Critical success factors for business-IT convergence within Group Finance clusters in the South African banking sector

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ABSTRACT

Business-Information Technology (IT) convergence is increasingly becoming a source of competitive advantage in the global economy and its importance has been widely discussed and documented in recent years. The management question that remains unanswered is: what are critical success factors for business-IT convergence in the South African banking sector?

This report seeks to explore critical success factors for business-IT convergence in the South African banking sector via a quantitative data analysis approach which aims to incorporate leading theories and frameworks on business-IT governance. In analysing the critical success factors for business-IT convergence, it attempts to provide the South African banking sector with recommendations that should be considered within the framework of a generic business-technology maturity model. Furthermore challenges to the value of business-IT convergence research, divergent views and new perspectives on business-IT convergence are presented.

In the research, the motivation for business-IT convergence research is first discussed. Next, business-IT convergence is defined and key dimensions and levels of the business-IT convergence construct are presented. Lastly a review of factor models of business-IT convergence is presented and outcomes of assessment within the four banking clusters are presented.

The goal is to be inclusive of many different perspectives. It is hoped that the research will spark helpful conversation on the merits of continued investigation of business-IT convergence. In closing, reflections on the business-IT convergence research stream are provided and key implications for research and practice are provided.

KEYWORDS

business-information technology
maturity
convergence
South African banking

DECLARATION

I declare that this project report is my own work. It is submitted in partial fulfilment of the requirements for the degree of master of Master of Business Administration for the Gordon Institute of Business Science (GIBS), University of Pretoria. It has not been submitted before for any degree or examination in any other University. I further declare that I have obtained the necessary authorisation and consent to carry out this research.

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Maryna Theron

9 November 2011

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CHAPTER 1 – INTRODUCTION TO THE PROBLEM

1.1WHY WAS THIS PROBLEM SELECTED?

There are several causes of the tensions that appear to be inherent in the relationships between the business units and the primary organisation charged with co-ordinating IT activities and managing or overseeing IT operations (Chan & Reich, 2007):

- Lack of common goals and incentives:

  Leadership of IT organisations usually have different goals and incentives from the goals and incentives of the business units they serve (Chan & Reich, 2007).
- Partnership only in name:

  Despite all the aspirations to be a business-IT partnership, this is rarely the case (Chan & Reich, 2007; Merlyn, 2011).

Furthermore, Whybrow (2008) argued that, over the past few years, a shift from business-IT alignment to business-IT convergence due to increasing business and IT maturity across industries globally has been observed. A combination of technological advances, advances in standards and architectures (mostly prompted by the Internet revolution), and increasing IT literacy across the business means that the challenge has moved beyond business-IT alignment to business-IT convergence (Merlyn, 2011). The convergence of organisational objectives and IT is a phenomenon that has impacted industries globally and

has received interest among the business press over the past decade (Weaver, 2007; Cummings, 2005; Bröring, 2004).

Although convergence during the 90s was merely seen as the merging of the IT telecommunications, media and entertainment sectors; it did however influence corporate strategies of the time as IT giants aimed to position themselves in a new converging business environment (Lind, 2005).

Despite this, business-IT convergence has received only limited attention from the academic field. The interest in business-IT convergence from an academic perspective can be characterised as marginal (if growing), although an emerging discussion on business-IT convergence can be identified (Weaver, 2007). Prior research (Jarvenpaa & Ives, 2003; Lind, 2005; Roche, 2002) was found to be limited by a lack of coherent definitions on business-IT convergence and a tendency to focus on the technological aspects, rather than the consequences, of business-IT merging (Merlyn, 2011).

1.2 OBJECTIVES OF THE RESEARCH REPORT

This study explores existing theories from previous research on attaining business-IT convergence, as well as explores the critical success factors of business-IT convergence.

The purpose of this research project was to investigate how four business units across the South African banking sector responded to and managed business-IT convergence through the positioning of resources and capabilities. This

report furthermore focuses on the South African banking industry, with particular attention to the critical success factors for business-IT convergence therein.

The key questions that were addressed as part of this research report are:

- What are the critical success factors for business-IT convergence?
- Is there a correlation between business-IT convergence and project success?
- Is there a correlation between business-IT convergence and agility?
- Why are the central role players ignorant of the success factors in favour of achieving business-IT convergence?

1.3 STRUCTURE OF THE RESEARCH REPORT

The research report is divided into chapters. The chapters as a whole form a logical progression that addresses the research questions. The report discusses the convergence between corporate strategy, information and Information Technology. Chapter two documents relevant research and explains the link between corporate strategy, information and IT. This chapter lays the foundation for the research which explores critical success factors for business-IT convergence within the South African banking sector.

Chapter three documents the research questions after which the research approach and method of testing is discussed in Chapter four. The questionnaire and sample are also discussed. The questionnaire was formulated around the Business-Technology Maturity Model (Hoque, Bruckner, Mirakaj & Zmud, 2009)

to test the opinions of operational resources within the Group Finance Clusters of the four major South African banks.

The results and analysis of the outcome of the questionnaire are discussed and illustrated graphically in Chapter five. Chapter six revisits the literature and uses the knowledge gained from the literature review, in Chapter two, to make recommendations based on the findings of the research. These recommendations and findings are summarised and concluded in Chapter seven. The limitations (as discussed in Chapter four) and findings of the research are used to formulate recommendations for future research.

1.4 SUMMARY

The advent of the network era and the network economy has brought with it a new set of challenges for organisations across the world (Voelpel, Leibolt & Tekie, 2004). Perhaps two of the most difficult challenges are regarding how to unleash the promise offered by enterprise technologies; and how to manoeuvre in the global economy within the increasingly turbulent and unpredictable business landscapes of the 21st century (Voelpel, Leibold & Tekie, 2004). In addition, there are many discussions of how technology and the 'new economy' have changed traditional business models in many industries, ranging from hi-tech to commodity industries (Evans & Wurster, 2000). Khalil (2010) argued that, previously, technology cycles were much longer than business life cycles, which created difficulties in synchronising business and technology strategies.

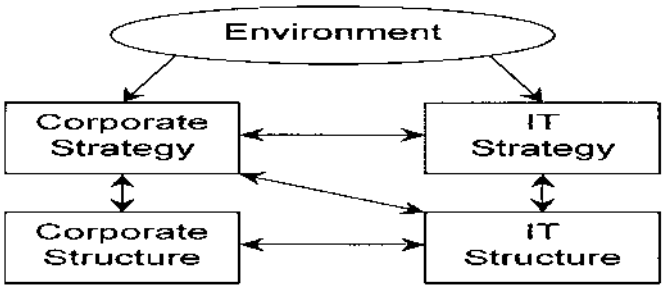
Kahlil (2010) further argued that, technology life cycles for high-tech industries are becoming much shorter and that this trend will continue in the future, enabling closer linkage of business and technology strategies.

The literature review in the next chapter covers a body of relevant theories and business-IT governance frameworks with regard to the need to explore the critical success factors of business-IT convergence.

CHAPTER 2 - LITERATURE REVIEW

The literature review has been drawn from a body of theoretical knowledge that assists in defining the questionnaire (see Appendix 1). The questionnaire formed the basis for exploring the critical success factors for business-IT convergence within the chosen organisations. The most relevant areas focused on are depicted in the figure below (Gordon & Gordona, 2005):

FIGURE 1: RELATIONSHIP BETWEEN CORPORATE AND IT STRATEGY AND STRUCTURE



2.1. INTRODUCTION

Strategic planning and convergence theory evolved through the 1980s and 1990s, although convergence meant different things to different people (Chan & Reich, 2007). Chan and Reich (2007) observed that previous researchers had explored the alignment of IT plans with business plans, business strategies or business objectives, but that a recurring issue seen in previous alignment research was that the concept of corporate strategy is a missing link. In this respect, Sabherwal and Chan (2001) found that the alignment between business and information systems strategies was associated with a company's

business success, and that business managers should closely monitor IT investments.

For purposes of clarity, the following terms are defined:

Convergence:

(1) Decentralised, market-driven changes of corporate governance practices at a firm level (La Porta, Lopez-de-Silanes, Schleifer & Vishny, 2000)

(2) The degree of mutual understanding between the technology provide and the business personnel regarding the importance of business activities and the importance of technology in supporting these activities (Lind & Zmud, 1991).

Information systems strategy:

The organisational perspective of the investment in, and deployment, use and management of, information systems (Chen, 2010).

IT strategy:

General frameworks which guide the opportunities of IT, which are identified, the IT resources which are developed, the rate at which new technologies are adopted, and the level of impact of IT within the firm (Kanungo, 2001).

Croteau and Bergeron (2001) surveyed CEOs from 945 manufacturing and insurance companies, and examined business performance, IT infrastructure, business infrastructure and various alignment indicators (e.g. distributed computing power and empowerment). The study found a positive correlation between IT infrastructure and business infrastructure and perceived business

performance. In summary, organisational studies of the time suggested that business-IT alignment and perceived business performance were closely related. (Croteau & Bergeron, 2001).

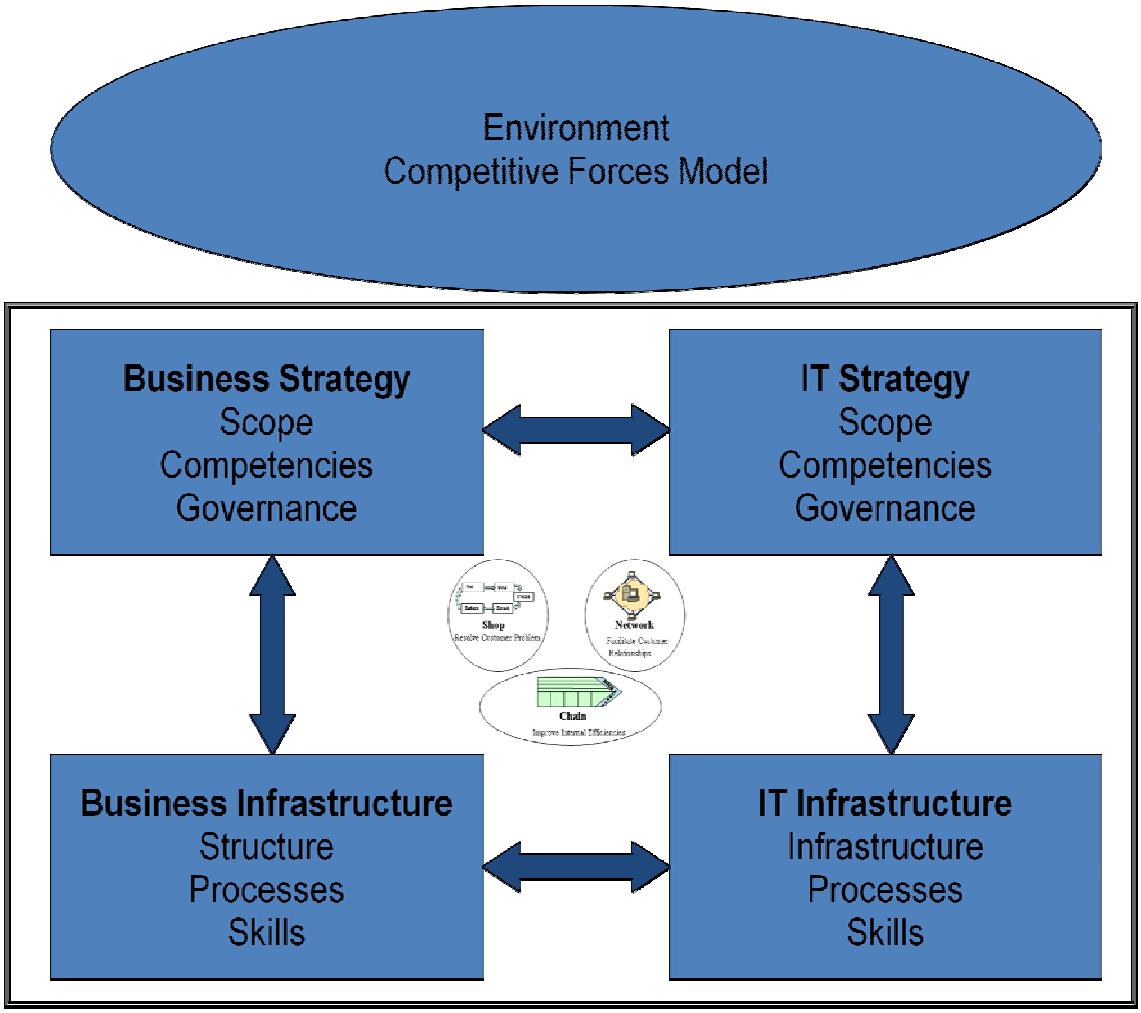
In clarifying the construct, Chan and Reich (2007) define business-IT alignment as the degree to which the IT mission, objectives and plans are supported by the business mission, objectives and plans (that is, the strategic fit). Business-IT alignment could also be considered a resultant state or outcome (effect) of the organisational processes (cause) that enabled the alignment (Chan and Reich, 2007).

Benson, Bugnitz and Walton (2005) argued that the intellectual dimension of business-IT alignment is the state in which IT and business objectives are consistent, congruent and valid, while the social dimension is the state in which business and IT executives in the organisation understand and commit to each other's missions, objectives and plans. Benson et al. (2005) furthermore stressed that both dimensions are required for well-aligned business performance. Benbasat and Reich (2003) also focused on providing a greater understanding of the social dimension, specifically the level of mutual understanding of the business and IT mission, objectives and plans. Benbasat and Reich (2003) concluded that the understanding of current objectives (short-term alignment) and a shared vision for the utilisation of IT (long term alignment) stood as promising measures of alignment..

Henderson and Venkatraman (1993) argued that strategic alignment could influence organisational transformation in a descriptive sense (i.e. by illustrating the value of emerging IT), prescriptive sense (i.e. by grounding cases in a

theoretical framework and suggesting possible courses of action), and in a dynamic sense (i.e. by conceptualising major relationships and interactions to be addressed over time):

FIGURE 2: THE HENDERSON AND VENKATRAMAN STRATEGIC ALIGNMENT MODEL.



In recent times, convergence studies have focused on exploring business performance outcomes as result of a high level of fit between information, technology and corporate strategy (Chan & Reich, 2007). Leading up to this approach, Chan (2002) surveyed executives in 900 pharmaceutical, manufacturing, banking and insurance companies and examined their business

strategy, information systems strategy, business performance, and information system performance.

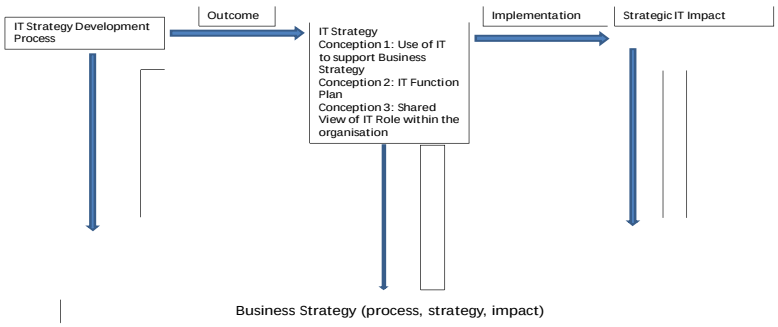
During the past two decades, the achievement of convergence between IT and organisational objectives has been reported as a key pain-point experienced by both business and IT managers (Benson et al., 2005; Luftman, Kempaiah & Nash, 2005; Benbasat & Reich, 2003; Reich & Benbasat, 2000). Furthermore, Chan and Reich (2007) argued that alignment remains an important but elusive goal.

