

Chapter 4 Managing businesses in a changing environment

“To cherish traditions, old buildings, ancient cultures and graceful lifestyles is a worthy thing - but in the world of technology to cling to outmoded methods of manufacture, old product lines, old markets, or old attitudes among management and workers is a prescription for suicide.”
(Maddock, 1982)

4.1 Introduction

The rapid and often discontinuous change that is taking place in the environment has a direct impact on the manner in which businesses are managed. Managers are finding that old proven recipes for success and specialised routines are no longer effective and are of necessity adopting new approaches to managing their companies. These changes, both in the environment and in the organisation, also have an impact on the accounting system and accounting function of organisations. Accountants have to be aware of these changes so that they can adapt accounting information to meet, and even anticipate, the changing demands of users.

The changes that are taking place in the environment were addressed in chapter 3. In chapter 4 the impact of these changes on businesses and the manner in which they are managed is considered; it is noted that a paradigm shift has taken place in management theory, as a result of the rapidly changing environment. The nature of the changes to which businesses are exposed determines the extent of the response required by management. A survey of literature is used to identify the extent and type of responses that are required both of businesses and their management in adapting to a competitive and global business environment. These responses are addressed as prescriptions for managing change in business organisations.

4.2 A shift in managerial approach

Managing a business in a volatile environment is fundamentally about handling change. Nadler and Shaw (1995) contend that businesses surviving in the coming decades will be those who are able to respond quickly and effectively to changing environmental conditions. This puts a premium on certain capabilities, such as adaptability, flexibility and responsiveness. They conclude that successful firms will learn and act at a faster rate than the competition and their leaders will have no choice but to be effective anticipators and managers of large scale change.

A paradigm shift has taken place in the literature on management theory in response to the devastating effect that rapid change has had on businesses. Originally, management theories were attractive because they were straightforward and not laden with ambiguity and paradox (Peters & Waterman, 1982). However, these well-tried methods fail to produce successful results in the new environment.

It is therefore not surprising that the approaches and methods suggested to management in the literature have changed substantially in recent times. Sconberger (1990) suggests that more have been learnt about the right way to run a business in the 1980s, than in the preceding half century.

The evolution that has taken place in management theories is diagrammatically depicted by Scott (1978) in a two-dimensional grid (figure 4.1).

Figure 4.1 : Four stages of Management Theory and practice

	Closed system	Open system
Rational actor	I 1900-1930 Weber Taylor	III 1960-1970 Chandler Lawrence Lorsch
Social actor	II 1930-1960 Mayo <i>et al.</i> McGregor Barnard Selznick	IV 1970-? Weick March

Source: Scott, W. R. (1978) Theoretical perspectives in environments and organisations, in Peters, W. J. & Waterman, R. H. (1982) *In search of excellence*, New York: Harper & Row, p.93.

On the one side of Scott's grid there is a progression from mechanical thinking about organisations (closed systems) to gestalt thinking (open systems). The closed systems view ignores the effect of the environment on the organisation, while the open systems view recognises its impact. On the second side of Scott's grid, there is a progression from a rational to a social view of organisations. Rational, in this context, means that clear aims and objectives for the organisation are deemed to exist, and that these can be determined. The social view holds that decisions about objectives are based on value rather than mechanical choices and that such choices are made not so much by clearheaded thinking as by social coalitions, past habit patterns and other dynamics that affect people in groups (Peters & Waterman, 1982, p.91).

In terms of this evolution, Management Theory has adopted increasingly complex problem-solving approaches. Ackoff (1974) notes that the management process has become "messy". for management now concerns the handling of ambiguity and paradox on a daily basis. The rational actor has been superseded by the complex social actor, a human being with built-in strengths, weaknesses, limitations, contradictions and irrationalities. A business insulated from the outside world has

been superseded by the business buffered by a fast-paced, ever-changing array of external forces.

The paradigm shift in management approach from a monistic, closed, rational view to a holistic, open, social view is also addressed by Kanter (1982). She contrasts the segmentalist assumptions of the old model with the integrative assumptions of the new model by means of a table.

Figure 4.2 : Assumptions underlying Management Theory

Old model assumptions	New ("political") model assumptions
<ul style="list-style-type: none"> Organisations and their participants have choice; freedom of contract; limits set only by own abilities and capacities. 	<ul style="list-style-type: none"> Organisations and their participants face environmental constraints; resource limits; conflict and unequal power.
<ul style="list-style-type: none"> Organisations tend toward "closed system" (rational focus and economic models). 	<ul style="list-style-type: none"> Organisations tend toward "open system" ("institutional" focus and political–economy models).
<ul style="list-style-type: none"> Organisations have limited purposes (and are therefore able to stay bounded because they produce bounded and identifiable outputs). 	<ul style="list-style-type: none"> Organisations have multiple activities and impacts ("uses"), any one of which is subject to scrutiny by other groups; bargaining by stakeholders to set organisations' "official goals".
<ul style="list-style-type: none"> Key management problems: Control (internal and external), Coordination of isolated segments, Reduction of friction around the work process. 	<ul style="list-style-type: none"> Key management problems: "Strategic decisions", Issue management, External political relations.
<ul style="list-style-type: none"> Internal, micro-focus: Primacy of leadership and inter-personal issues. 	<ul style="list-style-type: none"> External, macro focus.
<ul style="list-style-type: none"> Need to study static or relatively invariant properties of the organisation - e.g. how size or formal structure affects "success". 	<ul style="list-style-type: none"> Need to study bargaining, competition, and mutual adjustment.
<ul style="list-style-type: none"> Organisational effectiveness is a technical matter, based on objective standards and relatively universal human and organisational requirements. 	<ul style="list-style-type: none"> Organisational effectiveness is a political matter, based on standards set by an organisation's "dominant coalition" after bargaining among constituencies.

