

11. RELATION OF DMAP FINDINGS TO HYPOTHESIS

The purpose of this chapter is to align the findings of the DMAP to the hypothesis as stated in Chapter 8. This chapter focuses on Phase 3 in Figure 45, with specific reference to mapping the influencing factors and organisational impact and to the hypothesis.

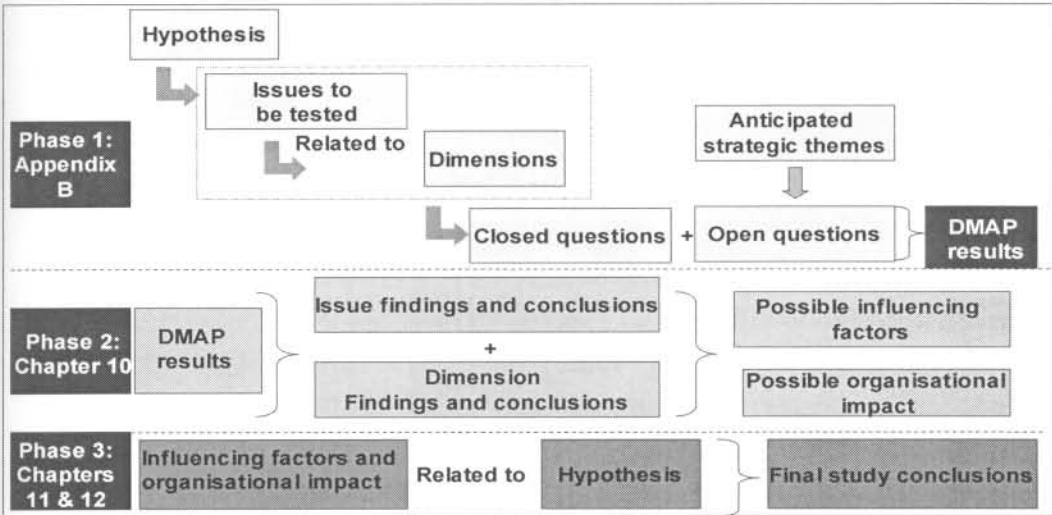


Figure 45. Approach of testing hypothesis and formulating conclusions and recommendations

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11.1. Closed questions: comparison of findings per strategic dimension

STRATEGIC DIMENSION	HYPOTHESIS	DMAP FINDINGS
1. Virtual communities and knowledge sharing	<ul style="list-style-type: none"> • Issue 1: Knowledge management has a vital role in the retention and structuring of knowledge shared in virtual communities / collaborative forums (Q2 & Q3) • Issue 2: Knowledge management can ensure the transfer of tacit knowledge to explicit knowledge within collaborative forums / virtual communities (Q27) • Issue 3: Knowledge management provides tools and platforms for virtual communities / knowledge sharing (Q4) • Issue 4: Knowledge management ensures management of website content (Q5) • Issue 5: Virtual communities / collaboration leads to efficiency and productivity improvements due to sharing of knowledge (Q6) • Issue 6: Virtual communities, with specific reference to extranets, play a larger role in the eBusiness arena in terms of sharing knowledge with customers / suppliers (Q1) 	<ul style="list-style-type: none"> • Low score indicating severe problems • Low score indicating severe problems • Respondents not entirely satisfied • Low score indicating severe problems • Low score indicating severe problems • Respondents satisfied with current situation

STRATEGIC DIMENSION	HYPOTHESIS	DMAP FINDINGS
2. Knowledge management as integration and change agent	<ul style="list-style-type: none"> • Issue 1: Knowledge management facilitates integration inter- and intra-organisation (Q7, Q8, Q9) • Issue 2: Knowledge management provides transparency in the organisation (Q9) • Issue 3: Knowledge management is embedded in day to day work (Q18) • Issue 4: Knowledge management institutionalises customer relationship management (Q1, Q14, 15, 21) 	<ul style="list-style-type: none"> • High score indicating exceptional agreement • High score indicating exceptional agreement • Low score indicating severe problems • Respondents satisfied with current situation