Business-technology convergence stems from a simple concept: IT is a means of achieving business objectives via technological enablement. However, the new capability provided by IT has changed the dynamic; IT capability occasionally leads by identifying new ways of serving customers (Hacklin, 2004). In this respect Benbasat and Reich (2003) argued that, with the increased importance of IT in organisations, business managers are now expected to show stronger leadership in regard to IT deployment in organisations. This requires greater focus on managers capability to understand and reposition IT resources effectively (Benbasat & Reich, 2003). Gordon and Gordona (2005) argued that business units need to be the focal points for the delivery of IT services. IT could not succeed unless the IT processes were owned by the business units – Business has *become* IT (Gordon & Gordona, 2005).

Benbasat and Reich (2003) further concluded that business-IT convergence has often been wrongly approached - mainly from a technology perspective – while strategic implications at business unit level are not necessarily tied back to technology-related aspects such as technology dissemination, innovation and new product developments.

In this respect, Chen (2010) put forward the below conceptual framework for IT strategy:

FIGURE 3: CONCEPTUAL FRAMEWORK FOR IT STRATEGY



Merlyn (2011) argued that IT capabilities such as business process management, business analystics, project management and support services (satisfying business unit application needs) belong in business operations. Merlyn (2011) further concluded that IT capabilities such as enterprise architecture, IT strategy and portfolio and programme management belong in the governance of the business, while shared IT infrastructure enterprise applications should be centrally co-ordinated and shared.

By managing business and IT in tandem, it is proposed by Merlyn (2010) that organisations are able to respond in an agile manner to changing marketplace dynamics, technology evolutions and competitive pressures – capabilities that have become particularly important as a result of the recent global economic downturn (Merlyn, 2011). For such enterprises, changes in the business environment rapidly drive appropriate adjustments to strategy and its execution (Merlyn, 2011). This limits the negative impact of falling revenue and share prices while exhibiting the superior performance needed to position an organisation for the growth cycle that historically follows a downturn (Pigliaru, 2003).

Today, business leaders across the globe look to IT to be an enabler of enterprise strategy and to align, synchronise and converge IT and business management, thus ensuring better execution, risk control and profitability (Wu, Chen & Sambamurthy, 2008). Business leaders also tend to consider technology implications of business decisions and look for innovative ways to embed technology into their business operations and processes (Wu, Chen & Sambamurthy, 2008). Technology can thus be regarded as more than IT or “operational” technology , but rather as business technology (Chan & Reich, 2007). Furthermore, in recent years data has become information. Across the globe there is an urgent need for this information to be made available through, and managed in an integrated, enterprise-wide fashion that drives improved and nimble decision making (Cohen, 2010; McLaughlin, 2008). At the same time, data is also becoming implicit to business management and operations, increasingly representing what the business manages and how data is

managed. (McLaughlin, 2008). In many respects, the context for IT today is becoming less about IT and more about information – the ability to capture, integrate, interpret, predict and act is increasingly the 'holy grail' of competitive advantage (Cohen, 2010). Merlyn (2011) furthermore stressed the need for the competitive advantage to reside in and belong to the business not a specialist group. In this respect, Love (2003) argued that information is data that has been processed in some (intelligent) way such that it can provide input to a variety of business needs. As depicted in table 1 these needs can be broadly categorised into two domains: strategic and operational (Love, 2003).

TABLE 1: STRATEGIC AND OPERATIONAL INFORMATION

	Strategic Information	**Operational Information**
Focus	Competitive advantage, wealth creation	Control and management
Direction	Forward looking	Backward looking or current implementation
Drivers	Innovation and opportunity analysis related to optimisation of value activities (as defined in Porter's value chain)	Efficiencies, resource allocations, optimisations, planning, budgeting, measurement (accounting and otherwise)
Outputs	Competitive cost advantage (greater market share/volumes) Competitive differentiation (greater margins)	Realisation of the strategic requirements

Typically, differing levels of users within an organisation will dictate the information required and how it is sourced. Namely, business operations and operations management use the operational information systems, and higher levels (executive level) operating in the tactical and strategic realms rely on management information systems (Love, 2003).

Whilst information is becoming a source of competitive advantage, companies that operate within a high level of business-technology convergence derive productivity improvement from their agile and adaptive nature (Girma & Kneller, 2005). These organisations are able to undergo change in a pro-active manner and use their superior performance to leapfrog over less agile competitors. Thus they better position themselves for future opportunity and growth (Girma and Kneller, 2005).

Many authors on convergence have directly or indirectly acknowledged that business-IT convergence resulted from, and reinforced, the Schumpeterian concept of innovation and discontinuity (Pennings & Puranam, 2001). This assumes a dynamic, evolutionary and organic view on competition and industry development (Pennings & Puranam, 2001; Hacklin, 2004). According to a recent survey (Annesley, 2010), the global banking sector is prey to convergence and consolidation. Furthermore, the survey found that bank CIOs expected to focus more on global competition in the next three years and that European banks in particular should be ready for opportunities as far afield as Asia-Pacific (Annesley, 2010). In Asia-Pacific, IT teams are are recognised as increasingly in need of scalable architectures and the ability to roll out new banking services at short notice as their management aims for global expansion

(Annesley, 2010). However, Baets (1996) argued that, although there is empirical support for the notion that business-IT alignment provides organisational value, many business managers were unaware of the importance of business-IT alignment, and/or have little belief that IT can solve important business problems. In Baets' (1996) study of European banks it was found that the influence of mind-sets on business-IT alignment awareness was significant: Although a trend regarding the use of IT from a support function to a competitive capability was observed; and IT issues were perceived to have a great influence on the banking industry, there was no strong and clear belief that IT could solve specific banking problems. Those managers who could see specific ways to solve banking problems via IT however, had more positive attitudes towards IT strategy and planning (Baets, 1996).

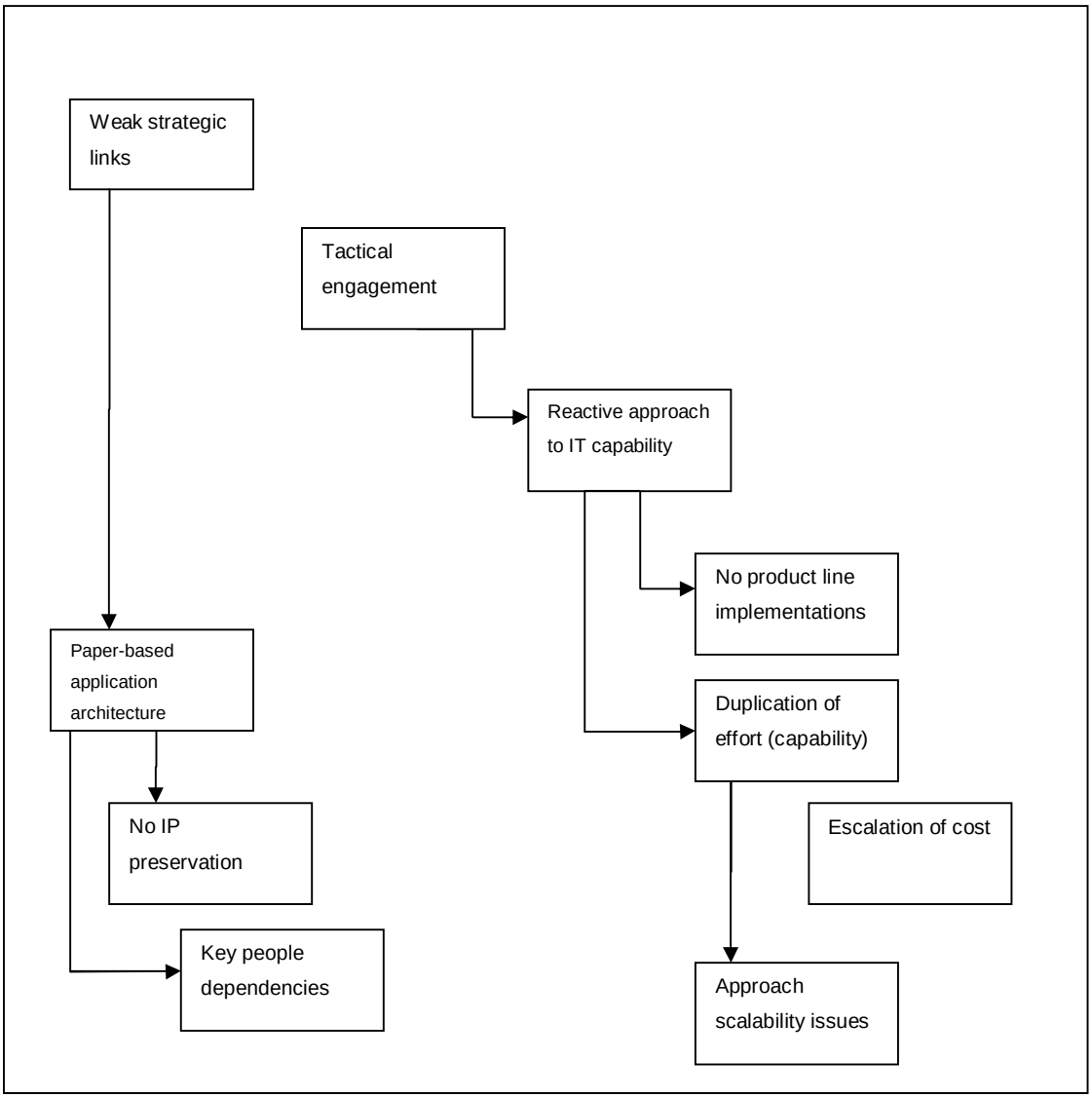
2.2. BUSINESSS-IT CONVERGENCE IN THE BANKING SECTOR

Green (2001) stated that banking institutions are in the midst of the globalisation turmoil, striving to grow and protect their market share in the face of unprecedented challenges. The banking industry today faces many challenges, particularly from non-banks attempting to disintermediate parts of the bank value chain (Green, 2001). The following forces are compelling banks to adjust their competitive strategies and continuously develop new competencies:

- ☐ New and converging technologies
- ☐ Consumer sophistication
- ☐ Increasing levels of competition (Green, 2001).

The illustration below (Krsek, 2009) indicates some of the issues and challenges that confront large banks as they exist now:

FIGURE 4: ISSUES IN THE EXISTING CONTEXT:



2.3. CONVERGED VERSUS NON-CONVERGED ORGANISATIONS

It appears as though converged enterprises know when to change the rules, in an attempt to maintain a strategic advantage over their competitors, and to sense and respond to changes in the marketplace (Chan & Reich, 2007). In

endeavouring to meet strategic goals, companies are focusing on core management processes as a means of delivering results to business (Hoque et al., 2009). By exercising effective governance over these goals and the underlying technology, organisations appear to be able to maintain competitive advantage, increase operational effectiveness and improve their bottom line (Tushman & O'Reilly, 2008).

At the other end of the spectrum, unconverged enterprises recognise that interaction of the IT function with the organisation's business units is a key determinant of success or failure (Merlyn, 2011). A disconnect between IT and the business units is a major disadvantage (Gordon & Gordona, 2005). Benson et al. (2005) argued in this respect that many organisations struggled to measure IT performance in ways that can be related to the business, resulting in a disconnect between the overall strategic goals of the organisation and the goals and activities of IT. These disconnects were found to occur in planning, prioritisation, performance measurement and organisational development (Benson et al., 2005). Although the traditional return on investment method is widely used, this method alone may not be sufficient in connecting IT investments to the bottom line (Benson et al., 2005).

2.4. LACK OF INFORMATION ON BUSINESS-IT CONVERGENCE

Cohen and Dennis (2010) argued that, while IT becomes a more strategic resource for organisations in developing economies, there is a lack of information on the South African perspective, with regard to the state of

business-IT convergence. This is particularly true with regards to IT competencies, IT resource positioning and the contribution of IT to business performance (Cohen & Dennis, 2010). Past research in the South African banking sector context has been limited to descriptive studies focused on single banks (Ramathuga, 2010).

In this light, this research aimed to explore critical success factors for business-IT convergence within the group finance clusters of the four big banks in South Africa, in an effort to promote understanding of the competencies and organisational positioning required to improve business performance.

2.5. DRIVERS OF CONVERGENCE

Technological change and innovation are undoubtedly the principal drivers behind business-IT convergence (Weaver, 2007). Other drivers include the emergence of integrative technological platforms such as the Internet (Weaver, 2007). The setting and adoption of technological standards is central to driving business-IT convergence (Hacklin, 2004).

Business drivers of convergence include innovation, as put forward by Yoffie (1997), who stressed the important role played by resourceful technology start-ups in the modern history of the IT industry. Stieglitz (2003) additionally pointed to corporate diversification strategies as important drivers of convergence. As an example, Palmberg and Martikainen (2006) described how the Finnish

telecommunications industry diversified into IT and Internet technology as a strategic response to the on-going convergence between IT and telecoms.

2.6. CRITICAL SUCCESS FACTORS FOR BUSINESS-IT CONVERGENCE

Benson et al. (2005) argued that one of the greatest challenges facing organisations today is how they invest in technology, and how the investments are integrated within their overall business strategies. The following factors present an integrated approach to connecting an organisations's strategies with its IT activities, and provide a roadmap to get there (Benson et al., 2005).

2.6.1. DEMAND AND SUPPLY PLANNING

Business and IT managers achieve consensus on where the organisation is going and what IT can do to facilitate the progression. They do this by establishing the business drivers as expressed through management's strategic intentions, and translating them into the strategic IT requirements needed to fulfil these strategic intentions (Benson et al., 2005).

2.6.2. INNOVATION

The practice of innovation drives business management to uncover the business opportunities that IT makes possible. It also provides a way to feed these opportunities into business strategic and tactical planning. The result is a robust and competitive set of business opportunities (Benson et al., 2005).

2.6.3. PRIORITISATION

Prioritisation is the assignment of resources to the highest value projects after assessing the business impact of the proposed IT initiatives. Prioritisation helps managers identify the IT projects that strongly support strategic intentions, ranking them by future business impact. As a result, resources are spent in the right places, for the right reasons, with business and IT managers agreeing on the decisions (Benson et al., 2005).

2.6.4. ALIGNMENT

This practice assesses the business impact of the existing IT activities. Money spent on maintaining existing systems is money not spent on new development. This practice lets business and IT managers decide together which existing IT initiatives should get resources, rather than assuming that everything currently in operation is critical for the business and should be supported (Benson et al., 2005).