Source: Kanter, R. M. (1982) *The change masters: corporate entrepreneurs at work*, London: George Allen & Unwin, p.399.

Kanter (1982) suggests that organisations that can be studied and managed in terms of the internal dynamics have been replaced by organisations that are highly dependent on and is formed by a volatile environment. The idea of free choice with own ability as the only constraint to success has been replaced by external; decision

making which is not based on organisational criteria. Explanations for the failure within the organisation were originally sought in factors internal to the individual such as incompetence, greed and lack of motivation. Now it is recognised that the actions of individuals often arise from the context in which they operate. The old view held that the ideal organisation should be divided into specific functions with specialisation, job descriptions and clear lines of authority. According to the modern view, co-ordination is more critical than differentiation and individuals should have responsibility for the consequences of their actions far beyond their job descriptions and areas of specialisation. As a result, increasing use is made of cross-functional teams in which people with different areas of specialisation and job descriptions work together to achieve the goals of the enterprise.

This shift in management theory has far-reaching implications for management, employees and business organisations. The manner in which a business is run will impact on its information system, and more specifically its accounting information system. If the organisation is managed as an open system, its accounting system should also be an open system so that it can respond to the changing needs of its users. The accounting information system should be user- or customer-driven. If the organisation is deemed to consist of social rather than rational actors, the content and use of the accounting information system should be adapted in line with these new assumptions. Accounting information should thus be used less as a control mechanism and more as a facilitator of change and continuous improvement.

4.3 Types of organisational change

Industries and businesses are exposed not only to different levels of change, but also to different types of change, with the interaction of the two determining the extent of the required response and ultimately adaptation. High levels of change will call for high levels of response by businesses, whereas discontinuous change will require more radical action than in the case of incremental change.

Nadler and Tushman (1995, p.24) identify four types of organisational responses that are required for the different types of organisational change, namely tuning, adaptation, reorientation and recreation (see figure 3.1).

Tuning is required where management anticipates certain events or seeks to improve efficiency in a business, and therefore initiates incremental change in the organisation. The requirement for change is not immediate, the change originates internally and the process is often initiated to enhance the fit between organisation strategy and structure.

Adaptation is usually initiated externally, in that changes in the environment calls for organisational responses in order to avert negative consequences. Although these organisational responses may be major, they do not usually require a fundamental reorganisation of the organisational strategy, culture and structure.

Reorientation is required when management anticipates events in the environment that will substantially affect the industry and the organisation. It calls for a fundamental re-evaluation of organisational strategy, culture and structure. This type of change is anticipated and initialised in the organisation before the need for organisational change becomes imperative, thus allowing the gradual introduction of fundamental change.

Recreation is required where management has failed to anticipate future events in the environment that requires fundamental changes to the business organisation. Consequently the organisation is required to respond to fundamental changes in its strategy, culture and structure over a short time span in order to survive. Because of the limited time available to effect such change it is often disruptive and may therefore result in the destruction of elements in the organisation, as well as in a departure from existing core values.

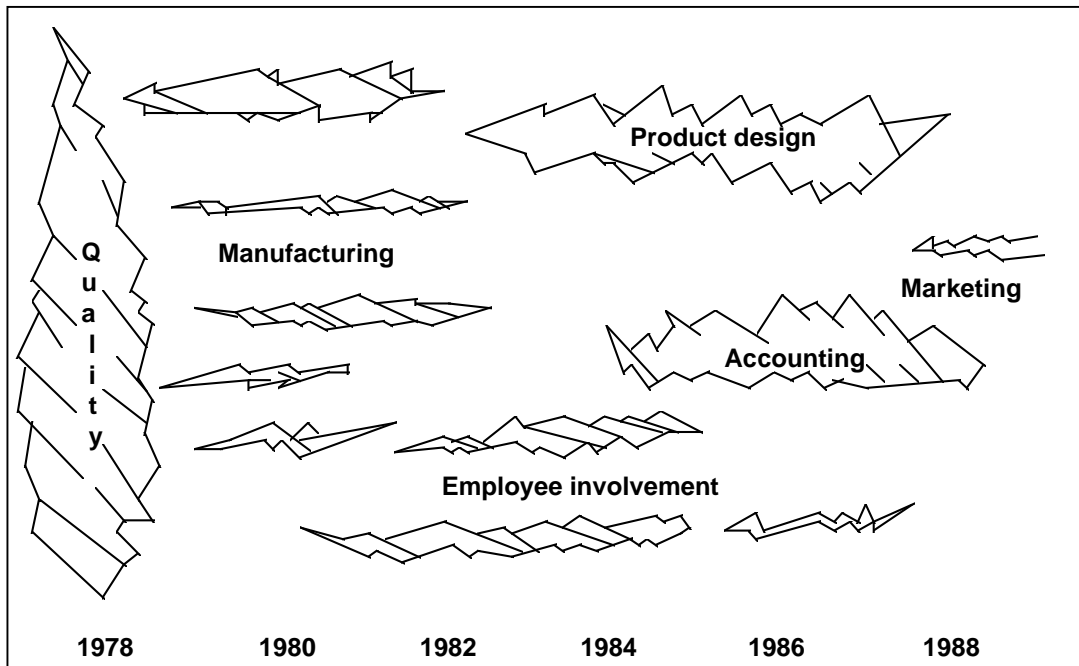
Nadler and Tushman (1995) note that the well-known term of “re-engineering” no longer encompasses the extent of change required in organisations in response to especially discontinuous change.

The extent to and pace at which the prescriptions for managing change in the literature are implemented in business organisations are influenced by management's assessment of the levels of change, the nature of the change and their willingness to act proactively. If management acts proactively in initiating change, the change will be introduced in a planned and organised manner. Such change will be less disruptive to the organisation than in cases where management is forced to implement change reactively within short time span.

