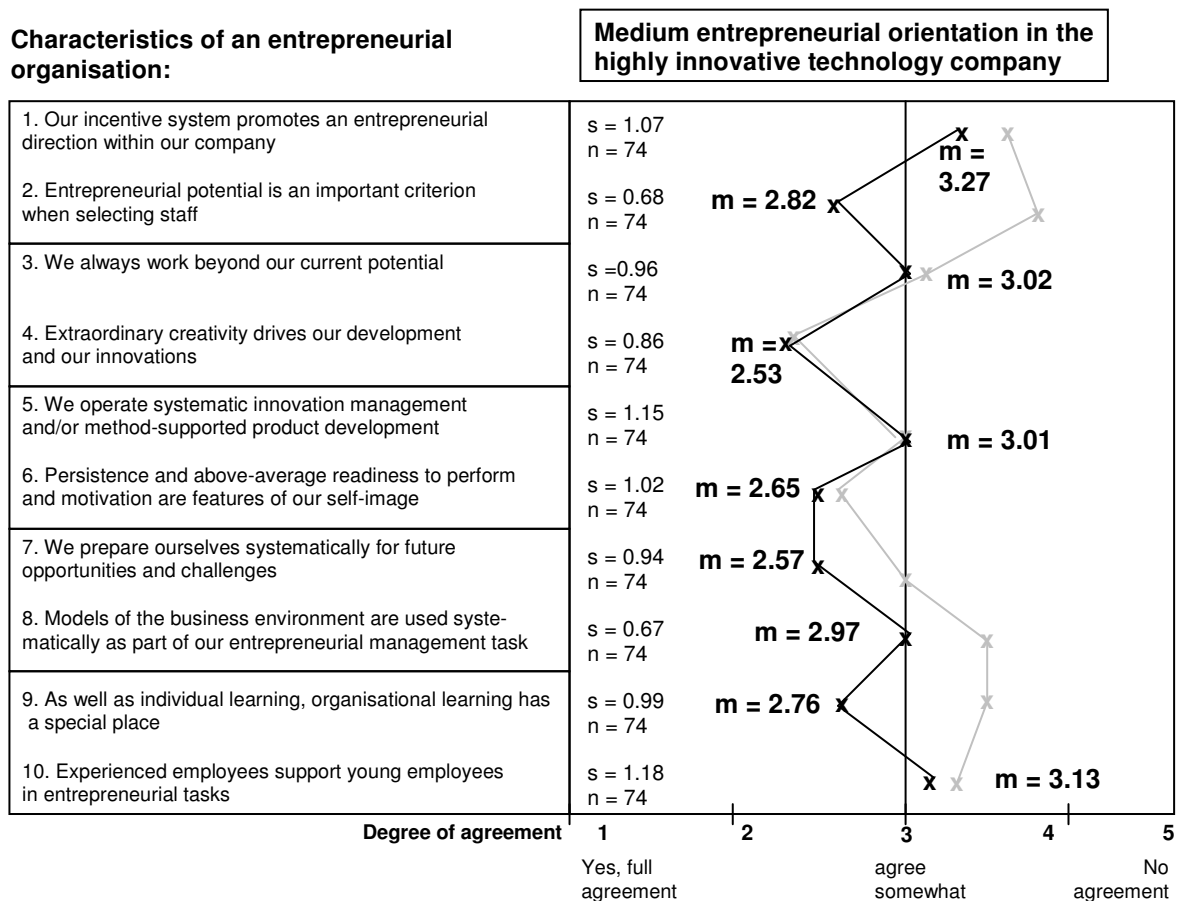


Figure 126: Entrepreneurial profile of a highly innovative technology company in the Bodensee-Oberschwaben region

⁴⁷⁷ The profile of the globally active technology companies from the first study in chapter 6.1 is shown as a comparison by the grey coloured curve.

6. Studies on the role of intrapreneurship

A further important aspect that can be derived from the study of the highly innovative company appears to be the existence of better structural framework conditions for intrapreneurship (see figure 127⁴⁷⁸). This would suggest a design which reduces structural constraints to intrapreneurship so as to achieve stronger entrepreneurial orientation from the potential entrepreneurial momentum.

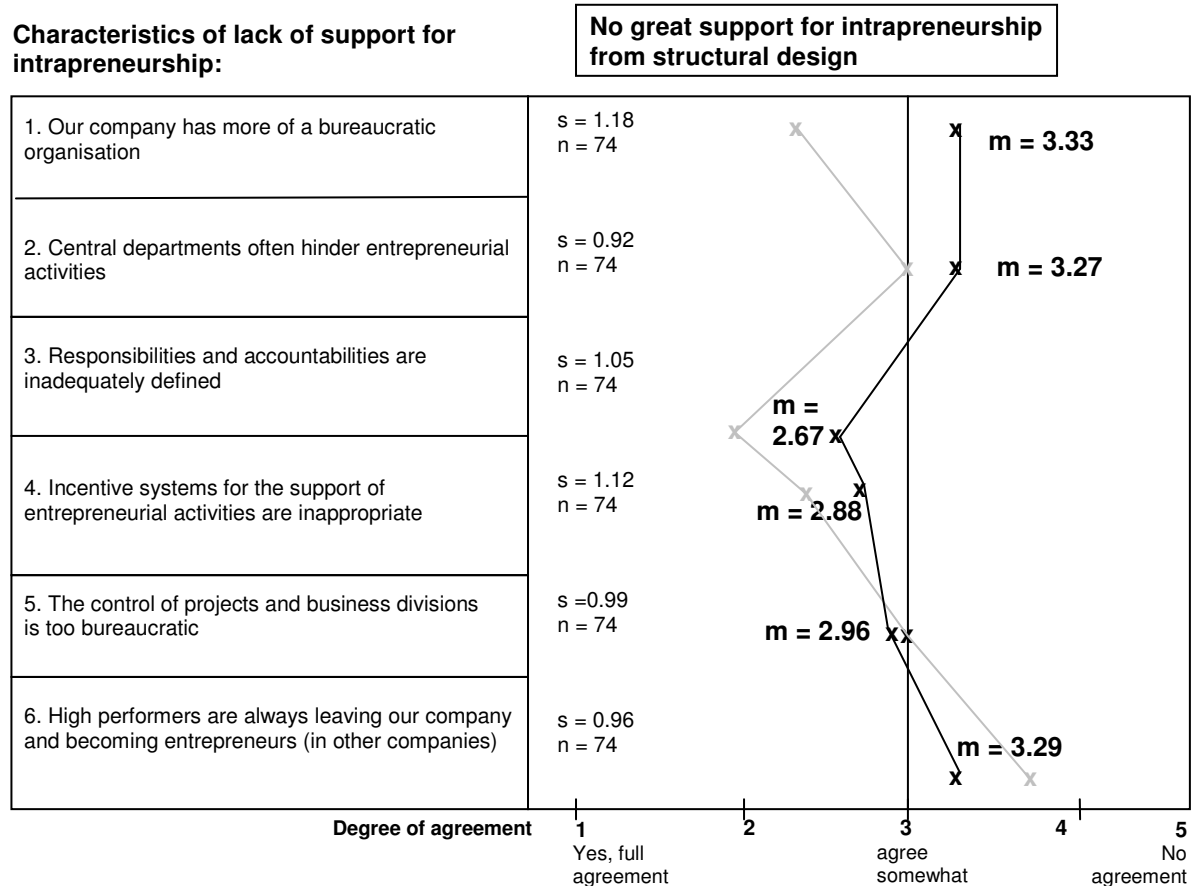


Figure 127: Little structural support for entrepreneurial thinking and action in the highly innovative technology company

As well as reducing structural constraints, it appears to be particularly appropriate to have an entrepreneurial culture and entrepreneurial human resources management function to support development of an entrepreneurial orientation in accordance with the role model presented (see chapter 5.1). The empirical study thus supports the development of design elements for a vital entrepreneurial learning organisation (see chapter 6.4). The benchmark study in chapter 6.2 shows the potential for a more collective intrapreneurship and the learning fields to strengthen holistic intrapreneurship in the specific cultural context.

⁴⁷⁸ The comparison curve of the globally active technology companies (see chapter 6.1) is shown on the graph in grey.

6.3 Survey of experts on implementation of the role model in practice

The role of intrapreneurship in companies in the Bodensee-Oberschwaben region is examined further by way of a personal and written qualitative survey (see Voss 2010) of experts amongst company representatives. This should contribute to understand how the companies questioned implement the manager roles in an entrepreneurial organisation taking into account the change dynamic in the business environment. The data collection for the third study is done via a structured survey⁴⁷⁹ which looks at implementation of the role model (see chapter 5.1). Via content analysis, interpretation and comparison of the data collected from several organisations, patterns for the five manager roles of the role model are inductively derived (see Bortz and Döring 1995: 271-312). Thus, the qualitative analysis captures some typical aspects of the five roles in practice (see figure 128).

The technology companies from the Bodensee-Oberschwaben region that were surveyed move in highly competitive dynamic and global markets where there are many uncertainties. The study suggests ways that opportunities and threats can be identified, new entrepreneurial ideas formulated and implemented, existing businesses adapted to changing competitive situations and synergy and change management actively developed. Twenty managers from technology companies in the Bodensee-Oberschwaben region were selected as a sample for the expert interviews and these managers came from the areas of personnel and company development. The organisations surveyed are members of the programme advisory committee for continuing education at the Ravensburg-Weingarten University⁴⁸⁰.