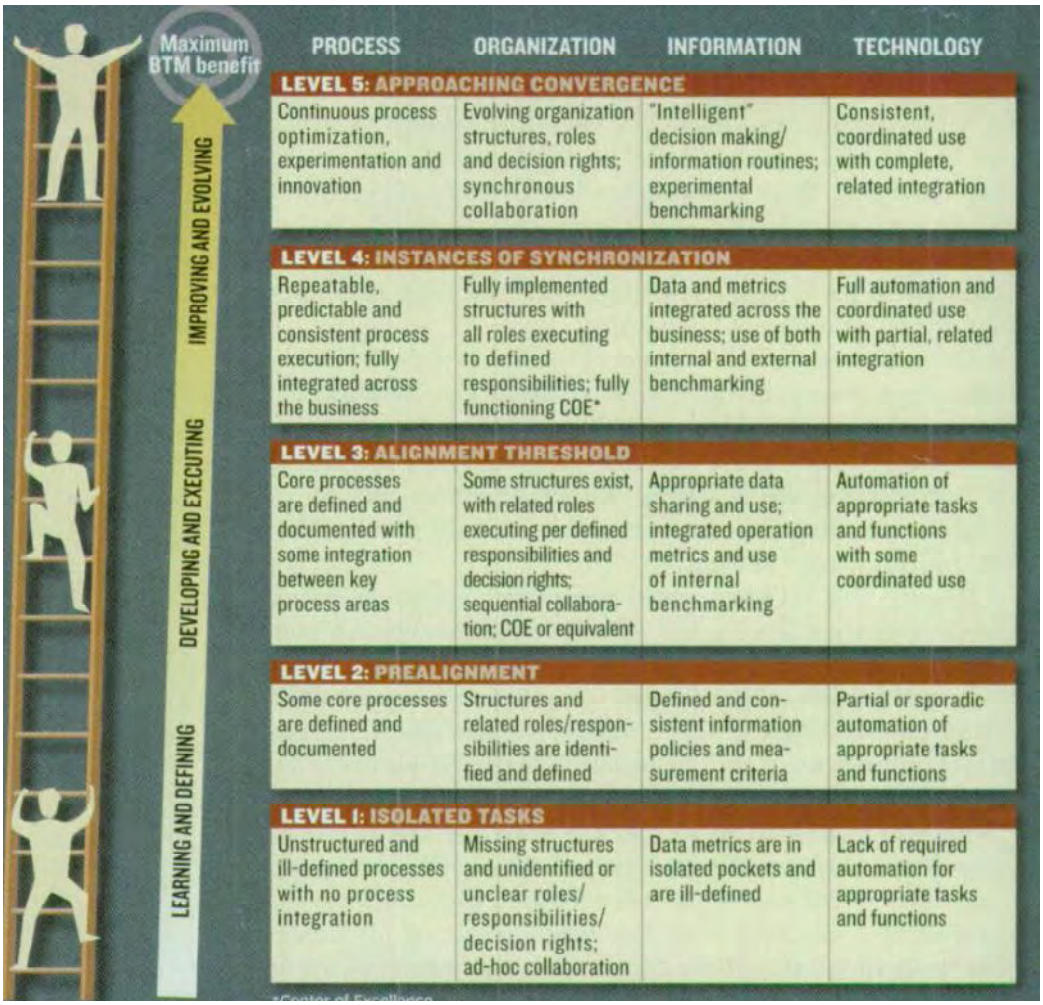
The Business-Technology Maturity Model is introduced to measure each of these critical success factors. Assessment of the maturity of the selected organisations' processes is set out in the questionnaire (see Appendix 1).

2.7BUSINESS-TECHNOLOGY MATURITY MODEL

In measuring what companies do differently in terms of their management behaviours, the Business-Technology Maturity Model can be used to evaluate organisations against management capabilities for effective business-technology convergence (Hoque et al., 2009). Albright and Zappe (2009)

argued that a model can be defined as an abstraction of a real problem – A model tries to capture the essence of a problem without getting bogged down in the details.

FIGURE 5: BUSINESS-TECHNOLOGY MATURITY MODEL



This model may be used to evaluate organisations against management capabilities that are grouped into four functional areas:

1. Process
2. Organisation
3. Information
4. Technology

Hoque et al. (2009) argued that, while less-mature enterprises enjoy increasing benefits as they mature, none of the benefits enjoyed equal the performance of converged enterprises. The differentiation between the different maturity levels as per Hoque et al. (2009) is as follows:

Level one organisations, which are the least mature, typically execute some strategic capabilities in a disaggregated, task-like manner. Level two organisations exhibit limited capabilities, they tend to assemble information for major decisions, and consult the technology function on decisions with obvious business-technology implications (Hoque et al., 2009).

Organisations at level three are functional with respect to the capabilities, and those at level four have the capabilities fully implemented. Organisations achieving level five have achieved full convergence (Hoque et al., 2009).

2.8 CONCLUSION TO LITERATURE REVIEW

A recent survey (Annesley, 2010) indicated that the alignment of IT strategy with corporate strategy is almost four times more important than the next significant factor and is recognised as requiring a common set of goals, strategies, tactics, responsibilities and budgets (Pollard, 2010).

The management of IT, information, corporate strategy and the business environment is becoming more complex as the global market grows. The time has come where it is essential for corporate and IT to act as one, to ensure competitiveness. The literature suggested that the future lies in effective business-IT convergence and that knowledge is created from data and information. Thus the question is: what is the best way to create an environment

where business-IT convergence is managed efficiently and IT converges with the other strategic elements towards a common goal and vision?

CHAPTER 3 - RESEARCH QUESTIONS

The disconnect between the business units and the primary organisation charged with coordinating and managing IT activities and operations is observed as being caused by a lack of mutual goals and incentives (Gordon & Gordona, 2005). However, despite the talk of aligning to the strategic intent of the organisation, the leadership of the IT division usually has different goals and incentives from the leadership of the business units they serve (Benson et al., 2005).

The question is: why are these supposedly well-informed players performing so disparately with regard to the critical factors in aide of business-IT convergence (Baets, 1996)?

Through the problem definition and the literature review, the research sought to answer the following questions.

1. What are the critical success factors for business-IT convergence?
2. Is there a correlation between business-IT convergence and project success?
3. Is there a correlation between business-IT convergence and agility?
4. Why are the central role players ignorant of the success factors in favor of achieving business-IT convergence?

CHAPTER 4 - RESEARCH METHODOLOGY

The research design process created a blueprint for the research and guided the process in terms of the methodology deployed, the data relevant to the investigation, the data collection method, and the analysis process (Yin, 2003). A preliminary stage of the research process concerned the identification of an industry as well as the selection of organisations within the industry that would serve as the subjects of investigation. The study adopted a research methodology that was deemed appropriate to answer the research questions in the face of limited resources and time constraints. The research furthermore placed emphasis on a highly structured approach which is noted as facilitating quantifiable and replicable observations that lend themselves to statistical analysis (Saunders, Lewis & Thornhill, 2000). The research adopted a quantitative method that attempted to provide sample spread as well as extract depth response in seeking to understand behaviour through statistical analysis (Albrecht & Zappe, 2009). The study furthermore made use of a survey (Appendix 1) as the primary data collection mechanism. The survey instrument was a structured questionnaire, used to capture respondents' opinions on information, IT competence, IT organisational positioning and IT business contribution. Questions were formulated in the following subsets:

1.) Biographical data

2.) A set of multiple choice questions designed to analyse the opinions of Group Finance employees of the four banks with regard to managing

convergence (independent variable) via their positioning of resources and capabilities (dependent variable).

3.) A set of Likert-type scale statements designed to test the opinions of Group Finance employees of the four banks in relation to the critical success factors for convergence, as identified in the literature.

Critical success factors were defined by Rockart (1982) as those areas of activity in which favourable results are key to achieving goals. The questionnaire was composed of a number of standard elements which measured a portion of the Business-Technology Maturity Model (Zikmud, 2011). The questionnaire consisted of 23 questions (for each of the four pillars of the model: organisation, process, information and technology). Both the current and desired situations were surveyed. Additional elements included the environment of the organisation with regards to agility (the ability to execute nimble decision making) and project success.

4.1 RESEARCH DESIGN

As the exploration of the critical success factors for business-IT convergence was a key component of the research, it was deemed necessary to gain insights from a broad selection of participants that were involved in the process of defining the strategic intent employed by the organisation. The financial clusters of the four organisations (the four major banks of South Africa) comprised multiple participants that influenced the corporate financial performance and overall strategy, including members of the executive team, members of the

business unit executive, and members of teams responsible for analysis and strategy formulation within the banks.

The unit of analysis was defined as the opinions of well-informed role players on business-IT convergence elements, as defined in the literature.

The banks were characterised by one strategic process responsible for the formulation of their business-IT convergence strategy. Attention was given to those variables that were identified as having an influence on the unit of analysis. Lastly, individuals included in the research were required to have operational responsibility.

4.2 POPULATION AND SAMPLING

The research placed emphasis on a highly structured approach which facilitated quantifiable and replicable observations that lent themselves to statistical analysis (Albright & Zappe, 2009). The administration of questionnaires and collection, organisation and data analysis was standardised and structured. The Business-Technology Maturity Model (Figure 5) as covered in the Literature Review section was used as a theoretical model to explore the critical success factors for business-IT convergence.

The population of this study was the Group Finance employees in the four major banks of South Africa.

The research sample comprised 30 employees within each bank's Group Finance cluster. A total of 30 questionnaires were distributed to each bank's Group Finance cluster. The 30 employees per bank comprised participants from the following functional areas within the Group Finance clusters:

- Business Performance Analytics
- Group Financial Reporting.

The questionnaires were distributed by email to the nominated employees, who either responded electronically or by hard copy. The profiles of respondents are attached as Appendix 3.

4.3 STRUCTURE OF THE QUESTIONNAIRE

The questionnaire comprised the following: a concise introduction, a set of instructions, four biographical questions and twenty-three questions. The questionnaire was formulated around the Business-Technology Maturity Model as discussed in Section 2.7. The first four questions were structured around the demographics of the respondent. These questions documented their job title, job grade, department and the number of years a respondent had been employed in the respective Group Finance cluster.

The remaining part of the questionnaire comprised a series of technical questions. There were three types of questions:

1. Multiple-choice questions which required respondents to choose an answer from a given set of five possible answers (A, B, C, D or E).
2. Questions that required respondents to assess the maturity of the process as U= unstable, E – established, S = standardised and O = Optimum.
3. Ranking questions that required the participant to rank a list of statements in order of importance. The ranking choices were as follows:

1 = most critical, 2 = critical, 3 = less critical and 4 = least critical. The detailed definitions for the various choices are given in paragraph 4.4.

The questions were grouped into five main categories:

1. Cluster's strategic position
2. Cluster's Business-IT maturity level
3. Business performance
4. Current situation in cluster
5. Desired future state in cluster.

These categories were correlated to the Business-Technology Maturity Model as presented in Figure 5.

4.4 ANALYTICAL MODELS

The questionnaire was partly formulated around the Capability Maturity Model (CMM) which contributed to the reliability of the findings (see Appendix 1: questions 6-13). The CMM is a globally accepted and tested model in the information technology field and brings a level of consistency to the research as it is a robust analytical model.

CMM has previously been used as a framework to describe the key factors for an effective software process. CMM was used as an analytical model as it establishes a benchmark against which it is possible to gauge the Business-IT maturity level of an organisation. The model is composed of four levels of maturity which are defined toward achieving a mature process. The four maturity levels are as follows:

4.4.1 Unstable level

At this level the organisation does not provide a stable environment. The organisation generally lacks sound management practices while ineffective planning and a reactive approach undermine the benefits of good practice. The organisation could be assessed as unpredictable and unstable.

4.4.2 Established level

At this level the policies and procedures for managing new projects are established. Planning and management of new projects is based on experience. The aim of this level is to establish effective management processes for projects, which allows the organisation to replicate successful practices developed on earlier projects. An effective process may be described as practiced and documented.

4.4.3 Standardised level

At this level the standard processes are document and integrated into a coherent whole. The defined process contains standards and procedures for performing the work and output criteria. This process capability is based on an organisation-wide understanding of the activities, roles and responsibilities within a well-defined process

4.4.4 Optimum level

At the optimal level the organisation is focused on continuous process improvement. The organisation has the means to identify weaknesses and strengthen the process pro-actively, with the goal of preventing the occurrence of defects. Organisations at this level undergo continuous improvement by striving to improve their process capability. Improvements occurs both by incremental advancements in the existing process and by innovation via leveraging off new technology.

The questionnaire was also formulated around the Business-Technology Maturity model (questions 14 – 21) as discussed in Section 2.7 of the Literature Review.

4.5 DATA ANALYSIS

After data collection, a template for data entry was designed in Microsoft Excel and the data captured. The data was subsequently exported to Statistical Package for Social Sciences (SPSS) version 15, where data coding and data analysis was conducted.

First, in order to provide a description of the sample from which data was collected, descriptive information on role profiles was described, as well as the means, modes, range, and standard deviations for the independent variable (convergence factors),and the dependent variable (e.g. agility and project success factors).

A mean per record (questionnaire response) was generated using the categorical data (Likert scale and closed-ended questions). Data analysis was

quantitative in nature and the opinions of the various Group Finance cluster employees was analysed.

The respective questions contained in the questionnaire were not weighted or categorised into order of importance, as all questions were considered of equal importance. Frequency tables were used to illustrate counts and percentages for the responses for questions with ordinal scales (Hayman & Sierra, 2010).

Some of the results were presented using radar charts. Radar charts are useful when several different factors related to one item are assessed, as in this study. This is particularly so when assessing an attribute such as IT maturity level, which is related to a number of factors, such as demand and supply planning and project implementation. Radar charts have multiple axes along which data can be plotted. On a radar chart, a point close to the centre on any axis indicates a low value, while a point near the edge represents a high value. Interpretation entails inspection of each axis as well as the overall shape, in an effort to interpret the extent to which an attribute achieves the ultimate goals.

Decision trees analysis was also used to partition the data set based on the relationships between independent variables and a dependent (outcome) variable. A decision tree algorithm called Chi-square Automated Interaction Detection (CHAID) analysis was employed.

CHAID analysis offers an alternative means of identifying specific elements of business-IT convergence that are related to maturity. A decision tree analysis identifies as the important elements of maturity those that most differentiate business-IT convergence. The CHAID algorithm differentiates using Chi-square

tests to measure the association between the dependent variable and the independent variables (Agresti, 1990).

The CHAID procedure begins by finding independent variables that have a significant correlation with the dependent or target variable. It then assesses the category groupings, or interval breaks in the case of continuous variables, to pick the most significant combination. Categories of the independent variable are combined if they are homogeneous with respect to the dependent variable. The independent variable, having the strongest association with the target variable, becomes the first branch in a tree with a leaf for each category that is significantly different relative to the outcome variable. The process is repeated to find the predictor variable on each leaf most significantly related to the outcome variable, until no significant predictors remain.

The subgroups or leaves of data are exhaustive in that they include every data point in the data set, and exclusive because each data point belongs to only one leaf. In the CHAID procedure, model selection depends on the choice of the minimum number of observations allowed in the leaves of the tree. In this analysis, the fairly large sample size provided an adequate basis for Chi-square tests on several levels.

The initial number of observations per leaf was adequate for the Chi- square tests. As the trees grew, however, the newest levels had diminished numbers of observations per leaf. The CHAID application allowed the analyst to set a minimum number of per leaf observations to avoid performing the Chi-test on leaves with few observations. It also allowed the minimum number of

observations per cell for parent leaves to be constrained, to prevent branching from leaves with a small number of observations. Adjusting either of these constraints could have resulted in the selection of different predictor variables.