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<i>STRATEGIC DIMENSION</i>	<i>HYPOTHESIS</i>	<i>DMAP FINDINGS</i>
3. Knowledge management efficiency improvements due to knowledge management standards	<ul style="list-style-type: none"> • Issue 1: Knowledge management provides a single point of entry to the knowledge base (Q19) • Issue 2: Knowledge management provides 24-hour access to knowledge (Q10) • Issue 3: Knowledge management prevents duplication and encourages reuse of knowledge in different contexts (Q11, Q12) • Issue 4: Knowledge management provides navigation ability, making searches easier (Q13) • Issue 5: Standardised customer knowledge leads to better customer service through having one view of the customer (Q21) • Issue 6: Knowledge management provides an understanding of the flow of knowledge (Q17) 	<ul style="list-style-type: none"> • Low score indicating severe problems • High score indicating exceptional agreement • High score indicating exceptional agreement • High score indicating exceptional agreement • High score indicating exceptional agreement • High score indicating exceptional agreement

<i>STRATEGIC DIMENSION</i>	<i>HYPOTHESIS</i>	<i>DMAP FINDINGS</i>
4. Knowledge management as factor that overcomes organisational and knowledge base complexity	<ul style="list-style-type: none"> • Issue 1: Knowledge management provides a single point of entry to the knowledge base (Q19) • Issue 2: Knowledge management allows flow of knowledge across divisions and between organisations and geographical locations (Q17) • Issue 3: Knowledge management is embedded into day to day work (Q18) • Issue 4: Knowledge management provides navigation ability, making searches easier (Q22) • Issue 5: Importance of identification of tacit knowledge sources in overcoming increasing organisational and knowledge base complexity (Q16) 	<ul style="list-style-type: none"> • Low score indicating severe problems • High score indicating exceptional agreement • High score indicating exceptional agreement • High score indicating exceptional agreement • High score indicating exceptional agreement

<i>STRATEGIC DIMENSION</i>	<i>HYPOTHESIS</i>	<i>DMAP FINDINGS</i>
5. Pooling of expertise in one central interface with internal and external parties	<ul style="list-style-type: none"> • Issue 1: Knowledge management provides a single point of entry to the knowledge base inter-and intra organisational (Q19; Q20; Q21) • Issue 2: Knowledge management facilitate easier and quicker access to knowledge due to structure (Q22) • Issue 3: Knowledge management provides useful structure to the knowledge base (Q23) 	<ul style="list-style-type: none"> • Respondents not entirely satisfied • High score indicating exceptional agreement • Respondents not entirely satisfied

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<i>STRATEGIC DIMENSION</i>	<i>HYPOTHESIS</i>	<i>DMAP FINDINGS</i>
6. Knowledge management as creator of environment of innovation, learning and improved communication	<ul style="list-style-type: none"> • Issue 1: Knowledge management increases the quality and speed of innovation (Q24) • Issue 2: Knowledge management leads to accelerated learning and skills development on individual, team and organisational level (Q25) • Issue 3: Knowledge management increases efficiency and productivity (Q26) 	<ul style="list-style-type: none"> • Low score indicating severe problems • High score indicating exceptional agreement • Respondents not entirely satisfied

<i>STRATEGIC DIMENSION</i>	<i>HYPOTHESIS</i>	<i>DMAP FINDINGS</i>
7. Knowledge management as measure to prevent knowledge attrition	<ul style="list-style-type: none"> • Issue 1: Tacit knowledge must be converted into explicit knowledge in stead of trying to retain employees (Q27) 	<ul style="list-style-type: none"> • Low score indicating severe problems

<i>STRATEGIC DIMENSION</i>	<i>HYPOTHESIS</i>	<i>DMAP FINDINGS</i>
8. Knowledge management as factor that increases knowledge management agility	<ul style="list-style-type: none"> • Issue 1: Knowledge management increases the quality and speed of decision-making (Q28) • Issue 2: Knowledge management increases organisational agility through faster decision making and quicker adaption to market changes (Q29, Q30) • Issue 3: Availability of knowledge leads to increased organizational agility (Q35) 	<ul style="list-style-type: none"> • Respondents not entirely satisfied • High score indicating exceptional agreement • High score indicating exceptional agreement