The companies surveyed see the objectives of the entrepreneurial orientation of an organisation in particular as being the increase of innovativeness, the adaptation of existing business to changing framework conditions and an increase in the organisation's efficiency.

⁴⁷⁹ The study takes place on the basis of a guideline interview and questionnaire (see appendix).

⁴⁸⁰ The fact that the author of the study works together with these companies in various projects provided important access to high ranking representatives of these globally active companies.

6. Studies on the role of intrapreneurship

Innovation and the development of new business through new products and the conquest of new markets can be seen as levers for securing the organisation's long-term viability. The experts surveyed identified the segment knowledge manager and the synergy manager as the necessary development areas for implementation of the five roles of an entrepreneurial organisation⁴⁸¹.

The tasks of the knowledge manager are mostly located in the marketing function of the companies surveyed. Particularly in large companies, the central market research function works together with the research and development function when generating knowledge for company opportunities and company threats arising from the micro environment. Market research examines the relevant global market and industry trends or the current or future situation of international markets (on the level of the individual political economies) and assesses developments for top management. A flow of information ensues as a result of proactive information from central market research reaching top management and via reactive information from requests from top managers.

Analysis of the general macro environment and long-term trends, particularly in the technology and demography sectors, often takes place in top management strategy groups with reference to external (commercial) databases and analyses. Occasionally, the active influence of managers within associations and interest groups, as well as at trade fairs, is used as information sources. Learning at its strongest takes place at the individual level in such a way that loss of important knowledge often occurs when employees leave. As well as personal development programmes, godfather and mentoring models are also frequently used. For organisational learning, projects are often used as joint learning fields and experiences are documented in knowledge databases (see Baltzan and Phillips 2008)⁴⁸². Optimisation processes in the total organisation⁴⁸³ and within and between departments⁴⁸⁴ can be identified as further developed learning fields.

⁴⁸¹ This supports the survey results from the first study (see chapter 6.1).

⁴⁸² According to McDermott and Archibald (2010), self-organised groups can deal in a responsible way with the long-term development of a knowledge and experience stock taking into account future problems which had thus far not been recognised.

⁴⁸³ For example via processes for continuous improvement of production or quality management systems.

⁴⁸⁴ For example via process reviews or (cross-divisional) meetings.

6. Studies on the role of intrapreneurship

The collection and processing of knowledge from the business environment is often done by project teams which are additionally established alongside formal structures and which also are there to drive forward the identified innovation potential and the development of new business.

The tasks of the idea finder relate, in particular, to the assessment of ideas that are gained from the external business environment or which result from entrepreneurial actors and inventors created by the internal dynamic. In this process, ideas come from the systematic application of existing competencies in new markets. Instruments and methods for the creation of ideas often come from creative workshops, cross-divisional meetings and communication processes between managers and employees. Idea assessment often takes place in the context of a structured business development process based on business plans and feasibility studies carried out by steering groups and top management.

In this way, information processing and the decision process link strategic and operational planning. Entrepreneurial ideas are often developed in cooperation with customers and external network partners. Creativity techniques play a more subordinate role in the process of finding ideas. New entrepreneurial activities in existing businesses are sometimes derived from gaps in the market. Ideas for new business can result, for example, from gaps in the product portfolio, new trends and (imitable) market successes of competitors.

Innovation manager tasks are often achieved via (formalised) innovation processes and project teams. Larger projects and the associated resource commitment are approved by top management in accordance with current priorities and supported by a basic development programme. Smaller scale activities are the responsibility of company divisions. As well as market innovation projects, great value is placed on technological innovation projects and improvement projects for the achievement of competitive cost structures in operational practice. Innovations are also transferred into other areas using communication processes. Implementation of ideas is often supported by an innovation-friendly culture.

6. Studies on the role of intrapreneurship

The adaptation of products, the production process and working the market in consultation with top management are, in practice, the central tasks of entrepreneurial managers in existing businesses. Changes in the external business environment shorten the product life cycle and require flexible internal and external network structures⁴⁸⁵. Within this process, virtual teams and structures which span locations take on greater significance. Often, the necessary strategic adaptations are communicated by top management, and they also establish responsibilities and agree divisional objectives for implementation of the strategy.

Within this, optimisation processes, personnel development⁴⁸⁶ and the recruitment of employees from a variety of cultural environments when working successfully in global operational fields are central issues. Impulses for adaptation come especially from market research and the development of bureaucratic structures can hinder the necessary adaptations by actors and divisions. Uniform business processes promote efficiency and cooperation.

The tasks of the synergy manager are steered in practice by top management and sometimes indirectly steered by structural design. Experiences are shared cross-divisionally for existing and new businesses, development projects are initiated using synergies and improvements in the value chain are achieved via optimisation systems. Internal synergy potential are identified, in particular, via process analysis and with modularisation of products, use of the same parts becomes possible. By pooling in the purchasing process, better conditions can be achieved using market power.

In order to improve external market opportunities and internal transfer of knowledge, internal experts, connections and cross-company networks and synergies are used. Figure 128 illustrates implementation of the entrepreneurial organisation's manager roles in globally active technology companies in the Bodensee-Oberschwaben region.

⁴⁸⁵ The dynamic design of the value chain requires continuous systematic decisions based on relevant criteria. For a complete illustration of criteria for outsourcing decisions see, for example, Krönes (2002).

⁴⁸⁶ For a reference model for the development of entrepreneurial managers, see, for example, Hohl and Knicker (1995) or Hohl and Platzek (2005).

6. Studies on the role of intrapreneurship

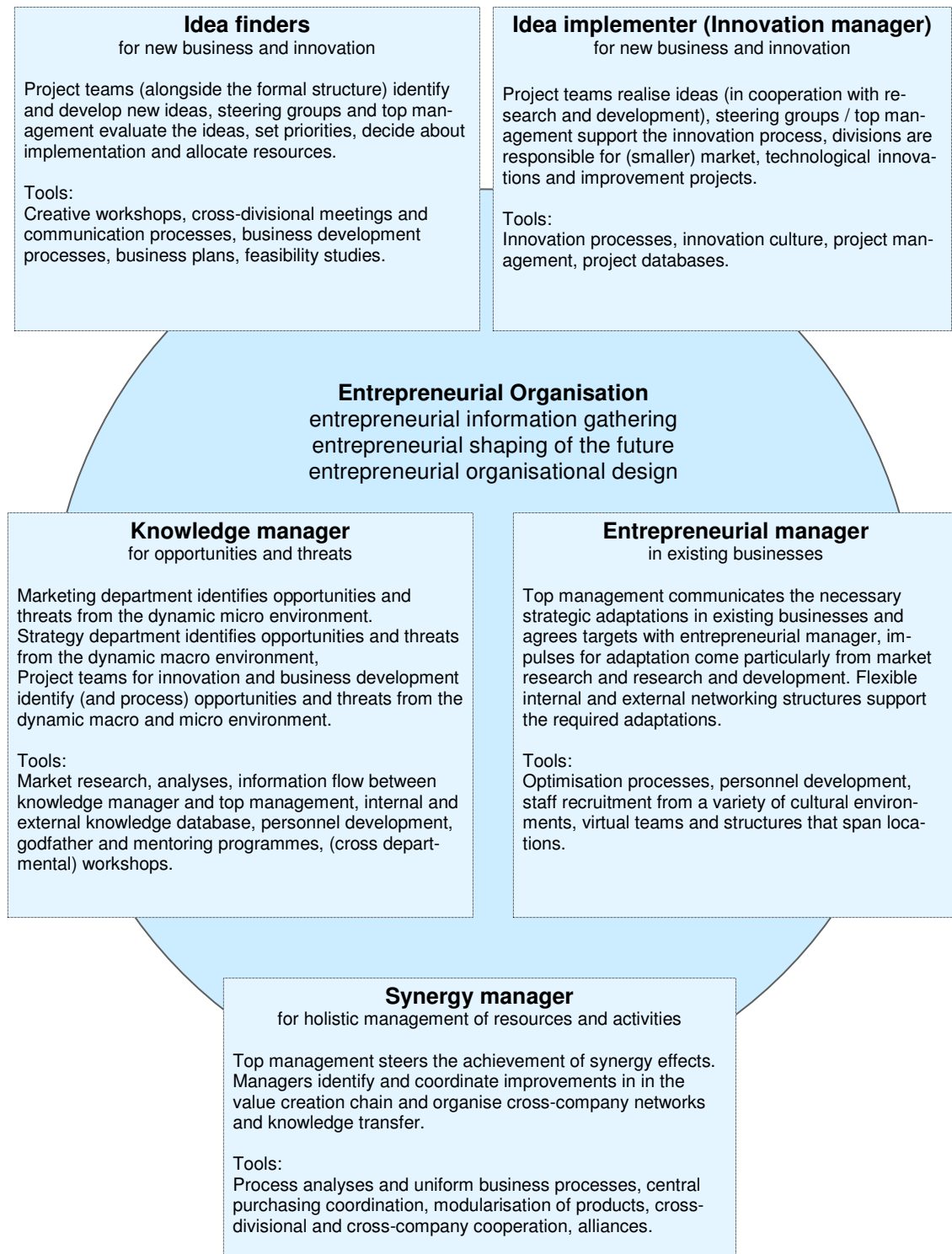


Figure 128: Implementation of the roles of the entrepreneurial organisation in practice

The outline for implementation of the entrepreneurial organisation's five manager roles developed in the theoretical analysis makes it possible to take a complementary look at the role model from the point of view of the practice.