4.6 LIMITATIONS

Some limitations of the research were identified and outlined below:

- The quantitative and exploratory nature of the research determined that the findings are representative of the opinions of the parties and divisions who participated in the survey, thus they are not representative of the organisation as a whole; neither do they hold broad application to industries outside of the banking sector or organisations studied.
- The research only managed to cover key individuals. A small sample of representatives was randomly selected from each organisation. Considering the size of each organisation, these opinions represent only a fragment of each bank and are not necessarily representative of everyone within it.

4.7 CONCLUSION TO RESEARCH METHODOLOGY

The research methodology was chosen to facilitate the most efficient process for data collection and analysis. The analysis was quantitative and assessed the

opinions of the Group Finance employees within the four major banks. The data was received in text format and was converted to numerical format for easier graphical representation. The different questions as contained in the questionnaire were not weighted differently or categorised in order of importance, as all questions were of equal importance.

CHAPTER 5 – RESULTS

The data collated from the questionnaire is presented in graphical format in this chapter. Each cluster will be covered separately after which a holistic discussion of the findings is presented. Results are categorised in accordance with the main themes of the questionnaire:

- Cluster's demographic information
- Cluster's strategic position
- Cluster's business-IT maturity level
- Cluster's business performance

This chapter concludes with a summary of the results which leads to the discussion of findings and recommendations in Chapter six and topics for further research and conclusion in Chapter seven.

5.1 BANK 1 – DYMO

A total number of 25 responses were received, which equated to a response rate of 83 percent. The sample size represented 10 percent of the total population size (Refer to Appendix 2 for a sample of a captured questionnaire). The data from the 25 questionnaires was entered into an Excel spreadsheet, in the format of a matrix, which can be viewed in Appendix 4. The matrix of the raw data was compiled by relating the rows (questions) to the columns (levels of

Business-IT maturity). The data in the matrix was then analysed and used to create the graphical representations found in this chapter.

5.1.1 CLUSTER'S DEMOGRAPHIC INFORMATION

The data indicated that mostly middle to upper management employees were represented in the research, which is acceptable as the questionnaire was aimed at operational resources that are involved with either the business- or IT strategy of the DYMO Group Finance cluster. The positions of respondents are reflected in the below table:

TABLE 2: DYMO-RESPONDENT POSITIONS

	Frequency
CIO	1
Group Finance Controller	1
Project Manager	4
Solution architect	3
Profitability Analyst	2
Data Analyst	1
Business Analyst	5
Information Analyst	2
Systems Manager	3
Systems Custodian	1
Systems Administrator	2
Total	25

The average years of service of the respondents was approximately 3.7 years.

TABLE 3 – DYMO: SUMMARY OF DEMOGRAPHIC INFORMATION

Total number of respondents	25
Average years of service	3.75 years

The DYMO Group Finance cluster consists of two departments: SCIO Finance Director and Business Performance Management. The distribution of respondents is shown in the below table:

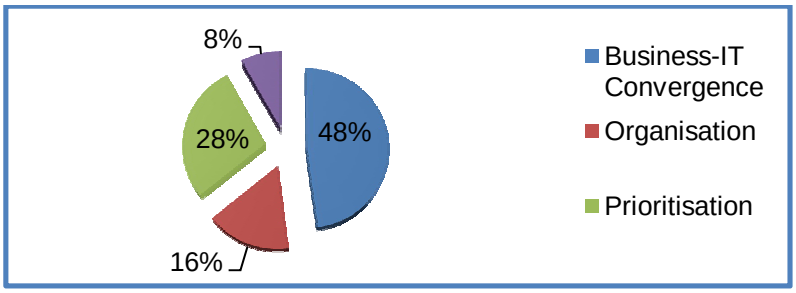
TABLE 4: DYMO - SUMMARY OF DEPARTMENT INFORMATION

DYMO Department	**Total Number in Department**	**Total Number sampled**
SCIO Finance Director	157	13
Business Performance Management	87	12
TOTAL	244	25

The following aspects were highlighted in DYMO's results set:

- The majority of respondents (48%) believed that the cluster's biggest challenge was strategic.
- The lack of business-IT convergence was indicated by 48% of respondents as a major challenge.
- Process- and organisation management were highlighted as areas of possible concern.

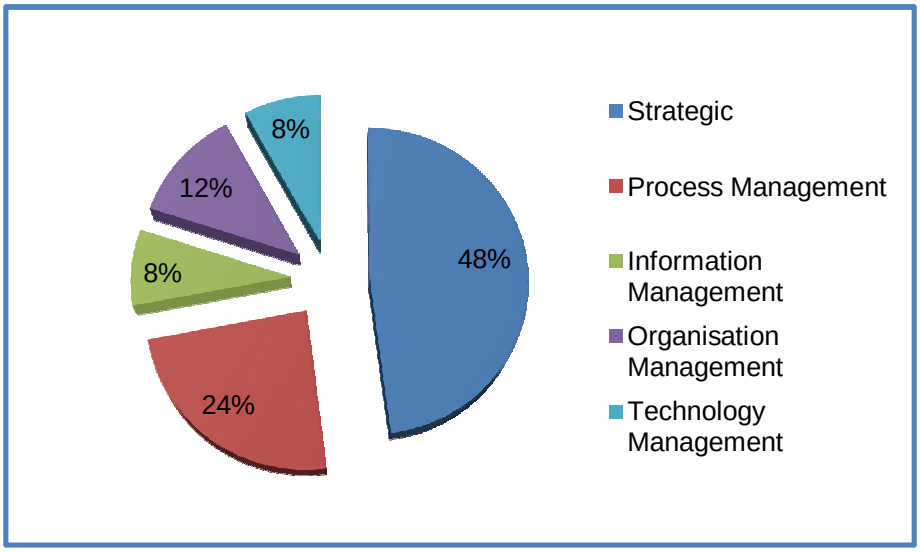
FIGURE 6: DYMO STRATEGIC POSITION: BIGGEST PROBLEMS



5.1.2 CLUSTER'S STRATEGIC POSITION

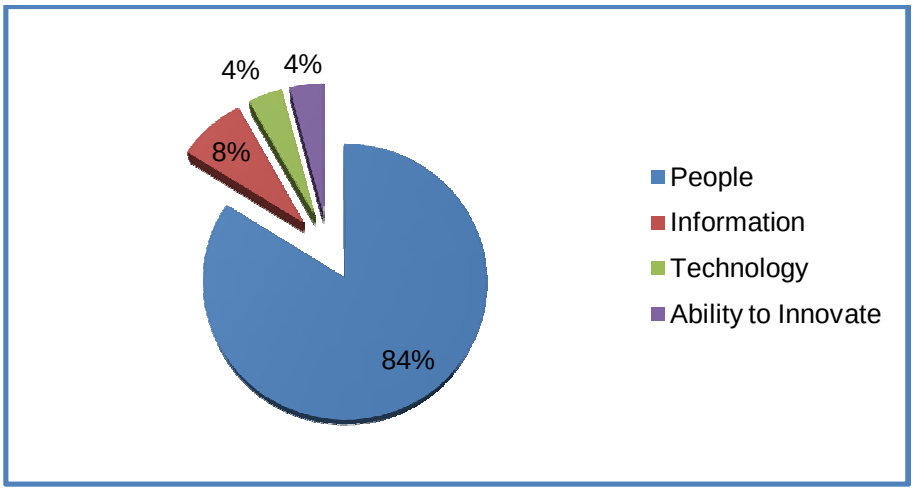
As noted above the biggest challenges were of a strategic nature (48%), process management (24%) and organisation management (12%). The challenges relating to information- and technology management were perceived to be secondary (see results in Figure 7).

FIGURE 7: DYMO STRATEGIC POSITION: BIGGEST CHALLENGE



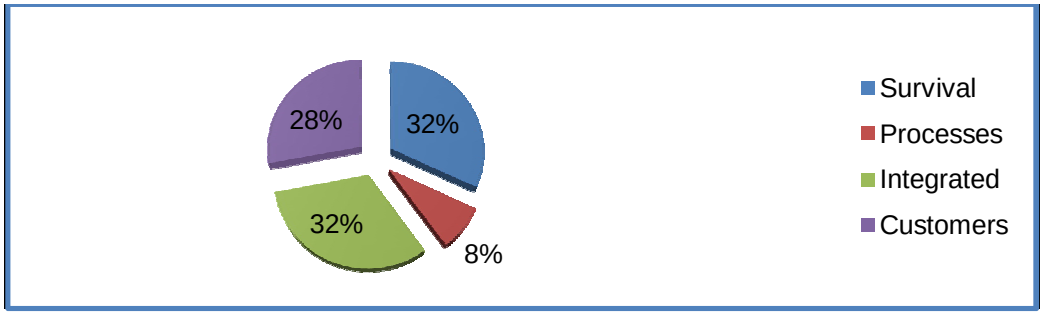
The majority of respondents agreed that the cluster's greatest asset was its people (84%) and information (8%), which implies that knowledge management and strategy are viewed as important elements within the cluster's operations.

FIGURE 8: DYMO STRATEGIC POSITION: CLUSTER'S GREATEST ASSET



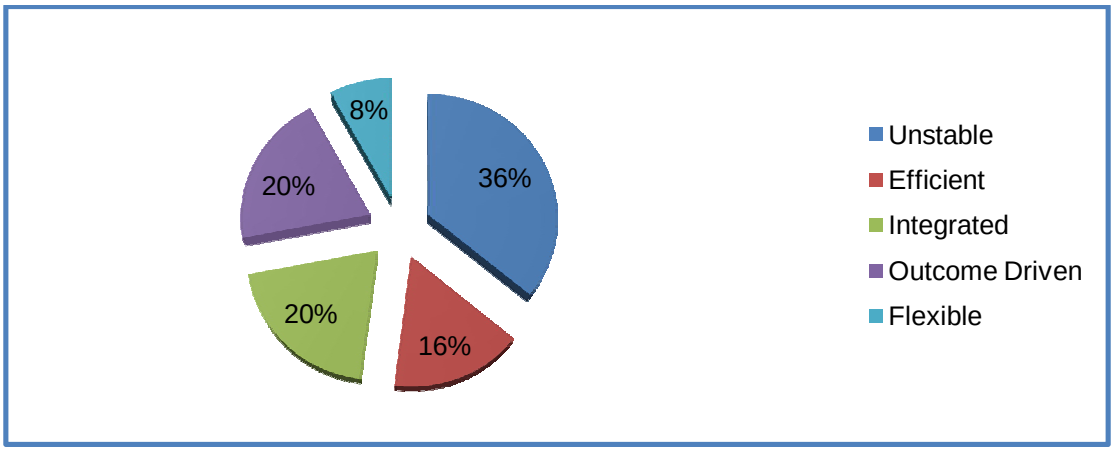
Respondents were of the opinion that the cluster's greatest problems were a lack of business-IT convergence (48%), prioritisation (28%) and organisation (16%) which tied back to the cluster's current priorities which were survival (32%), integration (32%) and customers (28%).

FIGURE 9: DYMO STRATEGIC POSITION: CURRENT PRIORITY



An interesting observation was that 84 percent of the respondents did not view the cluster as efficient (stage three), 92 percent did not view the cluster as flexible (stage four) and 36 percent of the respondents viewed the cluster as unstable (level one).

FIGURE 10: DYMO STRATEGIC POSITION: CLUSTER'S BEST DESCRIPTION

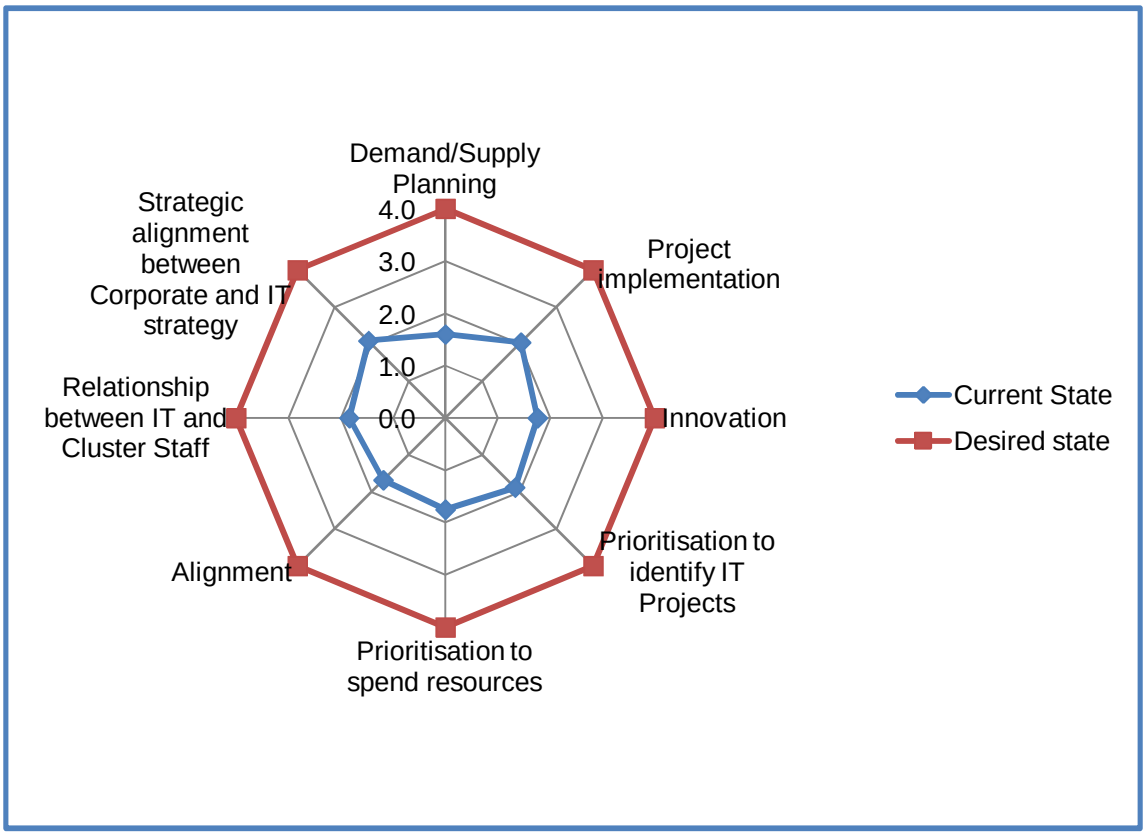


5.1.3 CLUSTER'S BUSINESS-IT MATURITY LEVEL

The only aspect in which the majority of respondents (36%) believed that the maturity of the cluster was *beyond* the unstable level of maturity (stage one) was the level of strategic alignment between corporate- and IT strategy (see Appendix 4). The majority of respondents were divided on the stage of development of the relationship between IT and cluster staff; 40% chose unstable and 40% chose established.

The radar chart below depicts factors of Business-IT level maturity in terms of "*Current State*" where level 1 = unstable; level 2 = established; level 3 = standardised and level 4 = optimum. "*Desired state*" has been plotted on optimum level as to better distinguish the "current" weighted averages of each factor:

FIGURE 11: DYMO STRATEGIC POSITION



The second theme (the Business-IT maturity component of the questionnaire) directly correlated to the Business-Technology Maturity Model (see 2.7). Respondents were required to choose a phrase (A, B, C, D or E) correlating to the five levels of development within each component of the Business-Technology Maturity Model:

- Process management (current and desired state)
  * Level 1 (indicated as “A” in the questionnaire): An unstructured way of work with no process integration.
  * Level 2 (indicated as “B” in the questionnaire): Defining and documenting some core processes.