4.4 Prescriptions for business change

A proliferation of literature on how to manage a business in a changing environment has prescribed a number of ideas and responses for survival and success. Schonberger (1990) describes the new movements in management as earthquakes, tremors and aftershocks. He suggests that these ideas and prescriptions did not develop simultaneously, but rather in the form of tradition-shattering movements over time with the first movement lending support to and creating an incentive for the second, and so forth. His diagram of earthquakes, tremors and aftershocks is shown in figure 4.3.

Figure 4.3 : Earthquakes, tremors and aftershocks



Source: Schonberger, R. J. (1990) *Building a chain of customers: linking business function to create a world class company*, New York: The Free Press, p.2.

The first and largest movement arose from the need of especially US companies to improve the quality of their products in order to remain competitive with Japanese companies. The idea of quality was entrenched in organisations by techniques such as Total Quality Management, Quality Function Deployment and the introduction of quality circles. The aim was to supply products and services that would meet the quality requirements of customers. It required that the whole organisation become customer oriented.

The second movement addressed the manufacturing techniques such as Just in Time, Total Preventive Maintenance, Computer Numerically Controlled Machines and later Flexible Manufacturing Systems. The aim of the second movement was not only to improve the manufacturing process by reducing labour, scheduling, material handling, stockkeeping and inspecting, but also by providing a better service to the customer through shorter lead times, better quality, and customised and personalised products.

The third movement arose from the involvement and empowerment of the employees in the organisation resulting in all employees, at all levels, and all functions, having a say in virtually everything (Peters, 1991). Empowerment developed through increased ownership in the organisation, training, crossfunctional responsibility, a bottom-up approach to management and a flexible approach to control. The employees of the organisation were recognised as the prime source of value added in a new and rapidly changing environment, and the prime means of achieving and sustaining a competitive advantage.

The product design movement resulted in the simplification of product design through standardisation, modularity and reduction of the number of parts, the number of operations and the need for resources. The accounting movement, focusing more on managerial accounting, developed new techniques such as activity based costing and target costing to deal with the increased demand for more accurate and useful information. The marketing aftershock too resulted in a change of focus from national to international marketing and competition. The marketing department formed closer alliances with people in operations, design and development, working as a team to ensure that the correct type and quality of products and services were marketed to the correct market segments.

It appears from the figure that the accounting movement is complete. However, it only starting to gain momentum, as new opportunities for experimenting, innovating and adapting the accounting information system have only been recognised in recent years.

The Schonberger diagram does not identify a number of other aspects that are necessary components of the survival kit of a business operating in a dynamic environment. A successful business need to be innovative and introduce and use new products, services, techniques and structures to stay ahead of competitors. These firms will move quickly to develop and use new technology to its advantage. The management style will change from a prescriptive and control-oriented approach to a supportive and facilitating approach. Leadership as a business quality will become increasingly essential to steer the firm through complex, highly competitive times. Decision making in the business will become more strategy oriented and the

future direction of the firm will be determined largely by its vision. (The area of strategic decision making has received little attention in accounting and is an area which is discussed in more detail in the next chapter.) Finally, the structure of the organisation will change to support the new management strategies. Thus all of these changes to organisations will affect the accounting information system which will have to adapt to the changing demands for information.

The prescriptions for managing an organisation in turbulent times are discussed in more detail in the following sections. They are not necessarily applicable to all types of organisations. The manufacturing and product design sections will for example not apply to service companies. It is also necessary to consider the reinforcing relationship between categories, in that a philosophy and strategy of total quality management will influence product design, manufacturing and marketing. Concluding each section is a brief discussion on the recognition and measurement of each of the prescriptions, together with a brief discussion on how the accounting information system will be affected by the new management philosophies and techniques of the organisation.

4.4.1. Quality

Quality does not only refer to goods and services but includes quality of time, place, equipment and tools, processes, people, the environment and safety, information and measurement (Schonberger, 1990). Quality is an ongoing process that has to be so pervasive throughout the company, that it becomes the philosophy and culture of the whole company. All firms and each unit within the firm need to adopt the same strategy, to serve the customer with ever better quality, lower cost, quicker response and greater flexibility (Schonberger, 1990). This perspective of Schonberger will be developed further in chapter 6, where quality, cost and time are identified as three of the four strategic aspects of flexibility. Flexibility itself is not viewed as a dimension or aspect but rather as a comprehensive construct which encompasses all these dimensions. Quality should be viewed from the perspective of the customers and potential customers. The aim should be to satisfy existing needs of customers with quality products or services, and to identify, anticipate and create new needs. This

requires the cultivation of a close relationship between the organisation and its customers.

A serious threat to an organisation that has attained a certain level of quality is sustaining that level. The process of quality products and services requires continual renewal to maintain and improve quality throughout the organisation. Peters (1991) suggests that the following attributes are amongst others, necessary to sustain quality in the organisation:

- A management obsessed with quality;
- One guiding system or ideology on total quality;
- The measurement of quality;
- The creation of quality incentives;
- An organisation structure supporting quality improvement;
- Involvement of distributors and customers, together with management information systems, personnel, accounting, treasury, sales, order entry and shipping as part of the quality programme.