6. Studies on the role of intrapreneurship

Within this, there is evidence in the cultural background selected of a potential for development, particularly in terms of combining knowledge on the level of the whole organisation. Organisational learning from experience and collective learning from individual entrepreneurial activities could thus be a focus of future efforts by the companies surveyed.

In terms of finding ideas and implementing of ideas, top management takes on a strong regulatory role. Here, it may be necessary to have a greater tolerance of emerging activities by decentralised managers together with greater structural management (instead of direct management), intensive communication processes between the entrepreneurial actors, along with a stronger involvement of customers in innovation processes.

In terms of strengthening entrepreneurial orientation in existing businesses, entrepreneurial personnel management can take on a more important role. Personnel selection and personnel development could make an important contribution to strengthening adaptability. There also appears to be potential for development within the holistic and long-term direction of the organisations.

The empirical studies show that the role model can also offer a basis for the analysis of entrepreneurial orientation in specific (cultural) contexts and that the identification of development potential for strengthening entrepreneurial orientation and thus, the long-term viability of an organisation in a dynamic business environment, appears possible.

Taking into account the theoretical findings of chapters 3 to 5, the empirical studies also thus give pointers for design elements for developing and strengthening a vital entrepreneurial learning organisation that can overcome the (future) challenges of a global and dynamic business environment. The following chapter 6.4 outlines five design elements with which entrepreneurial orientation can be developed or strengthened, depending on the context.

6.4 Conclusion: Elements for development and strengthening entrepreneurial orientation

In this chapter, on the basis of the literature analysed and the findings of the empirical studies, five elements are outlined which can help to develop and support individual and organisational entrepreneurial orientation (see also McGinnis and Verney 1987, Prosek 2011). With a view to strengthening entrepreneurial culture and common mental models, the first element is a cultural analysis and an entrepreneurial cultural design involving managers and employees as cultural agents.

The cultural agents analyse the development history of the organisation, check which values and assumptions for securing viability have to be adapted, develop common mental models of the organisation and the external business environment and thus strengthen adaptability and an innovation-supportive culture.

A workshop for entrepreneurial shaping of the future is proposed as a building block for the holistic development of a vital entrepreneurial learning organisation (element 2). In the workshop for entrepreneurial shaping of the future (see also figure 129), it is about the long-term viability of companies.

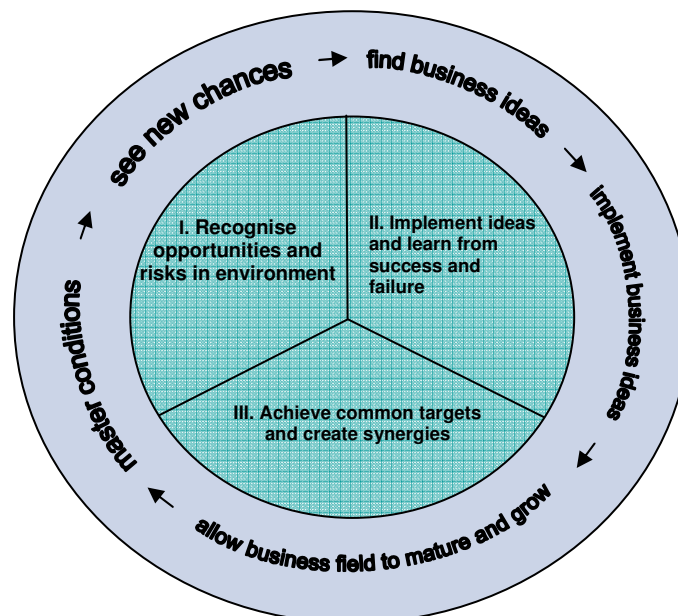


Figure 129: Workshop for entrepreneurial shaping of the future

6. Studies on the role of intrapreneurship

In order to secure this long-term viability, companies have to achieve a consistently entrepreneurial approach in competitive markets, that is to say, in particular, to recognise opportunities and threats from the business environment, to identify and put into place business ideas and synchronise and harmonise the interests of the company and the individual employees such that successful collaboration within the company is achieved and synergies between the company divisions are created. Managers as change agents analyse and discuss implementation of these aspects of an entrepreneurial organisation, learn and develop common ideas for improvements that will strengthen holistic intrapreneurship. The development of the three areas in the management workshop for entrepreneurial shaping of the future is an important element in developing the entrepreneurial potential of managers and a strategic building block in the achievement of a vital entrepreneurial learning organisation. Central to this is the identification of opportunities, threats and potential synergies along with learning from each other and with each other - particularly from mistakes, so that organisational learning from entrepreneurial activities can ensue. In addition to technical learning and the question of *what* was done incorrectly or correctly, one can also ask *why* mistakes were made and why these were not corrected early enough⁴⁸⁷.

Block and MacMillan (1995) propose four working steps for individual and collective learning from entrepreneurial activities⁴⁸⁸ (element 3). In the first step, documents and information (e.g., reports, minutes, budget plans) relating to the most important events of an entrepreneurial activity⁴⁸⁹ are collected and chronologically documented in a log book (by entrepreneurial agents). In this way, the entrepreneurial activity can be characterised (see table 12). Subsequently, in the second step, the manager who is responsible for the activity or who had conducted it for management, can be questioned with a view to establishing the origin of the business idea and its evaluation and record the market research process, the product development, the creation of the business plan, organisation of the activity, incentive components, and the forming of basic assumptions about the environment.

⁴⁸⁷ For so-called *Double Loop learning* see, in particular Argyris, (1999).

⁴⁸⁸ For opportunity-driven capability formation see Autio et al (2011).

⁴⁸⁹ According to Morris et al (2012), entrepreneurial experience create a cyclical relationship between the emergence of the entrepreneurial activity (venture) and the emergence of the entrepreneurial agent. Thus, the learning process from the entrepreneurial activity complements the previous acquired knowledge and skills.

6. Studies on the role of intrapreneurship

Character of Business	Product	Market	Technology
PMT-Venture Business Blue sky: New Product, in new markets, using new technology Learning field: operations, marketing and development	Lack of expertise Low product relatedness	Lack of expertise low market relatedness	Lack of expertise low technology relatedness
PM-Venture Business Technology commercialisation: New Product, in new markets, using known technology Learning Field: operations and marketing	Lack of expertise Low product relatedness	Lack of expertise low market relatedness	Knowing well High technology relatedness
PT-Venture Business Product development: New Product, in existing market, using new technology Learning field: product and technology	Lack of expertise Low product relatedness	Knowing well High market relatedness	Lack of expertise low technology relatedness
MT-Venture Business Vertical integration: Existing product, new market, new technology Learning field: market and technology	Knowing well High product relatedness	Lack of expertise low market relatedness	Lack of expertise low technology relatedness
P-Venture Business product augmentation: New Product, in existing market, using known technology Learning field: production, operations	Lack of expertise New-Product-Learning Low product relatedness	Knowing well High market relatedness	Knowing well High technology relatedness
M-Venture Business Market augmentation: Existing products, in new markets, with existing technology Learning field: Marketing	Knowing well High product relatedness	Lack of expertise New-Market-Learning low market relatedness	Knowing well High technology relatedness
T-Venture Business Technology innovation: Knowing product and markets well, using new technology Learning field: technology development	Knowing well High product relatedness	Knowing well High market relatedness	Lack of expertise New-Technology-Learning low technology relatedness
Established Business Maturing: Existing products, in existing markets, with existing technology Learning Field; optimize processes, cooperation and synergy seeking	Knowing well	Knowing well	Knowing well

Table 11: Characterisation of business activities according to level of experience in the divisions of product, market, technology as per Block and MacMillan (1995:222,223)

In the third step, a chronological history on the development of the entrepreneurial activity as well as of the main activities and critical decisions and events (for example, personnel changes, processes and procedures, which assumptions have changed in time) can be drawn up. In the fourth step, conclusions can be drawn for the future: what can be learned from the experience for future entrepreneurial activities?

6. Studies on the role of intrapreneurship

To strengthen the outward orientation of an organisation and its entrepreneurial actors, managers and employees can be deployed as country agents in the identification of opportunities and threats in the general macro environment (element 4) and also as industry agents in the development and analysis of strategic options in the specific micro environment (element 5).

Industry agents can analyse the current and future competitive situation (see Porter 2004a) and the industry life cycle and also investigate industry-specific success factors (see Andrews 1987). The country agents (or even teams) can specify and evaluate a country (or several countries or economic regions) with the most important characteristics and fundamental framework conditions for globally active companies (see Morrison 2006) and with a global mindset (Srinivas 1995). Using mutual information, it is then possible to assess opportunities and threats jointly and develop organisational competencies (see Dess and Lumpkin 2003) for various countries and from different economic regions. This analysis can be carried out using the *PEST*-framework⁴⁹⁰ introduced in chapter 3 (see Fahey and Narayanan 1986). Thus, it is possible to assess the political-legal systems, analyse the main political economic factors and growth opportunities using economic indicators, or identify dynamic economic regions (clusters). Demographic or technological developments as well as social trends and cultural aspects can be evaluated (see Rugman and Collinson 2006) bearing in mind potential entrepreneurial activities.