<i>STRATEGIC DIMENSION</i>	<i>HYPOTHESIS</i>	<i>DMAP FINDINGS</i>
9. Knowledge management as input in determining the organisation's strategic direction	<ul style="list-style-type: none"> • Issue 1: Knowledge management increases the quality and speed of decision-making (Q28) • Issue 2: Availability of knowledge at the right time to the right people increases organisation's agility (Q29) • Issue 3: Knowledge management provide the organisation with knowledge strategic to the business (Q32) • Issue 4: Knowledge is a corporate asset (Q34) • Issue 5: Knowledge management is tied to the business strategy (Q32, Q33) 	<ul style="list-style-type: none"> • Respondents not entirely satisfied • High score indicating exceptional agreement • High score indicating exceptional agreement • Respondents satisfied with current situation • High score indicating exceptional agreement

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STRATEGIC DIMENSION	HYPOTHESIS	DMAP FINDINGS
10. Knowledge management as factor in quicker adoption of the eBusiness model	<ul style="list-style-type: none"> Issue 1: Knowledge management assists the organisation in adapting its value chain to the eBusiness model (Q38) Issue 2: Knowledge management allows staff to adjust to their new roles through knowledge that enables the transition (Q35) Issue 3: Knowledge management facilitates the implementation of the eBusiness model (Q36, Q37) Issue 4: Knowledge management manages tacit knowledge in the eBusiness model where it is prevalent (Q27) Issue 5: Knowledge management supports the different knowledge flows due to changed business processes (Q38) Issue 6: Knowledge management helps the organisation to cope with more knowledge due to explosion of richness and reach (Q39) 	<ul style="list-style-type: none"> Respondents not entirely satisfied Respondents not entirely satisfied Respondents not entirely satisfied Low score indicating severe problems Respondents not entirely satisfied High score indicating exceptional agreement

11.2. Open questions: comparison of findings according to strategic themes

QUESTION 40	ANTICIPATED STRATEGIC THEMES	DMAP RESPONDENT STRATEGIC THEMES
Describe the two most critical requirements for knowledge flow across divisional, organisational and geographical boundaries	<ul style="list-style-type: none"> Leadership Communication Co-operation / sharing Channels / platforms Technology 	<ul style="list-style-type: none"> Leadership Culture Co-operation/sharing Technology Availability and accessibility of knowledge

QUESTION 41	ANTICIPATED STRATEGIC THEMES	DMAP RESPONDENT STRATEGIC THEMES
Describe the two most prevalent performance measurements relating to knowledge management in your organisation	<ul style="list-style-type: none"> Participation / behaviour Training Understanding of knowledge management Submissions to databases / measurable knowledge sharing Intellectual capital building 	<ul style="list-style-type: none"> Total lack of measurements Knowledge submissions Utilisation of knowledge Availability of knowledge General business performance

QUESTION 42	ANTICIPATED STRATEGIC THEMES	DMAP RESPONDENT STRATEGIC THEMES
Describe the two most essential leadership elements in knowledge management in your organisation	<ul style="list-style-type: none"> Operational ownership of knowledge management, e.g. knowledge manager Top management support Dedicated team Provision of guidelines Leadership communication and general visibility 	<ul style="list-style-type: none"> Leading by example Knowledge sharing Provision of guidelines Culture conducive to knowledge management Dedicated knowledge management function

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QUESTION 43	ANTICIPATED STRATEGIC THEMES	DMAP RESPONDENT STRATEGIC THEMES
Describe the role of communication in knowledge management	<ul style="list-style-type: none"> • Transparency • Knowledge on what is available • Timeous access • Prevention / reduction of duplication • Better knowledge of the organisation 	<ul style="list-style-type: none"> • Education / awareness creation • Common understanding of knowledge management • Enablement of knowledge sharing • Prevention of duplication and increased productivity • Awareness creation of availability of knowledge

QUESTION 44	ANTICIPATED STRATEGIC THEMES	DMAP RESPONDENT STRATEGIC THEMES
Describe the two most critical operational efficiencies effected by knowledge management	<ul style="list-style-type: none"> • Process efficiency • Prevention of duplication • Improved relationship management • Improved and increased knowledge sharing • Management of knowledge attrition 	<ul style="list-style-type: none"> • Time saving • Efficiency improvements • Enhanced customer and staff relationships • Improved access to knowledge