The process of quality improvement can only be sustained if the quality within the company is measured on an ongoing basis. Ansari *et al.* (1997) define quality costs as costs that are incurred to ensure that a product or service meets or even exceeds customers' expectations and maximises the value customers receive for a product. An accounting system that measures quality costs is essential in pursuing quality as a strategic goal. The old cliché "What gets measured gets done," applies to quality improvement as well as to other prescriptions. Improvement is only possible once something has been measured repeatedly to indicate the trend, level, speed, direction and acceleration of the phenomenon. Measurement should commence at the start and continue throughout each function of the programme. The type of measures that can be used to assess quality are

- *product quality* as perceived by customers, and measured by the number of customer complaints, returns, warranty expenses and service calls;

- *poor quality costs*, measured by scrap, rework, defect rates, and machine and labour downtime;
- *assessments of suppliers* measured by number of returns, the percentage or number of poor quality products to total products; and
- *share of revenue* from repeat sales to old customers in relation to total sales.

These and other measures should be initiated in the accounting information system to support the quality objective and the process of continuous improvement in organisations.

The accounting function itself should also strive to produce a product of high quality, namely useful and relevant information. This requires close and ongoing cooperation between accountants and the users of financial information so that their changing needs can be identified and met.

4.4.2 Innovation and technology

The dynamic business environment requires that innovation become a way of life. Innovation is difficult to define and often poorly understood. According to Toffler (1985), innovation is not just a matter of products or technology, but is also about people. A definition of innovation that encapsulates all these different aspects is provided by Kanter (1982, p.20):

“Innovation refers to the process of bringing any new, problem solving idea into use. Ideas for reorganising, cutting costs, putting in new budgeting systems, improving communication, or assembling products in teams are also innovations. Innovation is the generation, acceptance and implementation of new ideas, processes, products or services.”

Foster (1986) comments that successful companies such as IBM, Hewlett-Packard and Johnson & Johnson have made a number of assumptions regarding change and innovation: They assume that the day after tomorrow will not be like today. They assume that when change comes, it will come swiftly. They believe that innovation is inevitable and manageable. They believe that managing innovation is the key to

sustaining high levels of performance for their shareholders. They assume that as risky as innovation is, not innovating is riskier.

Being innovative requires continued creativity throughout the organisation. Drucker (1985) contends that innovation has to be decentralised, *ad hoc*, autonomous, specific and micro-economic and it should rather start small and be tentative and flexible. He argues further that innovation is not to be found in the massive aggregates with which the planner deals with of necessity, but in the deviations therefrom – in the unexpected, in the incongruity, in the difference between “The glass is half full” and “The glass is half empty”, in the weak link in the process. To successfully obtain and maintain a steady flow of innovation in the organisation, everyone needs to be committed and involved. It is a fallacy to believe that innovation takes place only in the research and development department. If everyone, in every function, constantly pursues innovation, the average firm’s overall capacity for innovation will of necessity increase dramatically (Peters, 1991).

The role of management in this process is to remove barriers to creativity and to build an environment and create a culture in the organisation that is conducive to innovation. This may require further training of staff, restructuring of the organisation, the development of a reward system linked to innovation, the setting of innovation targets and the deliberate creation of instability within the firm.

Since innovation is central to success in a changing environment, the rate and extent of successful and unsuccessful innovation should be measured, although there are difficult issues such as specification and definition that need be addressed. Even though measures may not always be reliable, new ways need to be developed to measure the flow of innovation and creativity in the organisation. Management may set the targets for innovation to serve as a benchmark. Measures such as the number of innovative projects started, the number of pilot tests undertaken, the amount of incentives paid to innovators and the number of failed projects, could be used to monitor progress in the organisation. Such innovation and incentives should also extend to the accounting system. It is only through creativity, innovation and experimentation that Accounting will be able to maintain its position as the language of business.

Companies are using new technology to improve their competitive advantage in global markets to an increasing extent. Successful companies are flexible and quick to abandon old technology and introduce the new. They focus on using the right technologies at the right time, on protecting their positions and on having the best people (Foster, 1986).

A number of decisions are made about technology in companies:

- Whether to invest in new technology or not;
- Which technology to invest in;
- Whether the people in the organisation will be able to adapt to the new technology;
- When to adopt new technology; and
- How to implement the new technology.

The acceptance, implementation and use of technology is crucial if the organisation is to gain the maximum benefit. The use of new technology often has important cost and risk implications for an organisation, as a large proportion of the total costs may have to be incurred before production or utilisation even commences. It may be useful to consider the life cycle costs of technology *vis á vis* the costs incurred from the date of investigating the new technology to the date of its discontinuance. Life cycle costing recognises that the majority of costs are incurred or committed before production or implementation and that the management and control of costs should already commence during this phase (Ansari *et al.*, 1997). The recovery of such costs is dependent not only on the steady flow of cash and/or benefits, but also on the intellectual abilities within the organisation to ensure that the technology is managed in an increasingly efficient, innovative and productive manner.

Technology should be used to attain, sustain and improve competitive advantage for the organisation, but an incorrect, unproductive or inefficient use of technology may very well have the opposite effect. The application of technology in the organisation should be measured to ensure optimised and continuously improving usage. This is

an aspect that has received [virtually no attention](#) in Accounting and is seldom disclosed in corporate reports. The development of measures of the extent and efficiency of use of new technology in an organisation depends on the nature of the technology. For flexible manufacturing systems, for example, Jaikumar (1986) suggests indicators such as system development time, types of parts produced, annual volume per part, extent to which systems are unattended by labour and the utilisation rate of the system in terms of shifts. Innovative and appropriate indicators should be developed for each type of new technology which is introduced into the organisation. Business organisations use technology to achieve competitive advantage. Accounting information systems could also use technology to gather, process and distribute information more efficiently both within and outside the organisation.

4.4.3 Product design

A company can gain competitive advantage through product design. The impact that product design may have on the organisation has often been underestimated. Ford and General Motors have found that although design accounts for only 5% of the cost of a car, it determines about 70% of the manufacturing costs. If it is borne in mind that eight out of ten new products ultimately fail in the USA (Welter, 1989), the importance of successful and cost effective product design will not be underestimated. In rapidly changing times, where the needs of customers and the positioning of competitors change continuously, it is a prerequisite that the opinions of the customers and suppliers and as well as employees and management be considered in product design.