The five elements presented here (see figure 130) strengthen the future development of a holistic entrepreneurial orientation and start with the roles which need strengthening in the future as identified in the empirical studies, namely *knowledge manager* and *synergy manager*. Entrepreneurial organisations pursue an entrepreneurial strategy and should clear away structural constraints. Holistic intrapreneurship is then supported by an entrepreneurial culture and entrepreneurial managers⁴⁹¹.

⁴⁹⁰ See chapter 3.2.2.1

⁴⁹¹ Seufert and Diesner (2010) see a high degree of responsibility for managers and employees in the implementation of specialist and cross departmental learning in practice, especially by designing appropriate framework conditions for organisational learning which strengthens the adaptability of the organisation.

6. Studies on the role of intrapreneurship

Using the five development-oriented building blocks presented here, collective entrepreneurial information gathering and processing can be achieved, the necessary outward orientation can be developed, individual learning and organisational learning can be fostered, synergies can be created thus enabling the development and strengthening of holistic intrapreneurship in the context of the design concept that has been developed here for a vital entrepreneurial learning organisation.

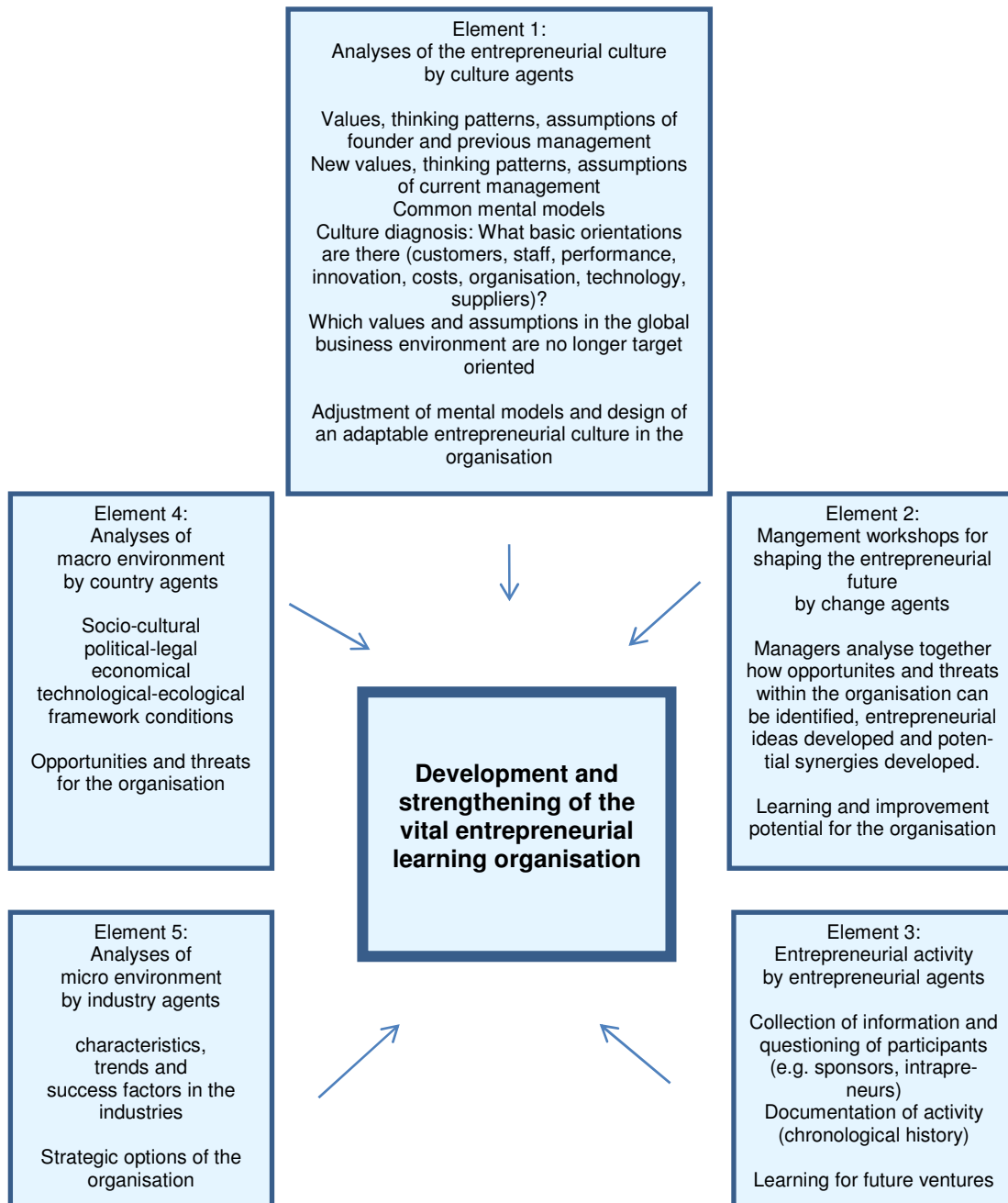


Figure 130: Five elements for the development and strengthening of a vital entrepreneurial learning organisation

6. Studies on the role of intrapreneurship

Following the outline of the five development-oriented building blocks for individual, collective and organisational learning in a vital entrepreneurial learning organisation⁴⁹² (Platzek et al 2011b) as a conclusion drawn from the theoretical and empirical insights, chapter 7 (see figure 131) reflects on the core thoughts of the examination and provides notes and links for future research.

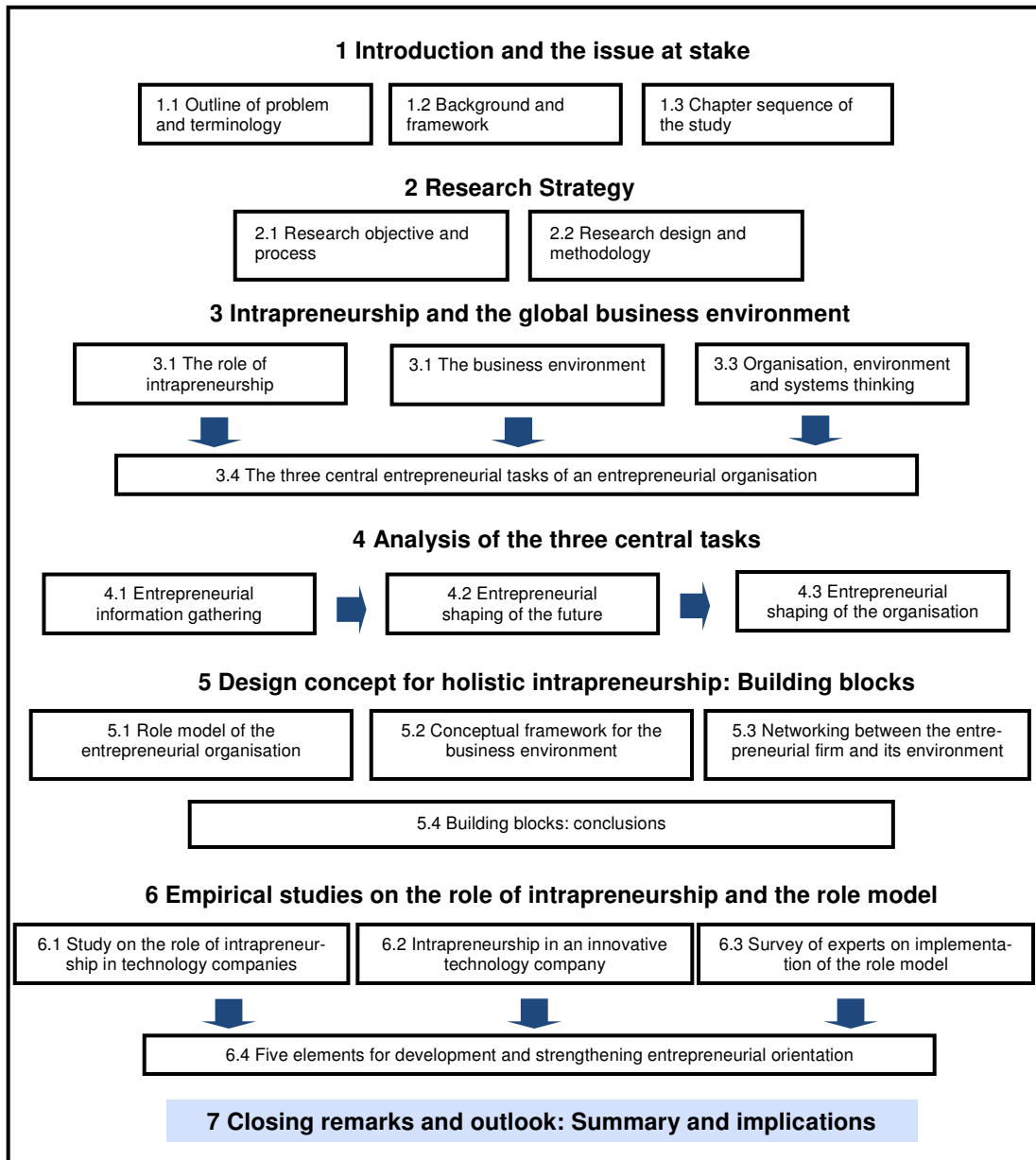


Figure 131: Closing remarks and outlook

⁴⁹² The concept of a Vital Entrepreneurial Learning Organisation (VELO) was discussed and presented at the International Conference on Industrial Engineering, Systems Engineering and Engineering Management for Sustainable Global Development, September 21-23, 2011, Stellenbosch / Spier, South Africa.