* Level 3 (indicated as “C” in the questionnaire): Defining and documenting core processes with some integration between key process areas.
* Level 4 (indicated as “D” in the questionnaire): Repeatable, predictable and consistent process execution, fully integrated across the business.
* Level 5 (indicated as “E” in the questionnaire): Continuous process optimisation, experimentation and innovation.

- Organisation management (current and desired state)
  * Level 1 (indicated as “A” in the questionnaire): Missing structures and unidentified or unclear roles, responsibilities or decision rights; *ad-hoc collaboration.*
  * Level 2 (indicated as “B” in the questionnaire): Identified and defined structures and related roles or responsibilities.
  * Level 3 (indicated as “C” in the questionnaire): Some existing structures, with relevant roles executing per defined responsibilities and decision rights; sequential collaboration; COE (Centre of Excellence) or equivalent.
  * Level 4 (indicated as “D” in the questionnaire): Fully implemented structures with all roles executing to defined responsibilities; fully functioning COE.
  * Level 5 (indicated as “E” in the questionnaire): Evolving organisation structures, roles and decision rights; synchronous collaboration.

- Information management (current and desired state)
  * Level 1 (indicated as “A” in the questionnaire): Data metrics which are in isolated pockets and are ill-defined.
  * Level 2 (indicated as “B” in the questionnaire): Defined and consistent information policies and measurement criteria.
  * Level 3 (indicated as “C” in the questionnaire): Appropriate data sharing and use; integrated operation metrics and use of internal benchmarking.
  * Level 4 (indicated as “D” in the questionnaire): Integrated data and metrics across the business; use of both interim and external benchmarking.
  * Level 5 (indicated as “E” in the questionnaire): Intelligent decision making or routines experimental benchmarking.

- Technology management (current and desired state)
  * Level 1 (indicated as “A” in the questionnaire): A lack of required automation for appropriate tasks and functions.
  * Level 2 (indicated as “B” in the questionnaire): Partial or sporadic automation of appropriate tasks and functions.
  * Level 3 (indicated as “C” in the questionnaire): Automation of appropriate tasks and functions with come co-ordinated use.
  * Level 4 (indicated as “D” in the questionnaire): Full automation and co-ordinated use with partial, related integration.
  * Level 5 (indicated as “E” in the questionnaire): Consistent, co-ordinated use with complete, related integration.

The majority of respondents (60%) viewed the current state of **process management** as B (level two - *defining and documenting some core processes*) and were divided on the desired state of process management; 44% chose D (level four) and 44% chose E (level five). See *Appendix 4 – DYMO: MATRIX OF RAW DATA.*

The current state of **organisation management** was voted by 48% of respondents as C (level three - *some existing structures, with related roles executing per defined responsibilities and decision rights; sequential collaboration; COE Centre of Excellence or equivalent*) and gauged the desired state of organisation management on level four (40% of respondents chose D).

The majority of respondents (52%) viewed the current state of **information management** as A (level one - data metrics which are in isolated pockets and are ill-defined) and measured the desired state of information management on level four (56% of respondents chose D).

Respondents (52%) voted the current state of **technology management** as C (level three - automation of appropriate tasks and functions with some co-ordinated use) and measured the desired state of information management on level five (68% of respondents chose E).

5.1.4 CLUSTER'S BUSINESS PERFORMANCE

This theme required the respondent to rank four of the five statements from the *most critical* to *least critical*. The statements assessed the current and future business performance of the cluster, and were related to CMM as defined in 4.4.

Respondents ranked the current situation in the cluster from *most critical* (1) to *least critical* (4). 1= *most critical*; 2 = *critical*; 3 = *less critical*; 4 = *least critical*. The majority of respondents (37%) ranked the ability to translate business requirements into technological terms as most critical. Agile delivery of project deliverables and nimble decision making was proportionally ranked second highest as most critical in the current state. Interestingly, appropriate repositioning of resources and capabilities to support the corporate strategy was ranked by 41% of respondents as critical. Table 5 shows the rankings and the percentages of the respondents that selected a particular ranking.

TABLE 5: DYMO - **CURRENT** BUSINESS PERFORMANCE

Current business performance situation	**Rank**			
	1	2	3	4
Seamless integration of technology, data, people and processes	29%	18%	24%	29%
Ability to translate business requirements into technological terms	**37%**	11%	21%	32%
Appropriate repositioning of resources and capabilities to support the corporate strategy	9%	**41%**	32%	18%
Strategic alignment of IT landscape with Business requirements	23%	36%	23%	18%
Agile delivery of project deliverables and nimble decision making	**31%**	13%	25%	31%

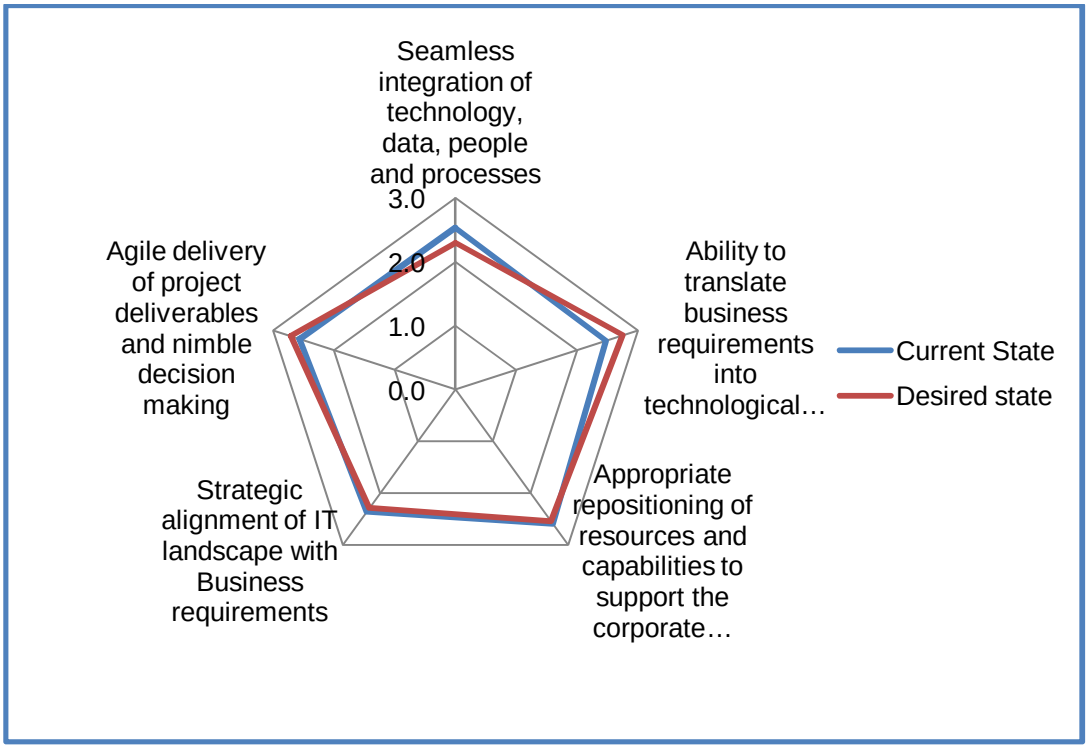
Where the **future or desired state** of the cluster was assessed, respondents ranked the statements also from *most critical* (1) to *least critical* (4). The majority of respondents (35%) ranked *seamless integration of technology, data, people and processes* as most critical. In this context it is interesting that 50% of respondents ranked the *ability to translate business requirements into technological terms* as least critical.

TABLE 6: DYMO - **DESIRED** BUSINESS PERFORMANCE

Desired Business Performance Situation	**Rank**			
	1	2	3	4
Seamless integration of technology, data, people and processes	35%	12%	41%	12%
Ability to translate business requirements into technological terms	31%	13%	6%	50%
Appropriate repositioning of resources and capabilities to support the corporate strategy	9%	45%	27%	18%
Strategic alignment of IT landscape with Business requirements	29%	25%	33%	13%
Agile delivery of project deliverables and nimble decision making	24%	24%	12%	41%

A review of Figure 12 reveals that in some instances, the current average state is collectively ranked higher than the desired state. This implies that the current state is focused on the respective area more than it will in future and vice versa. **It is important to note that, the wider the span in the radar chart, the lesser the criticality as "1" equals most critical and "4" equals less critical. The score nearer to the centre is a more desirable score than the one on the outer part. The radar charts for questions 14-21 are interpreted differently as an outer score is considered more desirable than a score on the inner circle.**

FIGURE 12: DYMO BUSINESS PERFORMANCE: SUMMARY OF CURRENT AND DESIRED STATE



5.2 BANK 2 – EALS

A total number of 18 responses were received, which equated to a response rate of 60 percent. The sample size represented 32 percent of the total population size. The data from the 18 questionnaires was entered into an Excel spread sheet which can be viewed in Appendix 5.

5.2.1 CLUSTER'S DEMOGRAPHIC INFORMATION

The positions of respondents are reflected in Table 7:

TABLE 7: EALS - RESPONDENT POSITIONS

	Frequency
Programme Manager	1
Project Manager	2
Operations Manager	1
Profitability Analyst	3
Technical Strategy Consultant	3
Senior Developer	2
Business Analyst	5
Systems Analyst	1
Total	18

The average years of service of the respondents was approximately 5.3 years.

TABLE 8 – EALS: SUMMARY OF DEMOGRAPHIC INFORMATION

Total number of respondents	18
Average years of service	5.35 years

The Eals cluster consisted of one department named Core Bank Services.

TABLE 9: EALS - SUMMARY OF DEPARTMENT INFORMATION

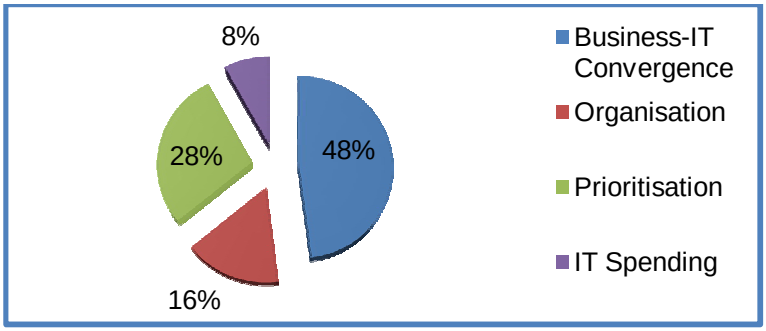
EALS Department	**Total Number in Department**	**Total Number sampled**
Core Bank Services	56	18

The following factors were highlighted in the EALS results set:

- The majority of respondents (43%) believed that the cluster's biggest challenge was process related.

- The lack of business-IT convergence was indicated by 48% of respondents as a major problem.
- Organisation management was highlighted as an area of possible concern.

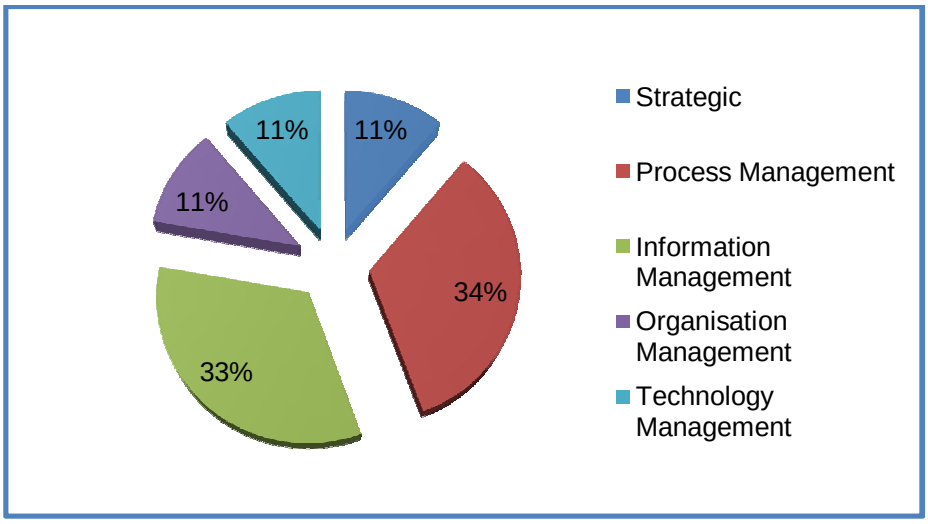
FIGURE 13: EALS STRATEGIC POSITION: BIGGEST PROBLEMS



5.2.2 CLUSTER'S STRATEGIC POSITION

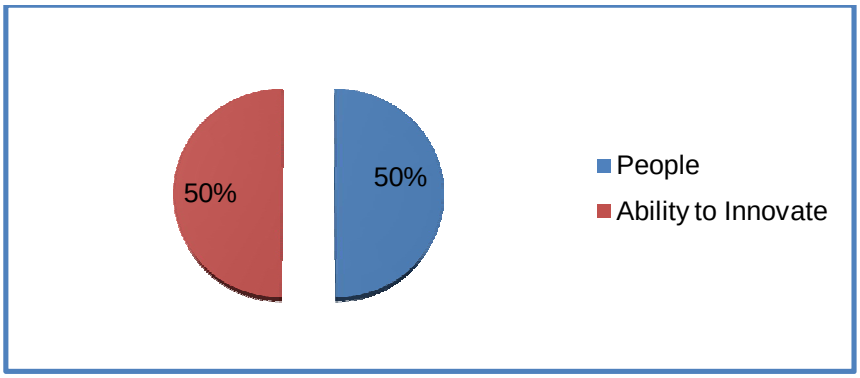
Respondents were divided according to the biggest challenge in their environment: 34% of respondents voted for process management and 33% chose information management. The challenges relating to strategy, organisation- and technology management were indicated as secondary.

FIGURE 14: EALS STRATEGIC POSITION: BIGGEST CHALLENGE



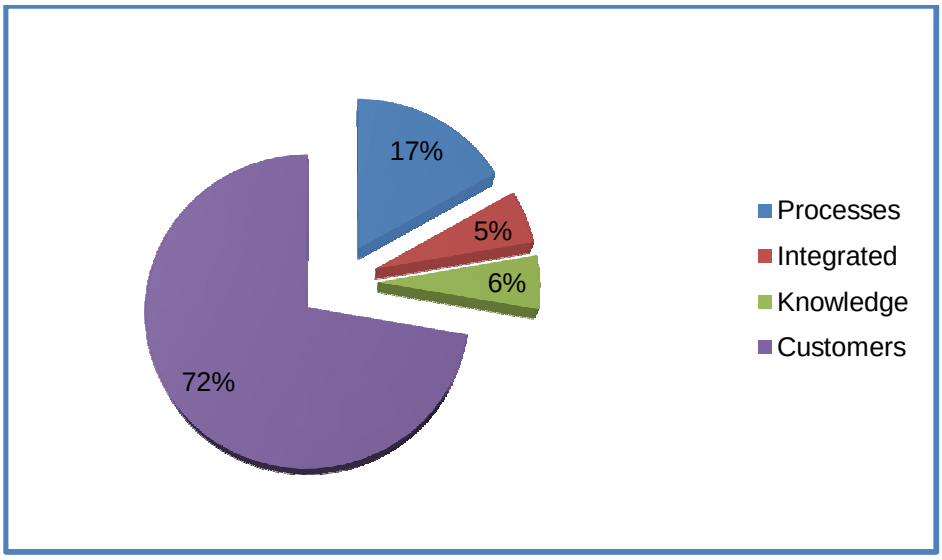
Respondents voted the cluster's greatest asset as both its people (50%) and the ability to innovate (50%).