QUESTION 45	ANTICIPATED STRATEGIC THEMES	DMAP RESPONDENT STRATEGIC THEMES
Describe the two most critical strategic efficiencies effected by knowledge management	<ul style="list-style-type: none"> • Management of knowledge as strategic asset • Efficient decision-making • Increased organisational agility • Knowledge strategy assists in execution of business strategy • Increases organisational capacity to expand customer base and global reach 	<ul style="list-style-type: none"> • Availability of intelligence • Standardisation • Improved service delivery • Efficiency improvements • Strategic management of intellectual assets

11.3. Hypothesis in the South African context: proved or disproved?

From the analysis above, it is clear that the hypothesis as stated in Chapter 8 *has been neither proved nor disproved with specific reference to the South African context, with reference to both importance and performance*. On some issues a high level of agreement exists, whilst on other issues there are severe problems, and a high level of disagreement exists. The researcher is of the opinion that the issues in the hypothesis, as formulated based on the literature used, that have not been entirely proved, may be attributed to factors specific to the South African business environment and economy. These factors, and possible ways to address them, include:

- **Understanding of the value proposition of knowledge management and how knowledge management integrates with the business**

According to the results of this study, it seems that South African organisations attach *importance* to strategic knowledge to ensure competitiveness and innovation in the marketplace. It seems that knowledge and knowledge management is used to innovate in order to design new products and services and to build or assemble these new products and services, and to *implement or execute* these new strategies, but it does not play a significant part in the *strategic decision-making process*. **South African organisations**

thus understand the strategic importance of knowledge and knowledge management, but only apply knowledge and knowledge management on an operational level. This is supported by the fact that knowledge management is not integrated into the business, e.g. into the business process value chain, but is implemented as an administrative function. This also ties into the fact that there seems to be a lack of leadership for knowledge management initiatives and no apparent measurement of the return on investment of these programmes, indicating that it is seen as very much an operational issue and not a strategic, top of mind issue. Once again, however, it must be emphasized that the organisations *perceptually* understand the value at a strategic level, but it has not yet been *implemented* on a strategic level. South African organisations face two unique challenges to overcome this. The first challenge is to extract maximum value from knowledge and knowledge management on a strategic level. To enable these organisations to extract the value from knowledge management, they firstly need to understand the value that knowledge and knowledge management can provide on a strategic level. These organisations need to appoint leaders to drive knowledge management with a strategic agenda, ensuring that it is tied to the business strategy and supports strategic decision-making and adaption to changes in the marketplace. The knowledge management sponsor should also link the strategic and operational application of knowledge and knowledge management by linking knowledge to the business process value chain of the organisation, which in turn assists in execution of the business strategy. Through the linkage of knowledge and knowledge management to the organisational value chain, knowledge and knowledge management will be embedded in the day-to-day activities of employees, allowing knowledge management to become an integral part of the business.

- **Technology**

Knowledge management technology has a limited impact in South African organisations compared to countries like the UK and US, as there are not as many large corporations in South Africa that can afford sophisticated knowledge management technology as there are in other countries. Due to the limited application of technology, knowledge management programmes may also be limited with reference to knowledge management systems. This does not, however, preclude other knowledge management activities in these organisations. The implication is that organisations may not all have sophisticated technology based knowledge management systems, but they may have other processes, platforms and tools in place to assist in knowledge management. South African organisations can therefore not be compared to international organisations with reference to knowledge management systems, simply because the utilisation of sophisticated knowledge management technology is limited due to cost, size of organisations and other factors. South African organisations that cannot afford sophisticated knowledge management technology are faced with a challenge to structure their knowledge

management programmes in such a way to achieve maximum value from knowledge without or with limited support of technology. These organisations will have to focus heavily on their knowledge management processes (specifically knowledge flow processes) to ensure that the knowledge cycle of creation, sharing, harvesting and leveraging is optimised. For those organisations that can afford sophisticated technology, the challenge will be to apply the technology optimally to support the knowledge management programme.

- **Labour market**

Currently an over supply of labour, both skilled and unskilled, exists in the labour market in South Africa. This results in organisations finding it easy to replace employees and their skills, knowledge and expertise. This means that organisations need not have a strong focus on trying to retain knowledge in the organisation through knowledge management as they could easily replace that knowledge through appointing other individuals. This situation differs from other countries globally where there may be a labour shortage, or where it may be difficult to replace specialist knowledge and where the focus would therefore be on retaining knowledge through knowledge management. South African organisations are in a fortunate situation that if they lose key individuals in their organisation, their knowledge can be replaced fairly easily due to the over supply of labour. Organisations need to reflect on the fact, however, that skills and experience are more difficult to replace than knowledge and that these elements may still be lost when people leave the organisation. It may therefore be to their advantage to focus on retaining knowledge and some experience in the organisation through knowledge management programmes aimed at capturing tacit knowledge and transferring of skills and experience.