7. Closing remarks and outlook

This chapter summarizes the major issues and contributions of this work with its implications for a better understanding of holistic intrapreneurship and for the design of vital entrepreneurial learning organisations in specific business environments. It proposes also valuable areas for future research. The literature gives us no clear picture of intrapreneurship in a global, dynamic and complex business environment. One can find countless interpretations of intrapreneurship in the literature (see chapter 3). Many approaches deal with individual aspects of entrepreneurial thinking and action in and pertaining to the organisation. The established derivation of the role of intrapreneurship in a global, competitive business environment in which technology and innovation represent important drivers of internal and external change and of increasing networking, contains a gap of considerable relevance. The present examination of the role of intrapreneurship concentrates on the entrepreneurial creation of interaction between the organisation and the environment to secure the company's viability. This leads to the development of a holistic concept of intrapreneurship (Platzek et al 2011a). This work provides new insights into the nature of intrapreneurship and the global environment for a better understanding of holistic intrapreneurship in today's business environment and for some implications for management practice.

7. 1 Summary and contributions of the study

Based on a well-founded theory analysis and a synoptic illustration of the theoretical constructs examined, the various theoretical fragments of intrapreneurship have been carried over by a theoretical exploration into an integrated framework with nine design elements for holistic intrapreneurship and three central tasks for the entrepreneurial organisation. The three entrepreneurial tasks identified, that is entrepreneurial information gathering, shaping of the future and of the organisation, are analysed and defined in chapter 4. The entrepreneurial collection of meaningful information with four key activities (scanning, monitoring, forecasting, assessment) focuses on the four dimensions of the business environment already identified: character, diversity, geographical dimension and segments.

7. Closing remarks and outlook

Individual and collective learning are defined as dynamic components of entrepreneurial information gathering. For entrepreneurial shaping of the future seven key competencies for entrepreneurial organisations, three innovation areas, ten systems theory principles for interaction of the organisation with the environment, and central entrepreneurial decisions in new and existing business can be derived.

For entrepreneurial shaping of the organisation four central levers can be defined: Entrepreneurial strategy, structure, culture, resources and competencies. Within this, five central dualities should be taken into consideration: Short and long-term viability, optimisation and renewal, flexibility and operational stability, centralised and decentralised decision structures, interests of the organisation and interests of the individual actors⁴⁹³.

On the foundation of theoretical analysis of the three entrepreneurial tasks identified, there follows in chapter 5 the formulation of an explanatory and specifying framework model (theoretical constructs) which together form a concept for holistic intrapreneurship⁴⁹⁴. The role model of the entrepreneurial organisation (see chapter 5.1) as a synthesis of the individual and collective approaches of intrapreneurship that are contained in the literature can provide the design of the entrepreneurial organisation with an important orientation framework. The conceptual framework developed here for the specification and analysis of the business environment (see chapter 5.2) can guide entrepreneurial gathering of information. The qualitative systems model (see chapter 5.3) focuses the understanding to help with entrepreneurial shaping of the future. In implementing the three entrepreneurial tasks via the developed process model (see chapter 5.2), the entrepreneurial organisation must fulfil as a whole unit the roles of knowledge manager for opportunities and threats, idea finder, idea implementer (innovation manager), entrepreneurial manager in existing businesses and synergy manager.

⁴⁹³ Harmonisation of the interests of the individual actors with the interests of the organisation can be defined as a necessary and fundamental design target for the entrepreneurial organisation.

⁴⁹⁴ The basic theoretical constructs of the vital entrepreneurial learning organisation are: nine design elements of holistic intrapreneurship, three entrepreneurial tasks and process model, role model, conceptual framework of the business environment and qualitative systems model. As a consequence of the empirical study, one more theoretical construct is developed; the five elements to develop and strengthen the vital entrepreneurial learning organisation (see chapter 6.4). The theoretical constructs lay down a theoretical foundation for holistic intrapreneurship (see figure 34).

7. Closing remarks and outlook

The conceptual framework for specification and analysis of the business environment can help to define the relevant areas of analysis of the business environment in specific situations such that future opportunities and threats can be proactively detected with an inside-outside-inside approach. The qualitative systems model sharpens the understanding of the elementary interaction between the entrepreneurial organisation and the external environment in existing and new businesses. As a result, internal and external impulses for the design of interactions on an aggregated level can be examined.

This integrated concept of the vital entrepreneurial learning organisation (ultimate objective) derived from theory-based exploration thus focuses on the entrepreneurial action of the organisation as a whole, and the achievement of viability in a global and dynamic environment. Entrepreneurial organisations achieve this by entrepreneurial decisions in new and existing businesses and for adaptation, innovation and efficiency.

Holistic intrapreneurship requires learning by the actors, the teams and the whole organisation and enables the necessary proactive, dynamic and creative adaptation to changes in the global environment, in particular by the realisation of entrepreneurial opportunities and the processing of threats. Thereby, efficiency and flexibility must be strived for in existing businesses and new business and innovations must be developed in synergy with the external environment.

In empirical studies (see chapter 6), the theoretical findings were reflected in the practice of global technology companies. Within this, it was possible to identify hints from the quantitative and qualitative empirical exploration on how strong the individual roles of an entrepreneurial organisation in a specific cultural environment are featured and how the implementation of roles on the basis of a sharing of tasks actually happened in the firms surveyed. From this it is possible to glean initial recommendations for action fields for the development and strengthening of a vital entrepreneurial learning organisation.

7. Closing remarks and outlook

Based on theoretical and empirical findings, five development-oriented learning elements are proposed: Management workshop for entrepreneurial shaping of the future by agents of change, analysis of individual entrepreneurial activities by entrepreneurial agents and teams, analysis of entrepreneurial culture by culture agents, analysis of the macro environment by country agents, analysis of the micro environment by industry agents.

Using a diagnosis of the entrepreneurial profile, based on the role model, and the five development-oriented learning elements outlined in chapter 6.4, country-specific cultural orientations (see Stewart et al 2008) can be supplemented by actively shaping the organisation culture in order to develop a holistic entrepreneurial orientation based on the presented role model (chapter 5.1)⁴⁹⁵.

7. 2 Implications and some directions for further research

In the theoretical analysis, the research process explored models, concepts and findings for the central questions presented in chapter 1 and also reinforced and specified these further with empirical studies. The study succeeded in explaining and analysing the role of intrapreneurship in securing the viability of organisations. The characteristics of the business environment, in particular the degree of uncertainty and the cultural aspects (see Lee and Peterson 2000) can be given thorough consideration using the concept of the vital entrepreneurial learning organisation, defined by the presented theoretical constructs: design elements of holistic intrapreneurship, entrepreneurial tasks and process model, role model, framework for the business environment, qualitative model, and the five learning elements⁴⁹⁶.

On this basis, it is possible to give consideration to the specific design of an entrepreneurial organisation in a specific context. In this respect, there emerge important research fields for future research projects.

⁴⁹⁵ Thus, entrepreneurial thinking and action can be promoted on the level of the individual as well.

⁴⁹⁶ According to Kuratko (2010), the impact of environment, related to corporate entrepreneurship strategy is an important area for research as well as learning by individuals and organisations from specific corporate entrepreneurial projects. The theoretical constructs presented in this thesis give basic implications and directions for further research in these areas and for the combination of micro and macro perspectives (see table 1) on corporate entrepreneurship.

7. Closing remarks and outlook

This would make it possible to investigate general design principles in specific environmental situations, particularly taking into account the dynamic, the complexity and cultural features of alternative external environments and also giving consideration to organisation types and company politics as elements of the internal business environment.

An in-depth examination of the transformation process for developing an entrepreneurial orientation and a study of the performance (see Mohamad et al 2011) vital entrepreneurial learning organisations achieve in different business environments and in relation to organisations with other management concepts can also provide important clarification for practical implementation of a holistic concept of intrapreneurship.

As part of company research projects (see Cooper and Schindler 2010), specific implementation concepts could be developed on the basis of the theoretical concept of the vital entrepreneurial learning organisation, and these could show entrepreneurial managers the way on how to translate individual entrepreneurial activities into collective entrepreneurial power (see Baghai and Quigley 2011). Case study research can analyse practical problems in implementing and developing the vital entrepreneurial learning organisation in a specific context. The compilation of a company specific system and the consensus about the interactions and strength of the influencing factors can be developed with brainstorming sessions involving all concerned (see Vester 2005), based on the basis of the total system presented in section 5.3.1.1. Thus, it is possible to identify firm-specific levers in business research projects to strengthen the entrepreneurial orientation and to meet the innovation challenges that differ from firm to firm (Hansen and Birkinshaw 2007).

On the global level, intrapreneurship can help to overcome the challenges of sustainable development (see Glenn and Gordon 2002, Meadows et al 2004, Grunwald and Kopfmüller 2006, Weizsäcker 2010) in that innovative actions (Kralj 2008) as life-cycle analysis (to look at lifelong environmental impact of a product), technology cooperation (between companies in developed and developing countries) or industrial ecology can reduce waste, minimise environmental impact or transfer environmental technologies (see Lawrence et al 2010).