Schonberger (1990) identifies six main directives for good product design:

- *Design partnerships:* This refers to the use of extended design–build teams in which a product designer works with suppliers, customers, assemblers and purchasing.
- *Design for operations:* Here the aim is to design products or services that are easy to make or provide. This includes minimising the parts used,

standardising the type of part used, ensuring that parts can perform multiple functions, designing parts that are easy to join and separate and so forth.

- *Design for cost* means that the cost implications of the products or services should already be considered at the design stage. Marketing specifies a cost target based on an expected selling price and the cost of manufacturing the product is monitored as the design of the product progresses. This cost should be compared to the original marketing target on an ongoing basis to assess whether the project is still feasible.
- *Structured product development* concerns the use of mapping techniques so that the development and manufacturing phases of the product can be planned in advance. Planning the design, development and manufacture allows for the early detection of threats and problems.
- *Competitive analysis* is based on a comparison of the organisation's products and services to those of competitors. There are five source of competitive analysis according to Schonberger (1990, p.231): (1) Buy and try out the competitor's product or service, (2) Check with your competitor's customers, (3) Be active in trade associations and speciality groups, (4) Trade data with competitors, or (5) Hire knowledgeable people from outside your firm.
- *Time to market* refers to the competitive advantage that may be gained by a quick design-to-market response. Beating the competitors to the market with an innovative new product allows the organisation to reap larger profits. A substantial reduction in lead time of product design and manufacture may therefore result in the organisation gaining a competitive advantage.

The importance of product design is well established through the method of target costing in Management Accounting. Target costing is a system of profit planning and cost management that is price led, customer focused, designed centred and cross functional (Ansari *et al.*, 1997). Target costs are established by determining the market price and deducting the required profit margin. The target cost analysis is

based on customer requirements. Product design forms the key to identifying and managing product costs, through the elimination of costly parts and by simplifying designs and minimising changes. Crossfunctional teams are responsible for the development of the product. Cost management commences at the early stages of design and development and continues throughout the life cycle of the product. Finally, the value chain of the organisation extends beyond its legal boundaries to include the contributions of suppliers, dealers, recyclers and distributors. This extended view of the enterprise is adopted in target costing to improve the management of costs.

The need exists for measurement of the performance of the design process, not only on a cost basis, but also in terms of time to completion, rate of designing of successful products, number of parts used per product, percentage common versus percentage unique parts, number of subassemblies and other measures that support the design aims and targets of the organisation. The design function can have significant cost implications for a business. Much of the success of the introduction of new products and services depends on product design. On a similar basis the accounting system can apply the principles of efficient product design to its product information. The accounting system design, too, should be based on simplicity, flexibility, multipurpose uses and cost effective implementation.

4.4.4 Manufacturing

The manufacturing process can be used together with the design function to gain competitive advantage in highly competitive market segments by beating competition to the market, or by producing customised or cost effective products and services. These functions can in turn be used as powerful marketing tools.

One of the first new developments aimed at improving the efficiency of the manufacturing process was the introduction of the concept of Just in Time (JIT). Where Western companies tended to focus on optimising inventory policies, Japanese companies viewed inventory as a form of waste that had to be eliminated and as the buffer used to cover up multiple manufacturing problems. Johnson and Kaplan (1991) noted that Japanese companies tried to understand the fundamental

forces that led them to holding inventory in the first place. These forces were then targeted with the aim of systematically removing them. JIT is in essence a production philosophy that results in products being pulled through manufacturing as they are needed. The result of the JIT philosophy is that total quality improves, set-up times of machines are reduced substantially and closer relationships are formed with suppliers to reduce the lead times and improve the quality of material supplies. The layout of machinery in the factory is redesigned to reduce both bottlenecks and manufacturing lead times. JIT also removed waste resulting in substantial cost savings – firstly by substantially reducing the costs of holding inventory, with a concomitant drop in financing costs and secondly by saving factory floor space. Companies also discovered the fundamental truth that inventory hides problems: attempts to reduce inventories, lead to the emergence of a number of other problems, such as quality problems, bottlenecks, co-ordination problems, obsolescence, shrinkage and supplier unreliability (Johnson & Kaplan, 1991).

Technology has also had a substantial impact on the manufacturing process. Organisations using sophisticated computerised equipment find that virtually labour free manufacturing becomes a possibility. Technology could also be used to customise and personalise products. However, Schonberger (1990) makes the point that world class status is not achieved merely by purchasing the latest equipment, for the successful implementation of advanced technology depends mainly on the personnel of the organisation. The danger exists, for example, that the level of technological sophistication and the level of competency of employees may be mismatched (Perrow, 1983). Furthermore, technically advanced machinery may not be used for the correct purposes or at maximum productivity levels. Examples of misuse of sophisticated technologies in the manufacturing processes are found in digital computer production technology machines, robots, computer-aided manufacturing (CAM) and flexible manufacturing systems (FMS). The following is one example of misuse: The purpose of FMS is to manufacture several kinds of parts in low to medium volumes. All the activities in the system (metal cutting, monitoring tool wear, set up, inspection, tool adjustment, etc.) are under precise computer control, similar to a miniature automated factory (Jaikumar, 1986). However US companies used FMS for high volume production of few parts rather than variety production of many different parts at a low cost per unit. The inefficient

use of FMS in US companies is in contrast to the efficient use by Japanese companies, which showed up in a further increase in the competitiveness gap between these companies. The latter companies gained a competitive advantage by being able to produce differentiated, low cost and high quality products.