FIGURE 15: EALS STRATEGIC POSITION: CLUSTER'S GREATEST ASSET



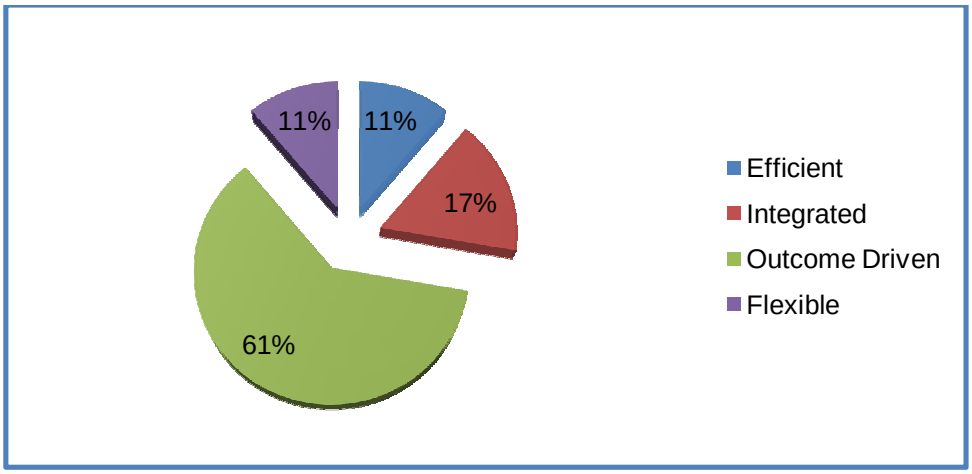
The majority of respondents indicated that the cluster's greatest problem was two-fold: the lack of business-IT convergence (44%) and organisation (22%).

FIGURE 17: EALS STRATEGIC POSITION: CURRENT PRIORITY



In contrast to DYMO (see figure 10) 61 percent of the respondents viewed the cluster as outcome driven (stage three).

FIGURE 18: EALS STRATEGIC POSITION: CLUSTER'S BEST DESCRIPTION



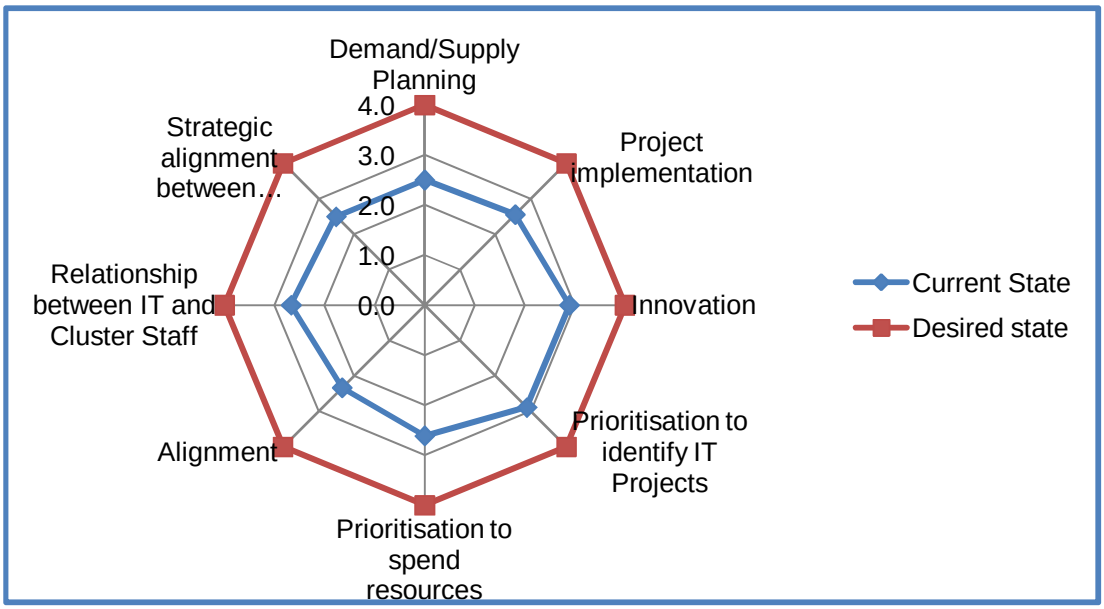
This tied in with Figure 17 which indicated that the cluster's current priority was customers (72%) and processes (17%).

5.2.3 CLUSTER'S BUSINESS-IT MATURITY LEVEL

The only aspect in which the majority of respondents (39%) believed that the maturity of the cluster was *beyond* the standardised level of maturity (thus stage four - optimum level) was where it was indicated that *prioritisation was on the level of helping management to identify the IT projects that strongly support strategic intent, ranking them by future business impact* (see Appendix 5). The majority of respondents were divided on demand/supply planning in which *business and IT management achieve consensus on where the organisation is going and what IT can do to help*; 38.9% chose established and 38.9% chose standardised.

The radar chart below depicts factors of Business-IT level maturity in terms of "*Current State*" where level 1 = unstable; level 2 = established; level 3 = standardised and level 4 = optimum. As in the case of DYMO, "*Desired state*" has been plotted on optimum level as to better distinguish the "current" weighted averages of each factor:

FIGURE 19: EALS STRATEGIC POSITION



The respondents' opinions were reflected as follows in the Business-IT maturity component of the questionnaire:

The majority of respondents (60%) viewed the current state of **process management** as C (level three - *defining and documenting some core processes*) and on the desired state of process management 61% chose E (level five) See *Appendix 5.*

The majority of respondents (50%) viewed the current state of **organisation management** as B (level two – *identified and defined structures and related roles/responsibilities*) and gauged the desired state of organisation management on level five (66.7% of respondents chose E).

The majority of respondents (50%) viewed the current state of **information management** as C (level three – *appropriate data sharing and use; integrated operation metrics and use of internal benchmarking*) and measured the desired state of information management on level four (55.6% of respondents chose D).

The majority of respondents (52%) viewed the current state of **technology management** as B (level two – *partial or sporadic automation of appropriate tasks and functions*) and were divided on the desired state of information management (44.4% of respondents chose D and 44.4% chose E).

5.2.4 CLUSTER'S BUSINESS PERFORMANCE

The majority of respondents (47%) ranked the ability to translate business requirements into technological terms as most critical. Seamless integration of technology, data, people and processes was proportionally ranked second highest as most critical in the current state. Interestingly, *appropriate repositioning of resources and capabilities to support the corporate strategy* was ranked by only 27% of respondents as *most critical* and by 47% as *critical*. Table 10 shows the rankings and the percentages of the respondents that selected a particular ranking.

TABLE 10: EALS - CURRENT BUSINESS PERFORMANCE

Current business performance situation	**Rank**			
	1	2	3	4
Seamless integration of technology, data, people and processes	36%	9%	18%	36%
Ability to translate business requirements into technological terms	47%	20%	20%	13%
Appropriate repositioning of resources and capabilities to support the corporate strategy	27%	47%	20%	7%
Strategic alignment of IT landscape with Business requirements	11%	33%	33%	22%
Agile delivery of project deliverables and nimble decision making	8%	8%	31%	54%

As in Dymo's instance the majority of respondents (45%) ranked *seamless integration of technology, data, people and processes* as most critical for the future state of the cluster. In this context it is interesting that 41% of respondents ranked *the appropriate repositioning of resources and capabilities to support the corporate strategy* as *less critical*.

TABLE 11: EALS - DESIRED BUSINESS PERFORMANCE

Desired Business Performance Situation	**Rank**			
	1	2	3	4
Seamless integration of technology, data, people and processes	45%	9%	9%	36%
Ability to translate business requirements into technological terms	25%	33%	25%	17%
Appropriate repositioning of resources and capabilities to support the corporate strategy	12%	24%	41%	24%
Strategic alignment of IT landscape with Business requirements	28%	39%	11%	22%
Agile delivery of project deliverables and nimble decision making	21%	14%	36%	29%

5.3 BANK 3 – FARGO

A total number of six responses were received, which equated to a response rate of 20 percent. The sample size represented seven percent of the total population size. The data from the six questionnaires was entered into an Excel spreadsheet, which can be viewed in Appendix 5.

5.3.1 CLUSTER'S DEMOGRAPHIC INFORMATION

The positions of respondents are reflected in Table 12:

TABLE 12: FARGO - RESPONDENT POSITIONS

	Frequency
CIO	1
Senior Strategic Manager	2
Business Strategic Manager	1
Corporate Strategic Analyst	1
Management Accountant	1
Total	6

The average years of service of respondents was approximately 7 years.

TABLE 13 – FARGO: SUMMARY OF DEMOGRAPHIC INFORMATION

Total number of respondents	6
Average years of service	6.9 years

The Fargo cluster which participated in the survey consisted of one department named Group Finance Reporting.

TABLE 14: FARGO - SUMMARY OF DEPARTMENT INFORMATION

FARGO Department	**Total Number in Department**	**Total Number sampled**
Group Finance Reporting	83	6

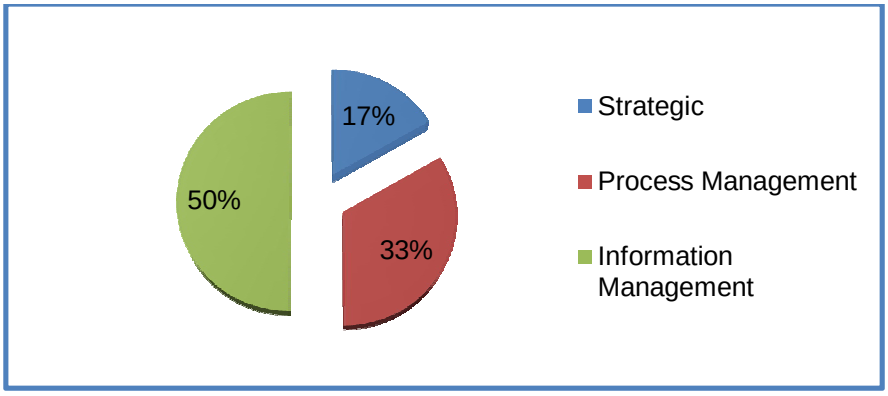
The following pointers were highlighted in the FARGO results set:

- The majority of respondents (43%) believed that the cluster's biggest challenge was information management.
- The lack of business-IT convergence was indicated by only 17% of respondents as a major problem yet it featured under the top three items of this category.
- Prioritisation was highlighted as an area of possible concern.

5.3.2 CLUSTER'S STRATEGIC POSITION

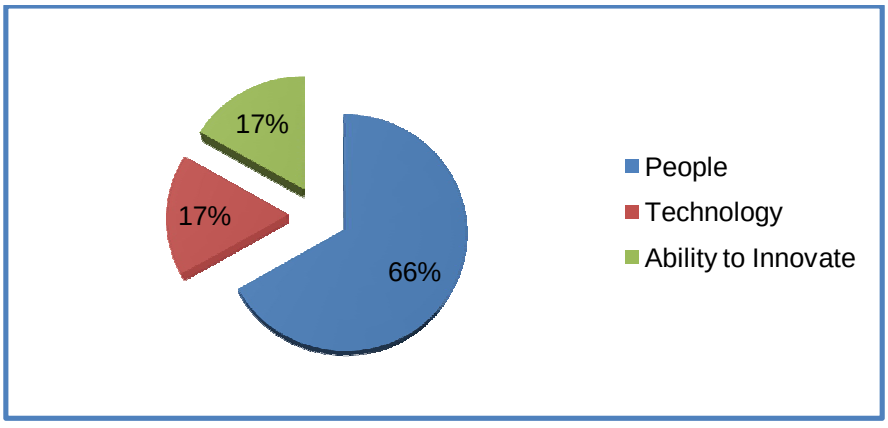
Respondents viewed information management (50%) as their biggest challenge. The challenges relating to process- and strategy management were voted as secondary.

FIGURE 20: FARGO STRATEGIC POSITION: BIGGEST CHALLENGE



Respondents indicated that the cluster's greatest asset was its people (66%).

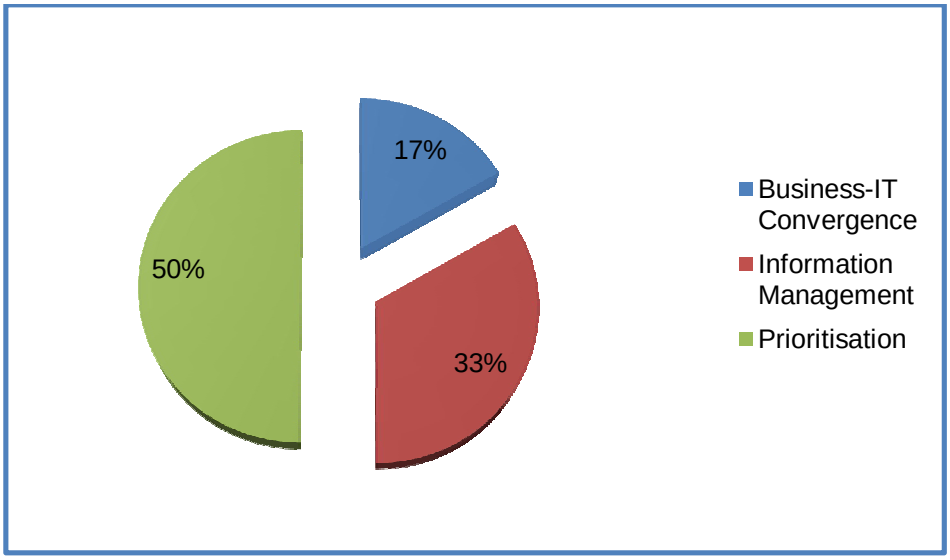
FIGURE 21: FARGO STRATEGIC POSITION: CLUSTER'S GREATEST ASSET



The majority of respondents indicated that the cluster's greatest problem was two-fold: prioritisation (50%) and information management (33%). Of the four

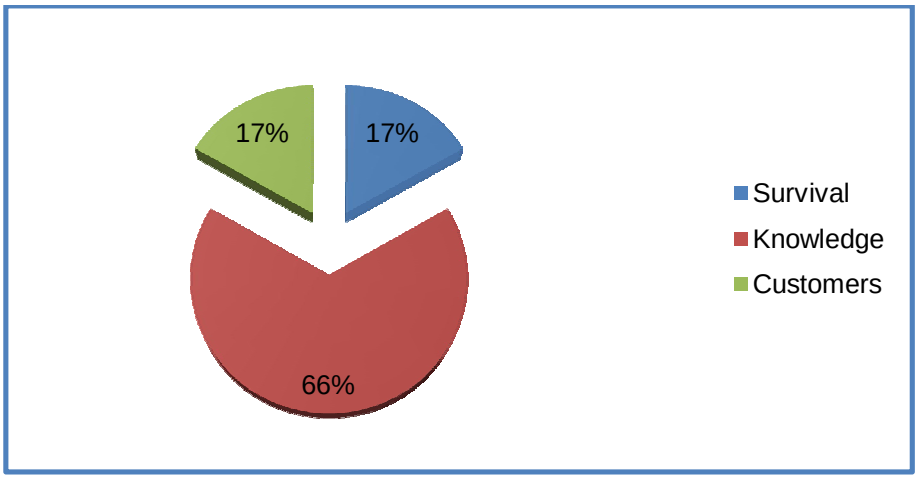
clusters in the research sample, FARGO did *not* rate the lack of business-IT convergence (16%) highest in this category.