7. Closing remarks and outlook

For example, businesses can use wastes from one process as materials for others and new products can be developed which use resource-friendly technology in their manufacture (see Meyer 2008:23-26).

The view on the global challenge of a sustainable development shows the entrepreneurial organisation opportunities to achieve and sustain vitality proactively at the company-level: The vital entrepreneurial learning organisation as a good corporate citizen (Makipere 2008) can contribute to a global sustainable development (Becke 2010) via innovation in new and established businesses to maintain their own competitiveness, reputation, and economic substance (Lash and Wellington 2007, Lubin and Esty 2010, Platzek et al 2012).

In addition, various stakeholders like government, investors, customers, competitors, and the networked society pressure organisations to implement reactively sustainability (Paramanathan et al 2004, Garvare and Johansson 2010). As stated by O'Neill et al (2009), sustainability-driven entrepreneurial activities to exploit sustainability issues, innovation, and emerging markets (Dunphy 2007, Nidomulu et al 2009, Kotler 2011) become the engine which transforms the global system towards sustainability.

Especially with regard to a sustainable global development, there emerge future fields of action for entrepreneurial organisations that are able to establish future research projects on the role of intrapreneurship from the viewpoint of systems thinking (Knez-Riedl and Mulej 2006) on the macro, meta and micro levels (see table 1) with much (global) social relevance (see also Kuratko 2010).

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Appendix

A.1 Role of intrapreneurship: Aspects derived from the literature

Role of intrapreneurship	goes back to
Targetted creation of opportunities and risks arising from division of labour within an organisation.	Smith (1776)
Permanent and strong-minded implementation of innovations by dynamic entrepreneurs („Big ideas“ by individuals)	Schumpeter (1912, 1950)
Use of internal resources and collective knowledge as basis for entrepreneurial opportunities („Big ideas“ by collective knowledge)	Penrose (1959)
Use of opportunities and risks of internationalisation for the product life-cycle. Export, import and production, research and development at international locations.	Vernon (1966)
New entrepreneurial activities trigger an evolutionary market process. Discovering unexploited opportunities follow changes in the price system.	Hayek (1968)
Use of entrepreneurial opportunities from symmetries of information between supply and demand.	Kirzner (1973)
Ongoing search for new opportunities. Identification of risks and risk management. Ongoing realignment of entrepreneurial activities.	Schwab (1976)
Large companies are subdivided into small autonomous units. Many small entrepreneurial initiatives bring success. Recognition for successful entrepreneurial initiatives create an entrepreneurial company culture.	Peters and Waterman (1982)
If possible all employees should develop and drive entrepreneurial activities to overcome changes in the business environment. When implementing entrepreneurial activities a holistic view and cooperation is necessary. Organisations should cultivate innovators, who as team members adopt a key role in the ability of organisations to survive in a globally competitive world. The innovators enable operational efficiency and ongoing innovation and should be supported by the company culture and structure.	Kanter (1983, 1989)
Discover opportunities and overcome problems; redesign, end activities that are no longer productive; make a contribution to the whole and achieve harmonisation of interests within the organisation.	Drucker (1985)
Acceleration of innovation within larger companies outside of established structures by individual entrepreneurial talent (to bridge the innovation gap in hierarchical organisations)	Pinchot (1985)
Development of a company culture that supports new ideas in all areas of the company. Well-informed employees together achieve an entrepreneurial orientation of the organisation by way of entrepreneurial contributions. Entrepreneurial revitalisation of established businesses through new employees and new technology. Adapt management practices (design of strategies, structure, culture and human resources management) to the economic, political, technological and social changes as the key to future success.	Brandt (1986)
Every employee has the potential to breach bureaucratic orientation and to pursue an entrepreneurial orientation. Entrepreneurial employees, managers and business units are role models and, together with entrepreneurially designed structures, can accelerate cultural change. However, employees must themselves choose to adopt an entrepreneurial approach. Entrepreneurial employees gain autonomy, can make a real contribution to the whole, but must at the same time make a big effort to gain support within the organisation for their approach.	Block (1987)
Realisation of innovation, entrepreneurial activities and strategic renewal in existing organisations.	Guth and Ginsberg (1990)
Applying systems thinking and team learning: discovering various mental models and/or further development of common ones for the detection and evaluation of opportunities and risks. Mingling of personal visions with the organisation's vision.	Senge (1990)

Role of intrapreneurship	goes back to
Competitive advantage of a national economic system as a source for entrepreneurial activities. Search for strategic combination of national and local conditions with the resources and capabilities of the company.	Porter (1991)
Improvement of company performance by an entrepreneurial orientation of the whole organisation. Entrepreneurial thinking and action pervades the vision and mission, targets and strategies, structures and processes, activities and culture.	Covin and Slevin (1991)
Intrapreneurship as an individual process: generate permanent new entrepreneurial activities in the areas of product, market and technology in existing organisations in order to survive in the long-term (overcome pressure of competition, achieve growth).	Block and MacMillan (1993)
Achieve global competitiveness through structural leadership, co-entrepreneurship and entrepreneurially oriented employees whilst at the same time strengthening value of humans in the world of work.	Wunderer (1993)
Intrapreneurship requires efficiency in existing companies as well as the development of future entrepreneurial strategies. Managers must balance out the present and the future and develop dual strategies. Top management must enable synergies.	Abell (1993)
Intrapreneurship is in the minds of management, mature organisations can be revitalised by an entrepreneurial culture.	Baden-Fuller and Stoppford (1994)
Perceive and respect cultural differences in the world and use them for entrepreneurial activities.	Trompenaars and Hampden-Turner (1994)
Management must achieve entrepreneurial orientation for the whole organisation. For this, entrepreneurial opportunities must be pursued on the basis of existing core competencies and future core competencies for the exploitation of new opportunities must be developed. Core competencies determine an arena for entrepreneurial opportunities in new and existing markets. Changes in the external business environment necessitate adaptations in the internal business environment via managerial innovations in the organisation and management of the company as well as operational innovations for the optimisation of processes.	Hamel and Prahalad (1994, 2008)
Autonomy, innovation, risk-taking, proactivity and an aggressive competitiveness determine the entrepreneurial orientation of a company. Entering new markets is the central entrepreneurial activity.	Lumpkin and Dess (1996)
The development of new business ideas for revitalising the organisation: Adapting strategy to a changing company environment and then adapting the internal business environment to the new strategy.	Oden (1997)
Harmonisation of the interests of the organisation with the interests of the actors produces an identity which strengthens the viability of the organisation in turbulent environments through learning. Central contextualisation and decentralised freedom to innovate and adapt are the foundation of entrepreneurial strategies and activities.	De Geus (1997)
Ensuring entrepreneurial success by being proactive demands a systematic monitoring of the business and factor markets.	Kuhn (2000)
Heads of subsidiaries are central agents of entrepreneurial activities in global companies and pursue internal and external entrepreneurial opportunities. They optimise resource allocation within the whole company system using entrepreneurial initiatives. They realise synergies across locations, develop competencies in the company, realise new products and conquer new local and global markets.	Birkinshaw (2000)
Entrepreneurial organisations must be able to adapt themselves to unexpected change. Rapid learning from success and failure and rapid adaptation of the organisation through decentralised decisions by employees who possess the relevant necessary knowledge of the internal and external business environment. Alignment of the organisation in such a way that stability in operational business is achieved, even in difficult situations and crises.	Weick and Sutcliffe (2001)

Role of intrapreneurship	goes back to
The market mechanism with competition and profits as incentives via entrepreneurs produces innovation, growth, progress. A mix of innovative firms and established enterprises is the best form of good capitalism.	Baumol et al (2002, 2007, 2010)
Achievement competitive benefits through internationalisation of entrepreneurial activities. Creative discovery and exploitation of opportunities that are situated outside of the organisation's national markets. Established companies conquer international markets using innovation and proactive decision-making.	Zahra et al (2002)
Entrepreneurial organisations must identify entrepreneurial opportunities and at the same time realise and secure competitive advantages. For this, they must decide whether they achieve the required innovations internally or via external acquisition. They must attain entrepreneurial orientation of management and employees in order to recognise and implement entrepreneurial opportunities in local and global markets and also, they must be able to achieve sustainable competitive advantages.	Hitt et al (2002, 2005)
Entrepreneurial actors are visionary agents of change and effective managers. They create continuous innovation in order to achieve competitive advantages in global markets.	Morris et al (2002, 2008)
Creation on new products or conquest of new markets (new business creation) achieved through direct and indirect control of top management. Learning from entrepreneurial activities generates opportunities and can also improve performance in existing businesses.	Sathe (2003)
A galvanising basic approach to changing lethargic organisational structures (in large firms) by strengthening the self-direction of small units.	Hentze et al (2005)
Sustainable growth and entrepreneurial organisation through entrepreneurial leadership and learning from interaction with the environment.	Thornberry (2006)
Management should possess management and entrepreneurial competencies and be orientated towards long-term success. Diversification and decentralisation makes it easier to achieve entrepreneurial adjustments to changes in the business environment. Intrapreneurship in small, decentralised units should increase the ability to innovate.	Maucher (2007)
Working together and synergies are central success factors in terms of shaping the entrepreneurial future of organisations. This enables comprehensive gathering of information concerning changes in the business environment and by exploiting cooperative intelligence, achieves entrepreneurial adaptation and a strengthening of resistance.	Joyce (2008)
An entrepreneurial culture is achieved by a feeling of urgency by as many employees as possible. Urgent action enables rapid implementation of opportunities and a quick reaction to risks emanating from the environment. The long-term viability of an organisation is strengthened.	Kotter (2009)
Entrepreneurial feel, thinking and action by employees and managers are decisive factors for success of teams and individual performance. Strategically oriented entrepreneurial initiatives must be developed in a way that is suitable for the existing situation of play, comprehensible cause and effect relationships must be realised and leverage effects have to be perceived. Business models have to be adapted to changing resources and market conditions or replaced by new ones.	Kohlöffel and Rosche (2009)
Entrepreneurial organisations balance current and future opportunities. Thus, they operate frequently on the limits of a state of chaos. Entrepreneurial strategy then defines itself as the continuous and purposeful identification and pursuit of entrepreneurial opportunities.	Ireland et al (2009)
An entrepreneurial mindset and behaviour as an organisational end state helps the pursuit of new opportunities, the creation of new units or businesses, innovativeness in terms of products, services and processes, strategic self-renewal, constructive risk taking, and proactiveness.	Dhliwayo (2010)
A corporate entrepreneurship process is triggered by external events and entrepreneurial behaviour of the individual and the organisation to create sustainable competitive advantage.	Kuratko (2010)