The introduction of technology together with methods such as JIT also has implications for the information system of organisations. Traditional measures such as individual worker output and machine up-time are no longer appropriate in a JIT or automated environment. The efficiency of the manufacturing process must be measured by more unconventional yardsticks. One of the indicators is lead time, in other words the time taken from the start to the completion of production and delivery to the customer. Other indicators which assess manufacturing efficiency include the number of bottlenecks experienced in production, the average time taken to remove bottlenecks, the length of the set-up time of machines, the number of breakdowns in machines, number of reworked parts, average distance travelled by products in the factory and the average levels of inventory.

Although these indicators are used within the business to monitor progress, they are seldom communicated to stakeholders outside the organisation, unless in the form of a marketing tool. Consequently external users find it almost impossible to assess the manufacturing efficiency of a company from the information supplied in the financial reports.

4.4.5 Employee involvement and empowerment

The shift in the focus of management theory from a closed system, rational perspective to an open system, social perspective, has emphasised the role that people can play in the success of an organisation. It is now recognised in the literature that competitive advantage is gained through the brain power, initiative, resourcefulness and creativity of employees. According to Peters (1991) people must become the primary source of value added, and should not remain merely "a factor of production" to be optimised, minimised and/or eliminated. Rhinesmith (1995) argues that as companies gain a better understanding of the new global world, they learn that people provide the competitive edge while Naisbitt and

Aburdene (1990) predict that the most exciting breakthroughs of the 21st century will occur not because of technology, but because of an expanding concept of what it means to be human.

Organisations should be prepared to expend time and money to recruit the right people. Line staff should dominate the process and the qualities required of new recruits should be clearly specified up front. The potential of existing employees should be unlocked by more training in among others problem-solving ability, strategy, finance, technical aspects of manufacturing and design, marketing and quality improvement. Daniels (1994) contends, however, that training is not sufficient, what is needed is a learning organisation: This is an organisation that promotes learning among its employees – and also an organisation which itself learns from that learning process. She concludes that employees within a learning organisation would be and feel empowered – empowered to take responsibility for their own work area and/or tasks, for their own careers and for personal development.

The involvement of people can be encouraged by forming self-management teams in which people from different functions work together as focused teams. These teams need three commodities to operate successfully, namely information (data, technical knowledge, expertise), resources (funds, material, space, time) and support (endorsement, backing approval, legitimacy, commitment) (Kanter, 1982). A sense of ownership should be created among employees, combined with a total commitment and willingness to participate and take responsibility. Throughout the organisation, people should own and manage their processes with the help from anyone who has the required expertise (Schonberger, 1990). To encourage involvement, the organisation should provide financial incentives as recognition for contributions to innovation, quality, product design, team work and productivity. Employee ownership can be extended by encouraging shareholding in the organisation by means of share incentive schemes and performance bonuses paid in the form of shares.

The accounting information system is not designed to measure the primary resource of organisations, namely people. As a result of this narrow recognition and measurement criteria, the contribution of human resources to businesses are not

recognised in the conventional financial statements. Certain aspects of employee involvement, such as total training costs, training costs per employee, staff turnover, percentage people involved in teams, amount of incentive payments, absenteeism, recruiting success and skills, can be measured quantitatively while other aspects, such as the level of involvement, commitment, cultural differences and continued learning, do not lend themselves to direct quantitative measurement. Quantitative surrogates such as the percentage of people involved in teams could be used as an indication of involvement here. In other instances more qualitative assessments such as opinion surveys or performance assessments could be used.

4.4.6 Global competition and a customer orientation

The development of a global market has profoundly changed the manner in which businesses are managed. Globalisation means that it is now possible to produce a product anywhere, using resources from anywhere, by a company located anywhere, to be sold anywhere (Milton Friedman in Johnson, 1992). As a result, the number of decisions facing management on a day to day basis has risen significantly. Global scanning, in other words searching for and creating opportunities in the global environment, will increasingly become a prime concern of management. As competition is now waged on a global basis, organisations will have to produce products and services of a world standard, be committed to ongoing innovation to attract and create new markets, use technology and employee productivity to supply competitive products and services, and differentiate products and create unique products through brands and trademarks. Even local business cannot escape the impact of worldwide competition when high quality products and services from global corporations are being sold faster, cheaper and more efficiently in local markets. Allen (1994) maintains that alongside the rapid pace of change, globalisation has occurred to such an extent that few organisations can be thought of in purely local (including national) terms. He points out that a firm does not have to be import or export to be exposed to the risks arising from currency fluctuations, it requires just one competitor, existing or potential, who is based abroad.

World competition and marketing have made customers more selective, more informed and more demanding. According to Schonberger (1990) customers have

come to demand variety and change. Consequently, the management of organisations are striving to increase the attractiveness of their products and services by introducing different types, designs, colours, models, brands, labels and marketing. At the same time product life is declining rapidly, requiring many organisations to become product innovators rather than remaining low cost producers. For these organisations the key to success is the continual introduction of high performance products, timely delivery, customised or niche products, and the flexibility to adapt to customer preferences as they gain experience with new products (Johnson & Kaplan, 1991).

Prices of products and services are being determined by the value to the customer and less by the actual cost of production to an increasing extent. Foster (1986) states that yield is a function of the value of a particular product to a customer and the degree to which its manufacturer can protect that value from competitive duplication. It becomes increasingly important to measure the margins on products and manage the costs of production. If advanced technology allows a company to make the product at a lower cost and recover the cost of the investment in capital, it will make more money than its competitor and yet succeed in selling the product at a lower price. On the other hand, the company can enhance the value of its products by adding product attributes for which customers will be willing to pay more (Foster, 1986). In the past the company that knew how to standardise most effectively was able to beat its competitors, but in the future the company that knows how to customise effectively may prove to be the victor (Toffler, 1985).