- **Limited implementation scale**

South Africa cannot be compared to countries like the UK and US with reference to the number of large corporates where highly sophisticated knowledge management programmes may be prevalent. In South Africa there are a small number of large corporates where knowledge management can and have been fully implemented. Most organisations do not have the capacity to implement knowledge management on a large scale. South African organisations also differ with reference to geographic spread. There are once again a small number of corporates that operate internationally, compared with a large number of organisations in other countries, e.g. in the US or UK, that operate internationally. Most organisations therefore have a local focus, which means that the need for sophisticated knowledge management programmes may not be as great as in other countries. This also influences the way that knowledge management is implemented in South African organisations. It seems that South African organisations are following a fragmented implementation approach rather than a "big bang" approach. They are more likely to implement knowledge management e.g. in specific divisions or in

specific areas of focus within the organisation. South African companies must be aware that the scale and sophistication requirements of their knowledge management programmes will be different than those of overseas organisations. Local companies should adapt programmes to suit their needs. The researcher is of the opinion that many knowledge management programmes in South Africa have failed due to the fact that organisation slavishly implemented copies of overseas programmes without adapting it to local conditions and requirements. Organisations should therefore ensure that local conditions and requirements are taken into account when designing and implementing knowledge management programmes.

- **Literacy levels and language differences**

There is a high level of limited literacy in South Africa. This means that knowledge management programmes will differ from those countries like the US and UK where there are high levels of literacy. Examples may be in using touch screen knowledge management systems with graphic images denoting specific knowledge nuggets or activities, which may be easier to use for people with limited literacy than text based systems. This may be especially applicable in certain industries e.g. mining, manufacturing, environmental management, conservation, etc. Having 11 official languages and some European languages spoken in South Africa, may also render knowledge management a concept that is more difficult to implement compared to countries like the UK where one language is dominant. South African organisations are therefore faced with many unique challenges relating to the country specific conditions with reference to number of languages and literacy levels and will not necessarily follow the American or European models of knowledge management implementations. Organisations must take language differences and literacy levels into account when designing and implementing knowledge management programmes. Once again this will differ from organisation to organisation and by nature makes knowledge management programmes in South African organisations very unique to each particular organisation.

- **“Knowledge is power” syndrome**

Due to the over supply of labour in South Africa, the labour market is fiercely competitive. Knowledge, skills and experience are what set an individual apart from another to ensure that they can obtain a position in an organisation and retain it. The “knowledge is power” syndrome may therefore be much more prevalent in South Africa than in other countries where there isn’t such a huge over supply of labour. Knowledge sharing and knowledge management programmes may therefore be more difficult to implement in South Africa and will have unique challenges to face. The fact that “knowledge is power” is a prevalent syndrome in the South African marketplace will pose unique challenges to South African knowledge management programmes. Organisations will have to have incentive schemes in place to ensure that people are willing to share their knowledge with others. They would also have to have strong performance measurements relating to knowledge

management in place to encourage participation in knowledge management and in knowledge sharing in particular. Organisations will also have to have a strong focus on creating a culture of knowledge management and embedding knowledge management in day-to-day activities to ensure a successful programme.

- **Limited knowledge management specialists**

There seems to be very few true knowledge management specialists with practical experience in South Africa. This is due to the fact that very few organisations have highly sophisticated knowledge management systems. This is a "catch-22" situation because due to the fact that few implementations are done, people are not getting practical experience, and without practical experience successful implementations cannot be done. South Africa cannot be compared equally to countries like the UK and US where they have moved beyond this point and where there is seemingly no shortage of knowledge workers to assist with implementation of knowledge management programmes. Due to limited availability of experienced and knowledgeable knowledge workers in South Africa the researcher is of the opinion that South African organisations will have to encourage the training of such individuals and also arrange possible international exposure to international knowledge management programmes where possible (e.g. through exchange programmes). Management should also promote the importance and status of knowledge workers in organisations.