A.2 Questionnaire on the role of intrapreneurship in a company

This short questionnaire (approximately 10 minutes) is designed to clarify the role of intrapreneurship in a globally operating company. Therefore your contribution is very important for the significance of the questionnaire. Please fill in the questionnaire as completely as possible. You can also answer the questions in a very fast way by marking a position on the scale of five characteristics ranging from 'Yes' to 'No'. As our thank-you you will obtain an evaluation of this survey (therefore, please send an e-mail to: platzek@hs-weingarten.de). Of course, your answers to the questionnaire will be treated confidentially in any case.

First of all some details concerning the concepts are described here as follows.

You can immediately start answering the questions, if you wish.

Intrapreneurship as a central management topic in a global business environment is also a question of economics and harmonizing interests between the firm and its people (managers, staff): How should the incentive structures within an organisation be designed in a way that the enterprise as a *corporative player* can be successful as an entrepreneur on the market in the long run as well?

In management literature and in practice, for the protection of long-term potential for success – especially for big companies – it is required that executive managers and staff act with an entrepreneurial posture (as *the company or entrepreneur in the company* =intrapreneurship). In this case there are two central approaches: (1) Individual intrapreneurs take the full responsibility for the innovations and ideas within an organisation (=elitist management); (2) (Almost) all executive managers and staff members get inspired as co-managers and show their potential for management (=collective entrepreneurship). During implementation of entrepreneurship there are 3 considerations of central significance: The intrapreneur must be willing to do it (intrinsic and extrinsic motivation = micro-economic incentive effect), he must also be able to do it (entrepreneurial qualification) and he must be allowed to do it (structural leadership).

With reference to (1): According to Pinchot (Intrapreneuring, 1988) single, *heroic* intrapreneurs revitalize the companies, sometimes in structures that are created in parallel to the current organisation. Central guidelines for these intrapreneurs are:

- Be prepared to be fired when starting any day's work.
- Avoid all arrangements which could stop you dreaming.
- Do everything that is required to achieve your goal (no matter what your job is).
- Find people who support you.
- Select your co-workers by intuition and cooperate only with the best of them.
- Work in the underground as long as possible.
- Never bet in a race you do not participate in.
- It is easier to beg someone's pardon instead of someone's permission.
- Be true to your (feasible) goals.
- Honour your sponsors.

With reference to (2): According to Wunderer (Mitunternehmertum, 1999) the central function of the executive manager is to structurally and interactively promote entrepreneurial behaviour of all staff members. This collective entrepreneurship is strongly based on principles of cooperative self-organisation and self-development. Central guidelines of behaviour for these co-managers are:

- Work for tasks, organisations and people you can, on the whole, identify with (still).
- Be ready to get involved voluntarily.
- Understand problems as a challenge.
- Constantly look for better problem solutions.
- Concentrate on results.
- Implement your goals in a strategy and team-minded way.
- Work in a long-term and cooperative way together with other people involved.

Questionnaire on the role of intrapreneurship in globally operating companies

1. In our company there are very committed members of staff, who push through innovation against internal resistance or develop product ideas or ideas for new practices “in the underground”.

Yes **No**
strongly agree agree agree somewhat disagree strongly disagree

2. For these “heroic innovators” in our company, there is freedom and/or tolerance and/or sponsors (supporting high-ranking executive managers).

Yes **No**
strongly agree agree agree somewhat disagree strongly disagree

3. Being a team-player in our company is highly valued and has been practiced with success. Innovative and entrepreneurial action is a team effort.

Yes **No**
strongly agree agree agree somewhat disagree strongly disagree

4. In our company, more entrepreneurial spirit and entrepreneurial action from the managers is being **demanded** more and more.

Yes **No**
strongly agree agree agree somewhat disagree strongly disagree

5. In our company, greater entrepreneurial spirit and entrepreneurial action is being **achieved** more and more by the managers.

Yes **No**
strongly agree agree agree somewhat disagree strongly disagree

6. Entrepreneurial orientation of the staff members receives sponsorship and is supported by the managers (“helping others to help themselves”/ “self-monitoring”).

Yes **No**
strongly agree agree agree somewhat disagree strongly disagree

7. In our company, more entrepreneurial spirit and entrepreneurial action is increasingly **demanded** from (nearly) all staff members.

Yes **No**
strongly agree agree agree somewhat disagree strongly disagree

8. In our company, more entrepreneurial spirit and entrepreneurial action is increasingly being **achieved** by (nearly) all staff members.

Yes **No**
strongly agree agree agree somewhat disagree strongly disagree

9. We always exceed our previous possibilities and skills.

Yes **No**
strongly agree agree agree somewhat disagree strongly disagree

10. We have exceptional creative skills. Pioneer situations belong to our daily entrepreneurial routine. We are a particularly innovative company.

Yes **No**
strongly agree agree agree somewhat disagree strongly disagree

11. In our company, the incentive systems for supporting innovation and entrepreneurial activities are **not** appropriate.

Yes **No**
strongly agree agree agree somewhat disagree strongly disagree

Appendix

12. Our methodical process of innovation is being carried out at all company levels. Product development is supported by cross-functional project management.

Yes **No**
strongly agree agree agree somewhat disagree strongly disagree

13. We are a rather bureaucratically organised company.

Yes **No**
strongly agree agree agree somewhat disagree strongly disagree

14. Perseverance, outstanding willingness to perform, superior motivation and openness highly influence the way we see ourselves.

Yes **No**
strongly agree agree agree somewhat disagree strongly disagree

15. We are a proactive company and systematically make preparations for future opportunities and challenges.

Yes **No**
strongly agree agree agree somewhat disagree strongly disagree

16. Our company systematically implements models of our entrepreneurial environment to innovate and carry out entrepreneurial tasks.

Yes **No**
strongly agree agree agree somewhat disagree strongly disagree

17. Our core functional areas provide adequate to our innovation projects and our entrepreneurial activities.

Yes **No**
strongly agree agree agree somewhat disagree strongly disagree

18. Not only individual learning but also organisational learning and team learning are very important in our organisation.

Yes **No**
strongly agree agree agree somewhat disagree strongly disagree

19. In our company, experienced employees (senior managers) support young employees in taking-over (handing over) innovation projects and leader tasks.

Yes **No**
strongly agree agree agree somewhat disagree strongly disagree

20. In our organisation, areas of responsibility are clearly defined.

Yes **No**
strongly agree agree agree somewhat disagree strongly disagree

21. Structural measures (e. g. reward systems, intra-capital systems, profit-centre-structures) promote innovation and entrepreneurial alignment effectively in our company.

Yes **No**
strongly agree agree agree somewhat disagree strongly disagree

22. In our company, the controlling of projects and business segments is carried out in a functional and unbureaucratic way.

Yes **No**
strongly agree agree agree somewhat disagree strongly disagree

23. In our company, entrepreneurial potential is a very important criterion for employee selection.

Yes **No**
strongly agree agree agree somewhat disagree strongly disagree

24. Again and again, good staff members leave our company to found (take over) other companies.

Yes **No**
strongly agree agree agree somewhat disagree strongly disagree

Questionnaire on the individual entrepreneurial orientation according to Pinchot (1988)

1. Is your desire for improvement as intensive as your sense of duty for maintaining given standards?

Yes **No**
strongly agree agree agree somewhat disagree strongly disagree

2. Are you enthusiastic about your work?

Yes **No**
strongly agree agree agree somewhat disagree strongly disagree

3. Do you think about new business ideas during your free time?

Yes **No**
strongly agree agree agree somewhat disagree strongly disagree

4. If you think about a new idea, can you come up with specific steps for implementation?

Yes **No**
strongly agree agree agree somewhat disagree strongly disagree

5. Do you sometimes get into trouble because you do things that go beyond your authority?

Yes **No**
strongly agree agree agree somewhat disagree strongly disagree

6. Are you in a position to keep your ideas to yourself until they are tested and there is a plan for realisation?

Yes **No**
strongly agree agree agree somewhat disagree strongly disagree

7. Have you succeeded in overcoming lean spells when a task has threatened to fail?

Yes **No**
strongly agree agree agree somewhat disagree strongly disagree

8. Do you have more fans and critics than other employees?

Yes **No**
strongly agree agree agree somewhat disagree strongly disagree

9. Do you have a network of friends at work that you can ask for help?

Yes **No**
strongly agree agree agree somewhat disagree strongly disagree

10. Do you get angry if others implement your ideas incompetently?

Yes **No**
strongly agree agree agree somewhat disagree strongly disagree

11. Can you share responsibility for your ideas with a team?

Yes **No**
strongly agree agree agree somewhat disagree strongly disagree

12. Would you give up part of your salary for the chance to test your business ideas if reward for success were reasonable?