Current accounting practice is still driven by internal costs and cost cutting practices. It has not yet adopted the customer-oriented approach necessary for companies to survive global competition. Some indicators such as the market share in different market segments, markets entered and left during the period under review, the strategic aim of the organisation in different segments either as a niche, innovator or a low cost producer, a geographical analysis of sales, the amount spent on advertising, new advertising campaigns launched and the level of investment in intangibles such as brands, patents and trademarks, may be developed to monitor the competitive position of the company. This type of information is often not available to users of financial information outside the organisation.

4.4.7 Management style and leadership

There are two types of executives in business – incremental executives and radical executives (Toffler, 1985, p.23). An incremental executive assumes that continuity exists, formulates straight-line strategies and defines problems cleanly, treating each as it comes along, more or less in isolation from others. This type of executive is good at logical solutions and tends to use the well-tried methods of the past to solve problems. A radical executive recognises the growing importance of discontinuity, tends to define problems less neatly, and rather sees them in relation to the each other. This executive is open to “unthinkable solutions”, carefully examines mind sets and preconceived mental models, and does not seek solutions in rigorous plans, diagrams and budgets. Senge (1990) suggests that this executive sees interrelationships rather than linear cause-and-effect chains and processes of change rather than snapshots. The radical executive acts as a facilitator and supporter of crossfunctional teams.

The level of stability or turbulence in the environment determines which type of executive skills are the most needed in particular circumstances. The management style should match the demands of the times. Therefore the style and skills of the radical executive are best suited times of rapid change and turbulence, while times of stability are suited to the talents and the style of the incremental executive. A mismatch between the management style and the state of the environment can have catastrophic results for the business.

A shift is discernible in the literature away from management to leadership. Management, in this context, is viewed as ruling and controlling employees, whereas leadership is viewed as enabling and helping others to perform their work by removing barriers and constraints. Allen (1994) confirms that command and control have been replaced by leadership and enabling skills. Leadership can be defined as the art or process of influencing people so that they will strive willingly and enthusiastically towards the achievement of organisational goals (Koontz *et al.*, 1982, p.423). Jago (1982, p.314) suggests that leadership is both a process and a property: It is a process in the sense that it uses non-coercive influence to direct and

co-ordinate the activities of [University of Portofino](#) members of an organised group towards the accomplishment of group activities. It is a property in the sense that leadership is the set of qualities or characteristics attributed to those who are perceived to employ such influence successfully. Bennis (in Mc Elroy, 1982, p.413) sums up the diverging definitions of leadership that are found throughout the literature as follows:

“Probably more has been written and less known about leadership than any other topic in the behavioural sciences.”

The accounting system does not recognise, nor attempt to measure an elusive quality such as leadership. Yet leadership or the absence thereof directly influences the performance and success of the organisation. It is difficult to measure or assess the level and extent of leadership within a particular organisation, even more so from the perspective of an external user of the financial statements. However, some indirect or surrogate indicators may be used to obtain some idea of the level of leadership and type of management style in the company, such as a description of the age, qualifications, years with the company, track record, and interests of top management. The vision and mission statements as well as a discussion and overview of management on the progress of the company during the past year, and its prospects for the future, could also serve as qualitative measures.

4.4.8 Vision and strategy [University of Pretoria.etd](#)

A vision and core values are widely identified in the literature as being essential elements of a successful business in a volatile environment.

The term “vision” can be divided into three concepts:

- The future state or destination of the business – a pattern of what the business is going to be at some point in the long-term future;
- The driver or motivator of business behaviour – a pattern of becoming;
- The business philosophy, culture or shared belief about what the purpose of the business: what it is, why it so, what makes it successful, and how people in it should behave – thus a pattern of being (Stacey, 1992a).

A vision should be unique yet specific enough to give direction to the decision and actions within the organisation. It should on the other hand be general enough to allow for radical new and bold decisions in a rapidly changing environment. The central idea or core of the vision will usually remain fairly stable. Growth to the vision will normally take place at the edges, by means of the introduction of minor changes, some shifts in focus, the introduction of new ideas and the abandonment of the old. A vision should never inhibit the ability of the organisation to respond and adapt to change in the environment.

The vision of the organisation directs the decision making process in an organisation. Ansoff (1988) identifies three categories of decisions in an organisation, namely strategic, administrative and operating decisions. The aim of operating decisions is to maximise the efficient use and conversion of resources and includes decisions on aspects such as resource allocation, scheduling and supervision of performance. Administrative decisions are concerned with structuring the resources of the firm in such a manner that it will maximise performance potential and includes decisions on the structuring of authority, work flows, information flows and location of facilities. Strategic decisions are primarily concerned with external rather than internal problems of the firm. Hussey (1976) defines strategy as an evaluation of the various alternatives open to the company and a selection of what appears to be the optimum

course or courses of action to take. According to Christensen, Andrews & Bowen (1973), strategy is the pattern of objectives, purposes or goals and major policies and plans for achieving these goals, stated in such a way as to define the business, or future business of the company.

Strategy concerns with the relationship between the enterprise and its environment (Katz, 1970). The time and attention required by management on each of the types of decisions are determined largely by the business environment. If demand in the firm's markets is growing, technology is stable and customer demands and preferences change slowly, a firm can remain successful by focusing its attention on the operating activities and letting its products, markets and competitive strategies evolve slowly and incrementally. If, however, the environment becomes turbulent and changeable, and/or demand approaches saturation, continued success and even survival are possible only if management gives a high priority to the firm's strategic activity (Ansoff, 1988). This explains why strategy has become increasingly important in a turbulent business environment.