FIGURE 22: FARGO STRATEGIC POSITION: BIGGEST PROBLEMS



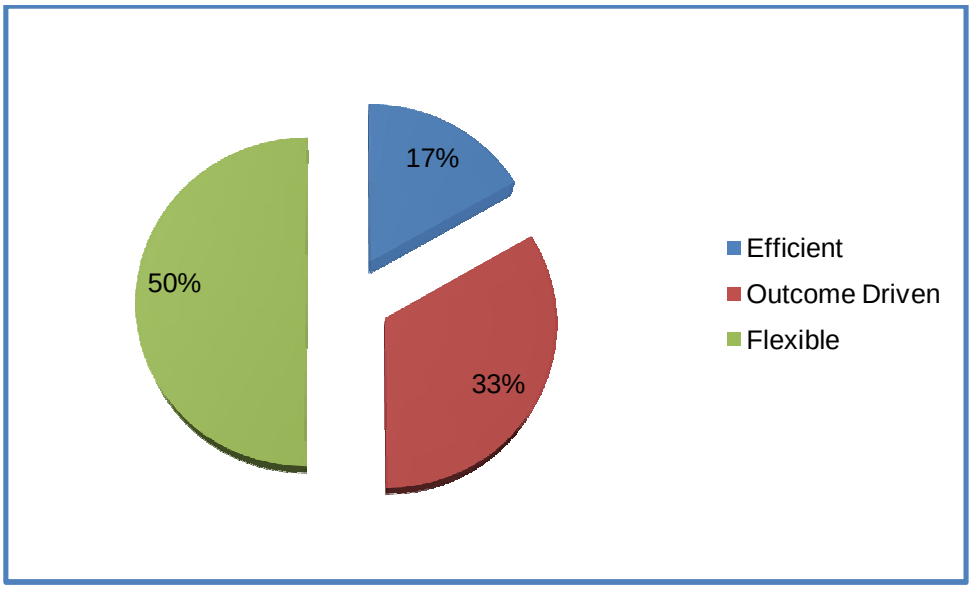
Above results set correlated to the cluster's current priorities which was knowledge (66%)

FIGURE 23: FARGO STRATEGIC POSITION: CURRENT PRIORITY



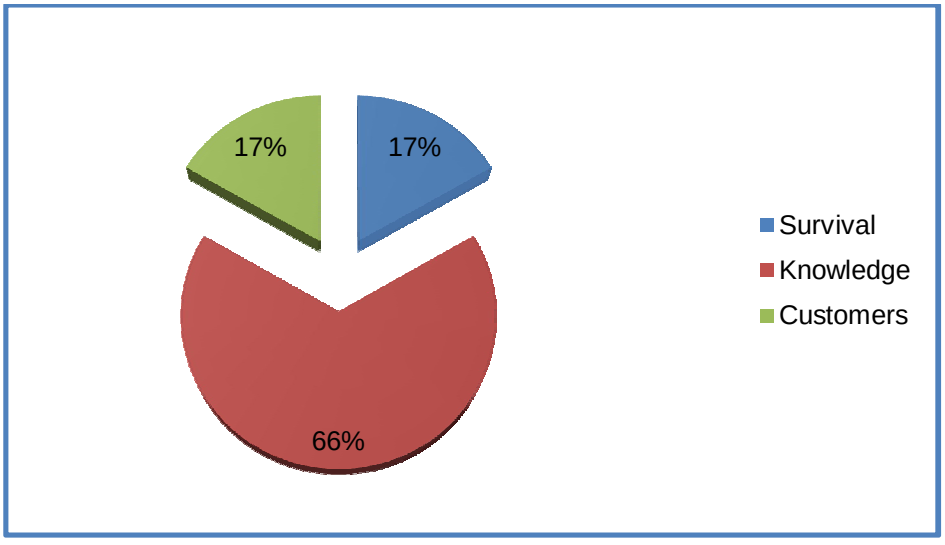
In contrast to DYMO and EALS 50 percent of the respondents viewed the cluster as flexible (stage four).

FIGURE 24: FARGO STRATEGIC POSITION: CLUSTER'S BEST DESCRIPTION



This tied into Fargo's response (see Figure 25) which indicated that the cluster's current priority was knowledge (66%), with customers (17%) and survival (17%) in secondary position. The business-IT maturity level is thus on standardised level.

FIGURE 25: FARGO STRATEGIC POSITION: CURRENT PRIORITY

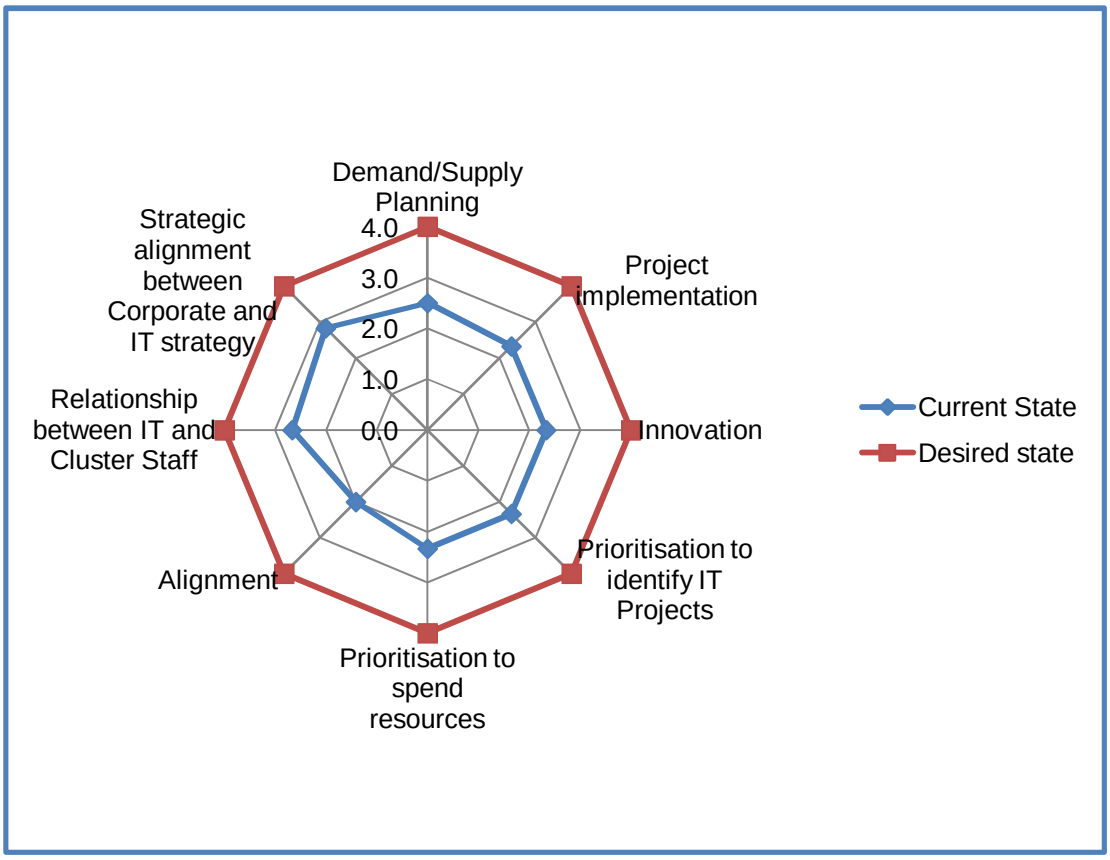


5.3.3 CLUSTER'S BUSINESS-IT MATURITY LEVEL

With the exception of the innovation category respondents viewed all business-IT maturity factors as *established* or beyond. Respondents were divided on the maturity level of innovation in their environment (33% chose unstable and 33% chose s*tandardised* - see *Appendix 6*). The majority of respondents were divided on *demand/supply planning in which business and IT management achieve consensus on where the organisation is going and what IT can do to help*; 33% chose established and 33% chose standardised.

The below radar chart depicts assessed factors of Business-IT level maturity in terms of "*Current State*" where level 1 = unstable; level 2 = established; level 3 = standardised and level 4 = optimum. "*Desired state*" has been plotted on optimum level as to better distinguish the "current" weighted averages of each factor:

FIGURE 26: FARGO STRATEGIC POSITION



The respondents' views were reflected as follows in the second section of the Business-IT maturity theme:

The majority of respondents (83%) viewed the current state of **process management** as C (level three) and as *desired state* 61% chose E (level five). Respondents were divided on **organisation management** (33% chose A, 33% chose C and 33% chose D)**.** The mean (2.67) was, however, indicated as C (level three). Respondents voted level five as their desired state (50% of respondents chose E).

50% of respondents viewed the current state of **information management** as D (level four) and noted level five as their desired state (50% chose E).

52% of respondents viewed the current state of **technology management** as C (level three) and chose level five as their desired state (67% chose E).

5.3.4 CLUSTER'S BUSINESS PERFORMANCE

Assessing the current situation in the cluster, respondents ranked the statements from *most critical* (1) to *least critical* (4).The majority of respondents (67%) ranked the *seamless integration of technology, data, people and processes* as most critical. *The strategic alignment of the IT landscape with Business requirements* was proportionally ranked second highest (33%). The agile delivery of project deliverables and nimble decision making was rated as least critical by 80% of respondents. Table 15 shows the rankings and the percentages of the respondents that selected a particular ranking.

TABLE 15: FARGO - **CURRENT** BUSINESS PERFORMANCE

Current business performance situation	**Rank**			
	1	2	3	4
Seamless integration of technology, data, people and processes	67%	0%	33%	0%
Ability to translate business requirements into technological terms	20%	40%	20%	20%
Appropriate repositioning of resources and capabilities to support the corporate strategy	20%	0%	80%	0%
Strategic alignment of IT landscape with Business requirements	33%	50%	0%	17%
Agile delivery of project deliverables and nimble decision making	0%	20%	0%	80%

Where the future or desired state of the cluster was assessed (see table 16), respondents ranked *agile delivery of project deliverables and nimble decision making* as most critical (33%) or critical (50%). In this context it is interesting

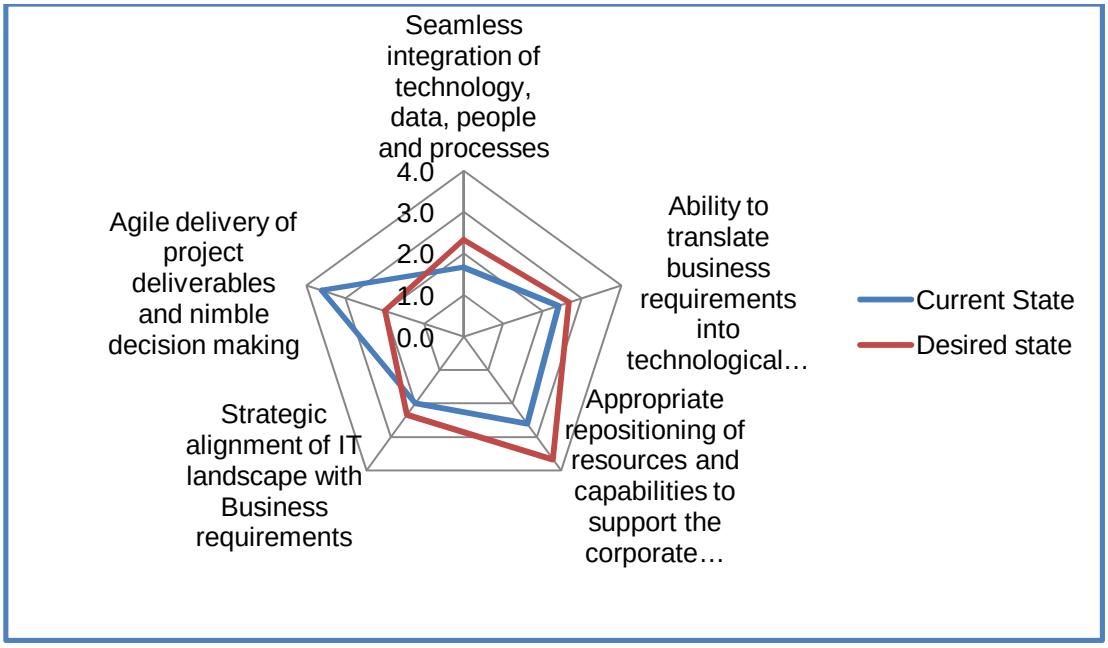
that 67% of respondents ranked *the appropriate repositioning of resources and capabilities to support the corporate strategy* as least critical.

TABLE 16: FARGO - **DESIRED** BUSINESS PERFORMANCE

Desired Business Performance Situation	**Rank**			
	1	2	3	4
Seamless integration of technology, data, people and processes	33%	33%	0%	33%
Ability to translate business requirements into technological terms	17%	0%	83%	0%
Appropriate repositioning of resources and capabilities to support the corporate strategy	0%	0%	33%	67%
Strategic alignment of IT landscape with Business requirements	33%	33%	0%	33%
Agile delivery of project deliverables and nimble decision making	33%	50%	0%	17%

It is again important to note that, when Figure 27 is reviewed, in some instances, the **current** average state was collectively ranked **higher** than the desired state. **This implies that the current state was focused on the respective area more than it will in future and vice versa.**

FIGURE 27: FARGO BUSINESS PERFORMANCE: SUMMARY OF CURRENT AND DESIRED STATE



5.4 BANK 4 – MERRIOTT

A total number of seven responses were received, which equated to a response rate of 23 percent. The sample size represented six percent of the total population size. The data from the seven questionnaires was entered into an Excel spreadsheet, which can be viewed in Appendix 7.

5.4.1 CLUSTER'S DEMOGRAPHIC INFORMATION

The positions of respondents are reflected in Table 17:

TABLE 17: MERRIOTT - RESPONDENT POSITIONS

		Frequency
Valid	CIO	1
	Group Financial Controller	1
	Solution architect	1
	Portfolio Analyst	1
	Profitability Analyst	1
	Portfolio Analyst	1
	Business Analyst	1
	Total	7

The average years of service of the respondents were approximately 8 years.

TABLE 18 – MERRIOTT: SUMMARY OF DEMOGRAPHIC INFORMATION

Total number of respondents	7
Average years of service	7.5 years

The Merriott cluster which participated in the survey consisted of one department named Group Enabling Functions.