Yes **No**
strongly agree agree agree somewhat disagree strongly disagree

Questionnaire on the entrepreneurial orientation of an organisation with regard to the role model for entrepreneurial firms (Platzek et al 2010)

Self-assessment on implementation of the five roles of an entrepreneurial organisation

Evaluate the entrepreneurial orientation of your organisation in the shared implementation of the five entrepreneurial roles. Part numbers may be awarded - e.g. 1.5, 1.6:

(Overall grade 1 = optimum performance; 5 = poor performance)

(1) Knowledge manager for opportunities and threats

(analysis of environment according to entrepreneurial opportunities and threats):

Value (1 = optimum performance; 5 = poor performance)

(2) Idea finder/ Idea manager for new business

(specification, evaluation, feasibility of entrepreneurial ideas):

Value (1 = optimum performance; 5 = poor performance)

(3) Idea implementer/ Innovation manager of new business

(realisation of entrepreneurial ideas/ innovation processes: product, market):

Value (1 = optimum performance; 5 = poor performance)

(4) Entrepreneurial manager of existing business

(learning, specialisation, coordination)

Value (1 = optimum performance; 5 = poor performance)

(5) Synergy manager for holistic management of resources

(synergy effects within the organisation/ with the business environment)

Value (1 = optimum performance; 5 = poor performance)

A.3 Guidelines for survey on entrepreneurial orientation

Survey guidelines

Entrepreneurial orientation of technology companies
(German: Bodensee-Oberschwaben region)

Introduction:

Technology companies in the Bodensee-Oberschwaben region have to adapt continuously to changing economic, political-legal, social and technological framework conditions. In particular, they have to confront a high degree of competition and globalisation of markets. They have to pursue and utilise technological developments. In order to overcome these challenges and secure long-term viability, organisations have to achieve, overall, a high degree of entrepreneurial orientation:

They must continuously **identify opportunities and threats, formulate and implement** new entrepreneurial **ideas, learn** from entrepreneurial activities carried out, **adapt** existing business to the changing competitive situation and manage entrepreneurially, and also create structures and synergies within the organisation using continuous **change management**. Depending on the dynamic and complexity of the environmental conditions, it is no longer enough to manage existing businesses efficiently, rather the focus must be much more on proactive adaptations to changing environments and the use of new entrepreneurial opportunities.

Using a survey of company representatives from the programme advisory committee for the Bodensee-Oberschwaben Academy of Scientific Higher Education, we are carrying out an examination of the role of intrapreneurship and implementation of the roles in an entrepreneurial organisation in companies in the region, taking into account the change dynamic in the relevant global business environment. Is a greater entrepreneurial direction being striven for in the region's companies? What targets are being pursued in this? Who does what in achieving an entrepreneurial orientation?

Many thanks for your participation!

For details concerning the five central roles of an entrepreneurial organisation (Knowledge manager for opportunities and risks, Idea finder/ Idea manager for new business, Idea implementer/ Innovation manager of new business, Entrepreneurial manager of established business, Synergy manager for holistic management of resources and activities) see Platzek, B., Pretorius, L. and Winzker, D., 2010. A role model for entrepreneurial firms in a global business environment. In: Ginevičius, R., Rutkauskas, A.V. and Počas, R., 2010. Business and Management – Selected Papers, Volume II, VGTU Publishing House Technika: Vilnius.

Survey on entrepreneurial thinking and action

1. Which objectives do you connect with entrepreneurial thinking and action in an organisation (intrapreneurship)? What should (can) be achieved by the entrepreneurial orientation of an organisation?

Revitalisation (renewal) of the organisation

Yes fully agree agree undecided do not agree **No** do not agree at all

Achievement of the organisation's long-term viability

Yes Fully agree agree undecided do not agree **No** do not agree at all

Reactive generation of new business based on changes in the external business environment

Yes fully agree agree undecided do not agree **No** do not agree at all

Proactive generation of new business based on internal entrepreneurial dynamic

Yes fully agree agree undecided do not agree **No** do not agree at all

Increase in innovation

Yes fully agree agree undecided do not agree **No** do not agree at all

Adaptation of existing business to changing framework conditions

Yes fully agree agree undecided do not agree **No** do not agree at all

Increase in efficiency

Yes fully agree agree undecided do not agree **No** do not agree at all

2. How are these five roles implemented in your organisation in terms of division of labour?

Area 1: Knowledge manager for company opportunities and company threats:

How, by whom, for whom is which information from the business environment gathered and processed? How does individual or organisational learning occur? What elements of knowledge management exist?

Area 2: Idea finder (Idea manager)

How, by whom is information evaluated and presented, how and by whom are decisions made on the implementation of new ideas? Are creativity techniques used? Are business plans drawn up? (How) do people learn systematically from the idea finding process?

Area 3: Idea implementer (Innovation manager)

How and by whom are entrepreneurial activities in the product, market and technology areas implemented? Structures? Incentives? Allocation of resources? Innovation processes? Do people learn in / from the innovation process (how)?

Area 4: Entrepreneurial managers in existing businesses

How, by whom is information from the business environment for existing businesses evaluated and entrepreneurial adaptations or strategies, organisational architecture, culture, human resources management taken forward? How is the product life cycle analysed and considered? How are internal and external processes of division of labour planned, how is flexibility and risk management achieved? How are improvements and competency development achieved?

Area 5: Synergy manager

How is potential for synergies in and between new and existing businesses (units, branches) discovered and pursued?

A.4 Technology companies in the Bodensee-Oberschwaben region

Company	Location
Altana Pharma (Nycomed Germany Holding GmbH)	Konstanz
Andritz Hydro GmbH	Ravensburg
Artec Engineering GmbH	Baienfurt
Astrium GmbH	Immenstaad
Baljer & Zembrod GmbH & Co. KG	Altshausen
CHG Meridian Deutsche Computer Leasing AG	Ravensburg
Claas Saulgau GmbH	Saulgau
Coperion GmbH	Weingarten
Diehl Aerospace GmbH	Überlingen
Diehl Aircabin GmbH	Laupheim
Diehl Ako Stiftung & Co. KG	Wangen
Diehl BGT Defence GmbH & Co. KG	Überlingen
EADS Deutschland GmbH	Immenstaad
Geberit GmbH & Co. KG	Pfullendorf
Handtmann Service GmbH & Co. KG	Biberach
Hennig GmbH	Pfullendorf
Hilti AG	Schaan (FL)
HSM GmbH & Co. KG	Salem
Hymer AG	Bad Waldsee
ifm electronic GmbH	Tettngang
J. Wagner GmbH	Markdorf
Karl Storz GmbH & Co. KG	Tuttlingen
Kendrion Linnig GmbH	Markdorf
Konzept Informationssysteme GmbH	Markdorf
Kuka Controls	Weingarten
Kumatronik Systemhaus GmbH	Markdorf
Liebherr Aerospace Lindenberg GmbH	Lindenberg
Liebherr Hausgeräte Ochsenhausen GmbH	Ochsenhausen
Liebherr-Werk Biberach GmbH	Biberach
Lindauer Dornier GmbH	Lindau
Metzeler Automotive Profile Systems GmbH	Lindau
mtu Friedrichshafen GmbH (Tognum Group)	Friedrichshafen
Müller Weingarten AG (Schuler Group)	Weingarten
ND Satcom GmbH (Cassidian)	Immenstaad
RAFI GmbH & Co. KG	Berg
Ravensburger AG	Ravensburg
Rohwedder AG (Rohwedder Macro Assembly GmbH)	Bermatingen
Sunways AG	Konstanz
TechniData AG (SAP AG)	Markdorf
Thyssen Krupp Drautz Nothelfer (EBZ Gruppe)	Ravensburg
Tox Pressotechnik GmbH & Co. KG	Weingarten
Venta Luftwäscher GmbH	Weingarten
Vetter inject system GmbH & Co. KG	Ravensburg
Voith Paper GmbH & Co. KG	Ravensburg
Waldner Holding GmbH & Co. KG	Wangen
Wenglor sensoric GmbH	Tettngang
Winterhalter Gastronom GmbH	Meckenbeuren
Xomox International GmbH & Co.	Lindau
Zeppelin Systems GmbH	Friedrichshafen
ZF Friedrichshafen AG	Friedrichshafen

Statutory declaration

I herewith declare that I have completed the present thesis independently making use only of specified literature and aids. Sentences or parts of sentences quoted literally are marked as quotations; identification of other references with regard to the statement and scope of the work is quoted. The thesis in this form or in any other form has not been submitted to an examination body and has not been published.

I am fully aware of the legal consequences of making a false declaration.

Date: 28th May 2012

Signature: Bernd Platzek