- **Limited eBusiness implementation in South Africa**

eBusiness did not explode as anticipated in the years 1998-2000, globally but even more so in South Africa. The role that knowledge management played in eBusiness in South Africa will thus be smaller compared to other countries like the US and UK, simply because there is more eBusiness activity than in South Africa. It is important to note, though, that even within the limited eBusiness application in South Africa, knowledge management was rated in this study as having an important role. South African organisations should expose their knowledge workers to international knowledge management programs with an eBusiness focus where possible, e.g. through exchange programmes to ensure they get adequate exposure to developments overseas, which will empower them to adapt the experience to suit South African conditions.

11.4. Potential impact of South African specific market conditions on organisations

If South African organisations do not keep these market specific factors in mind, the impact may be visible on both strategic and operational levels of the organisation. The impact on both levels is discussed in the sections below.

11.4.1. Strategic impact

The strategic impact refers specifically to the fact or that the integration of knowledge management with the business, as well as its value proposition, is not fully understood. In summary, this will invariably impact on:

- *Decision-making*

The fact that the value of knowledge management in providing knowledge on which decisions can be based, is not fully understood, means that decision-makers may not have all the knowledge at their command when making decisions, or alternatively knowledge may be outdated or in unusable format. This may lead to incorrect or sub-optimal decision-making, which in turn may affect the agility of the organisation to adapt speedily to market changes and in execution of the business strategy. More profoundly, it may also lead to ineffective *strategic direction* determination by top management.

- *Organisational agility and innovation*

A lack of understanding of how knowledge management integrates with the business may lead to inefficient decision-making, which in turn negatively affects organisational agility. It may slow down the adaption to changes in the market place, or the incorrect changes may be effected due to inaccurate decision-making due to a lack of knowledge upon which to base decisions. A lack of knowledge and knowledge management and an understanding of its importance may also lead to limitations with reference to innovation, as the full value and potential of knowledge will not be exploited, and innovation will not be as effective as it could be. This in turn will affect the organisation's time to market and its general agility.

- *Execution of business strategy through successful implementation of the organizational value chain*

A lack of understanding of how knowledge management integrates with the business may lead to inefficiencies in the business process value chains of these organisations as their knowledge management programmes will not be aligned to support the processes and the knowledge flow within the processes. Core business processes are aimed at execution of the business strategy, so the result will be inefficient business strategy execution.

- *Customer / market focus*

A lack of understanding of how knowledge management integrates with the business and of its value proposition may lead to a lack of understanding of customer and market needs. Knowledge is the base for understanding these needs, i.e. if the value proposition of knowledge is not fully understood, maximum value will not be extracted from it in order to identify needs and deliver products and services to the market to satisfy the identified needs. Without knowledge the customer and market focus cannot be accurate, therefore knowledge and the management thereof is critical.

11.4.2. Operational

The operational impact if the factors in the South African marketplace are not taken into consideration, is summarised as follows:

- *Efficiency and effectiveness*
General efficiency and effectiveness in management of knowledge, but also in execution of day-to-day work activities will be negatively impacted. This will be due to rework, duplication, lack of speed of decision-making and work execution, lack of focus, lack of innovation due to lack of knowledge, lack of adequate technology, and limited skills, amongst others. The knowledge management cycle of creation, sharing, harvesting and leveraging will be negatively impacted with reference to efficiency and effectiveness throughout the core and enabling processes of the business process value chain.
- *Productivity*
Productivity will be negatively impacted due to the lack of or inefficient application of knowledge in the business. This will be due to rework, duplication, lack of speed of decision-making and work execution, lack of focus, lack of innovation due to lack of knowledge, lack of adequate technology, limited skills, amongst others. The complete business process value chain will be affected.
- *Learning / knowledge building*
Due to limited access to and availability of knowledge, which may be due to a variety of factors, employees will be limited in increasing their personal knowledge and learning. This in turn will affect efficiency, effectiveness, and productivity in the organisation. Innovation on the operational as well as strategic levels may also be negatively impacted due to limited learning or building of individual's and the organisation's knowledge base.
- *Implementation speed within business processes*
Lack of awareness of availability of knowledge and inefficiency in accessing or utilising knowledge will directly affect the speed of implementation of improvements and other changes to the day-to-day activities and tasks within the business process value chain.