To enable users of accounting information to judge the performance of an organisation in terms of its vision and strategy, strategic expectations must be formulated, described and disclosed and the vision be stated. The "soft" nature of information on the vision and strategy of the organisation makes measurement difficult and its assessment will probably have a qualitative and descriptive rather than a quantitative nature.

The rising importance attached to strategy as a result of turbulence in the environment has a direct influence on the accounting information system. The increasing demands of users for information to support strategic decisions, requires a shift in focus regarding the accounting system. While Accounting had an internal focus and collected information mainly from within the organisation in the past, it will increasingly have to focus on information gathered from external sources, such as from customers, suppliers and markets. Similarly, where Accounting focused on supporting operating and to a lesser extent administrative decisions in the past, information will to a greater extent have to support strategic decisions.

4.4.9 Flexible organisational structure University of Pretoria.etd

According to Chandler (1962) structure follows strategy. Organisational structure should fit the vision and strategy of the organisation. Both are influenced to a large extent by the state of the environment in which the business operates. Changes in the environment of the firm leads to changes in its strategy, which in return generates changes to the internal structure of the corporation (Hedlund & Rolander, 1990). However, Adizes (1995) argues that while structure should in theory follow strategy, strategy in reality follows structure. He ascribes this to the political nature of organisations, and argues that if the power structure is known, the strategy can be predicted. People follow their own self-interest and strategy is the manifestation of those self-interests.

In the past the organisational structure could be depicted in terms of the formally structured, hierarchical charts and boxes approach or “military model”. This provided a suitable structure for a management philosophy based on a closed system and rational approach. This approach worked well in a stable environment where events repeated themselves and solutions of the past could successfully be applied to present and future problems. A different organisational structure is however needed if the organisation is viewed as an open system and people are recognised as social beings with strengths, weaknesses, contradictions, irrationalities and limitations. An informal, organic enterprise structure with a flat hierarchy, loose job descriptions, self-focusing teams, and crossfunctional involvement meets the requirements of an organisation that needs to respond almost instantaneously to a turbulent environment. Such an informal structure of the company will be flexible in that it will evolve and change continuously in response to the environment. Indeed, Drucker (1988) compares this organisational structure to a large symphony orchestra. Unfortunately, in most companies the existing organisation structures are still designed for the repetitive production of a few basic kinds of decisions (Toffler, 1985). This mismatch between a “charts and boxes organisation” and a volatile environment results in an organisation that is inflexible and slow to adapt and respond to changes in the environment.

The accounting function too, is influenced by the changing organisational structure. This implies that the manner in which the accounting function is structured in firms as well as the collection and distribution channels of accounting information will have to change. In an informal structure the accountant will become a member of crossfunctional teams and the prevailing mainly centralised accounting function will become increasingly decentralised.

4.5 Summary

In response to the rapidly changing environment, business managers have had to change the structure, culture and strategy of their organisations. Organisations are moving from an era dominated by incremental change to one of discontinuous change, where the focus will be on changing the fundamentals of companies through recreation and reorientation. These *fundamental changes* are being promoted by a profusion of literature on how to manage a business in a changing environment (see Peters, 1991; Peters & Waterman, 1982; Schonberger, 1990; Kanter, 1982; Foster, 1986 and Du Pree, 1989, to name but a few). The central idea of the proposed organisational changes is that change should be managed through a *process* of fundamental and continuous improvement and renewal instead of merely applying *ad hoc* reorganisation and restructuring. Change has to be integrated into the corporate culture.

The following areas of fundamental organisational change are mentioned in the surveyed literature:

- Achievement of **total quality**, not only in respect of goods and services but also regarding time, place, equipment, processes, people, safety, information, measurement and the environment.
- Continuous **innovation** throughout the organisation, with all employees being committed to and involved in innovation.

- Effective use of the **latest technology** to improve the organisation's competitive advantage and remain ahead of competitors – the attacker's advantage (Foster, 1986).
- Continuous **elimination of waste** through product design and manufacturing, in respect of materials, time, space, labour and costs.
- Involvement, training and **empowerment of employees**, and the recognition that they are the primary source of a competitive advantage.
- Creation of a **customer-oriented** culture in which satisfying the needs of existing and potential customers is the primary concern of the organisation (Schonberger, 1990). This does not only apply to products and services, but also to information.
- Changing the management style from an emphasis on command and control to an emphasis on **leadership**, with leadership being viewed as enabling and helping others to perform their work by removing barriers and constraints.
- Creation of a **vision** to direct decisions and actions in the organisation and increasing the emphasis on a **strategy** that is aimed at positioning the organisation optimally within its environment.
- Changing the organisational **structure**, from the mechanistic charts and boxes of command reminiscent of the military, towards an informal, organic enterprise with a flat hierarchy, self-focusing teams and involvement of people across functions.

These prescriptions and directives in the literature are, in effect, signposts for organisations to become more flexible (Volberda, 1998). More and more, managers are coming to recognise that flexibility is the key to survival in a volatile environment. Some authors view the developments in Management Theory as a paradigm shift from a mechanistic view of organisations (closed system approach) to gestalt thinking (open system approach), and from a rational view in which clear aims and objectives for the organisation are deemed to exist, to a social view, in which objectives are based on value choices rather than on mechanical choices (Scott, 1978; Kanter, 1982).

The changes that are occurring in organisations impact directly on the information systems and in particular on the accounting systems of those organisations

(Thompson, 1995). Indeed, many of the prescriptions for managing change in business organisations are also applicable to the accounting system. The accounting information system should not only measure change, but should contribute to anticipating and supporting change as well as reporting on it and the strategies adopted by the organisation in respect thereof. The momentum for changing and adapting the accounting system should be initiated not only by the users of accounting information, but first and foremost by the accounting profession.