TABLE 19: MERRIOTT - SUMMARY OF DEPARTMENT INFORMATION

MERRIOTT Department	Total Number in Department	Total Number sampled
Group Enabling Functions	119	7

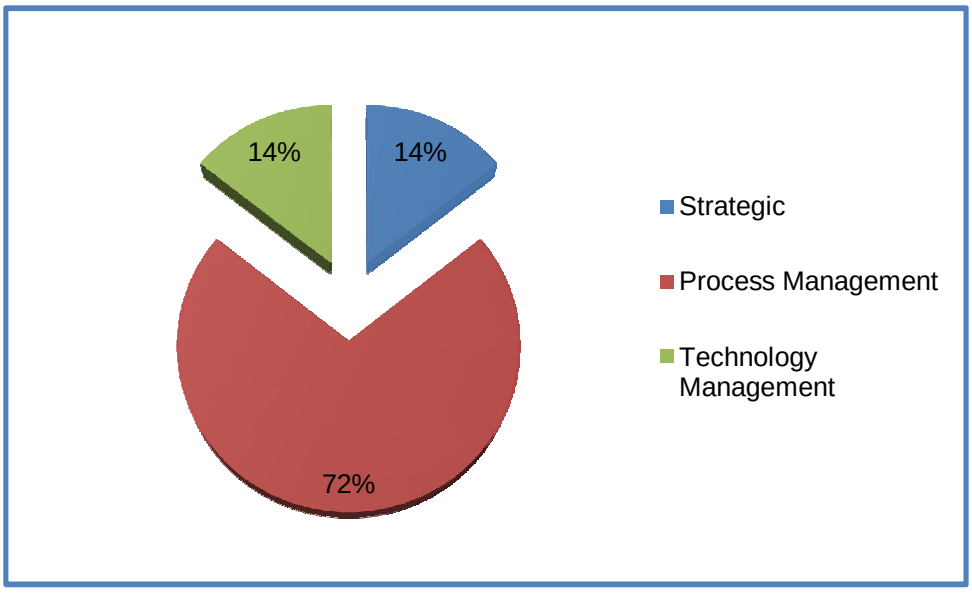
The following pointers were highlighted in the Merriott results set:

- The majority of respondents (72%) believed that the cluster's biggest challenge was process management.
- The lack of business-IT convergence was indicated by 86% of respondents as a major problem coupled with prioritisation (14%) which is a critical success factor of business-IT convergence.
- Integration was highlighted as a key focus area.

5.4.2 CLUSTER'S STRATEGIC POSITION

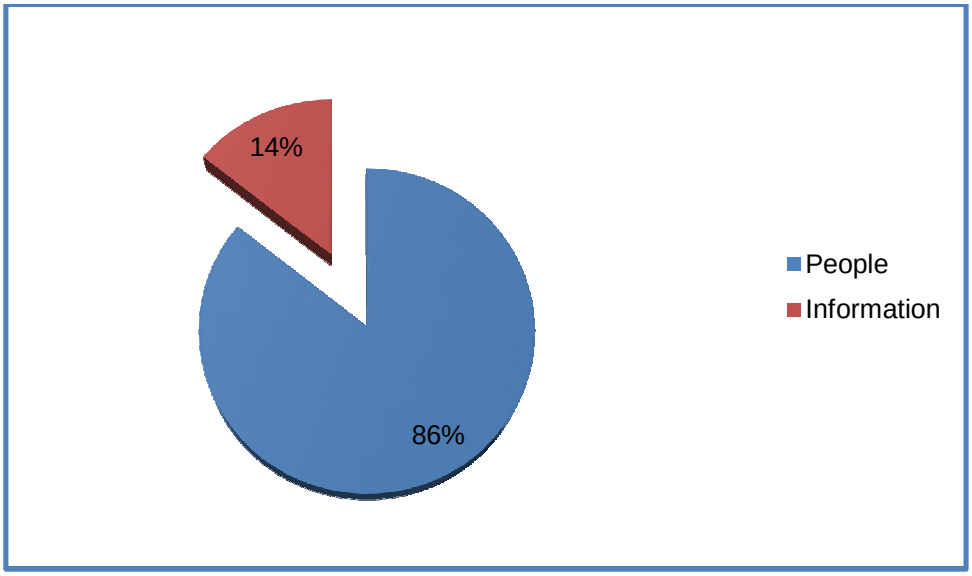
Respondents viewed process management (72%) as their biggest challenge. The challenges relating to technology- and strategy management were perceived to be secondary.

FIGURE 28: MERRIOTT STRATEGIC POSITION: BIGGEST CHALLENGE



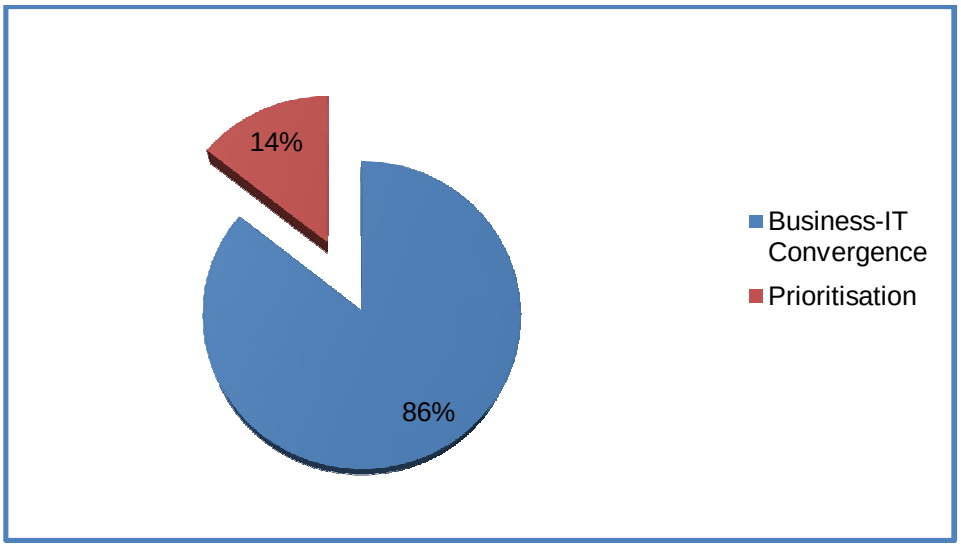
Respondents voted the cluster's greatest asset as its people (86%).

FIGURE 29: MERRIOTT STRATEGIC POSITION: CLUSTER'S GREATEST ASSET



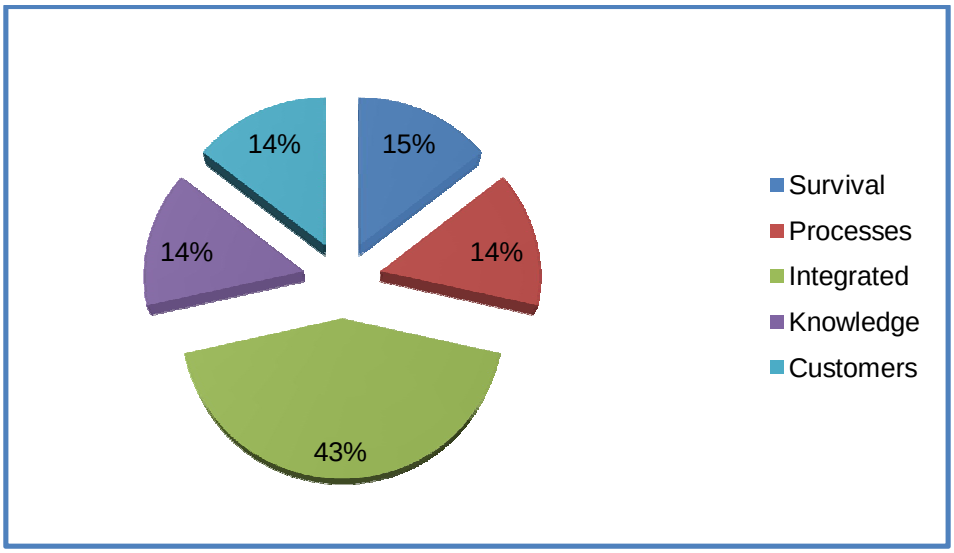
The majority of respondents indicated that the cluster's greatest problems were the lack of Business-IT convergence (86%) and prioritisation (14%).

FIGURE 30: MERRIOTT STRATEGIC POSITION: BIGGEST PROBLEMS



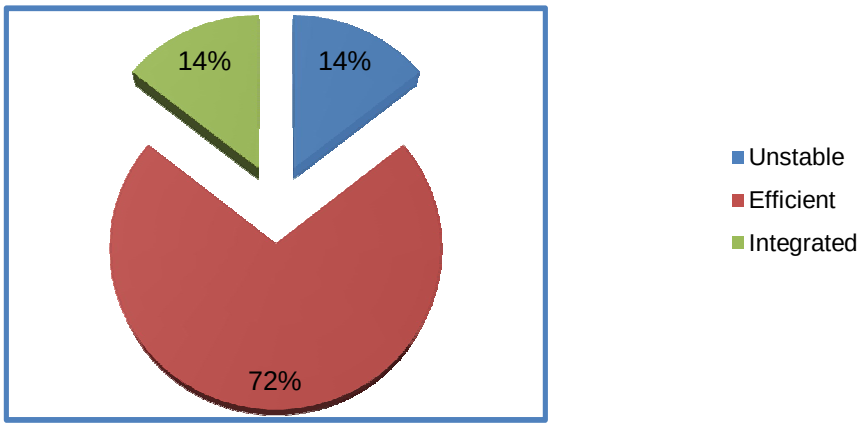
Above results set correlated to the cluster's current priority which was indicated as integration (43%).

FIGURE 31: MERRIOTT STRATEGIC POSITION: CURRENT PRIORITY



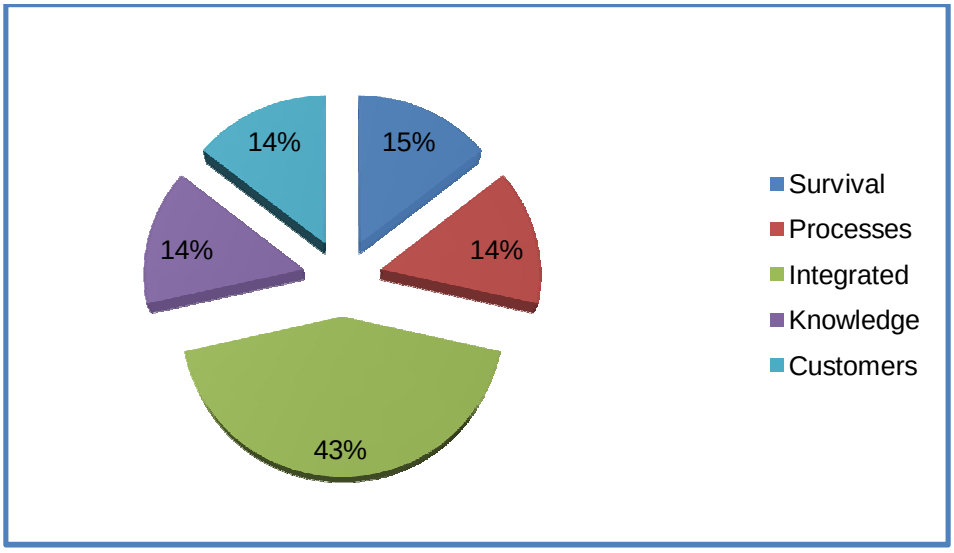
In contrast to DYMO (see Figure 10) 72 percent of the respondents viewed the cluster as efficient (stage three).

FIGURE 32: MERRIOTT STRATEGIC POSITION: CLUSTER'S BEST DESCRIPTION



The above results tied into Merriott indicating that the cluster's current priority was integration (43%), with customers (14%), processes (14%) and knowledge (17%) in secondary position.

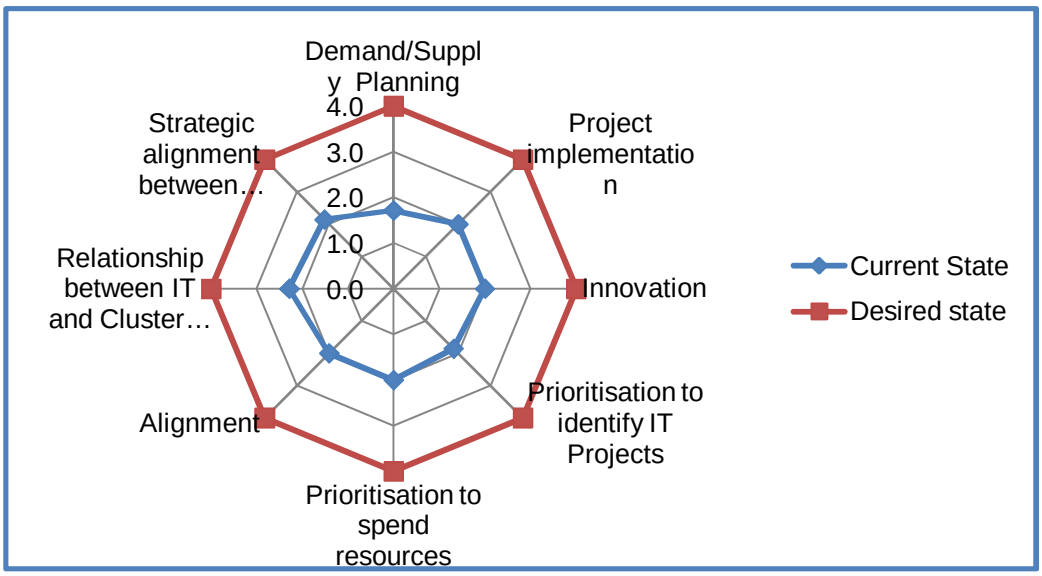
FIGURE 33: MERRIOTT STRATEGIC POSITION: CURRENT PRIORITY



5.4.3 CLUSTER'S BUSINESS-IT MATURITY LEVEL

Respondent viewed none of the assessed business-IT factors as beyond *established*. (see Appendix 7). The below radar chart depicts assessed factors of Business-IT level maturity in terms of "*Current State*" and "*Desired state*"

FIGURE 34: MERRIOTT STRATEGIC POSITION



The respondents' views are reflected as follows in the second part of the Business-IT maturity theme:

The majority of respondents (83%) viewed the current state of **process management** as C (level three) and were divided on the desired state of process management; 43% chose D (level four) and 43% chose E (level five) See *Appendix 7.*

43% of respondents voted C (level three) in the **organisation management** section**.** Level three points to *some existing structures, with related roles executing per defined responsibilities and decision rights; sequential*

collaboration. Respondents indicated level four as their desired state of organisation management (57% of respondents chose D).

The majority of respondents (43%) viewed the current state of **information management** as A (level one) and measured the desired state of information management on level five (71% of respondents chose E).

The majority of respondents (43%) viewed the current state of **technology management** as C (level three) and chose level five on the desired state of technology management (57% of respondents chose E).

5.4.4 CLUSTER'S BUSINESS PERFORMANCE

The majority of respondents (57%) ranked the *strategic alignment of the IT landscape with business requirements* as most critical. *Seamless integration of technology, data, people and processes* was proportionally ranked second highest (*most critical*) and by 33% of respondents as *critica*l. The *agile delivery of project deliverables and nimble decision making* was rated as less critical by 100% of respondents. Table 20 shows the rankings.

TABLE 20: MERRIOTT - CURRENT BUSINESS PERFORMANCE

Current business performance situation	Rank			
	1	2	3	4
Seamless integration of technology, data, people and processes	33%	17%	17%	33%
Ability to translate business requirements into technological terms	14%	57%	0%	29%
Appropriate repositioning of resources and capabilities to support the corporate strategy	0%	29%	71%	0%
Strategic alignment of IT landscape with Business requirements	57%	0%	0%	43%
Agile delivery of project deliverables and nimble decision making	0%	0%	100%	0%

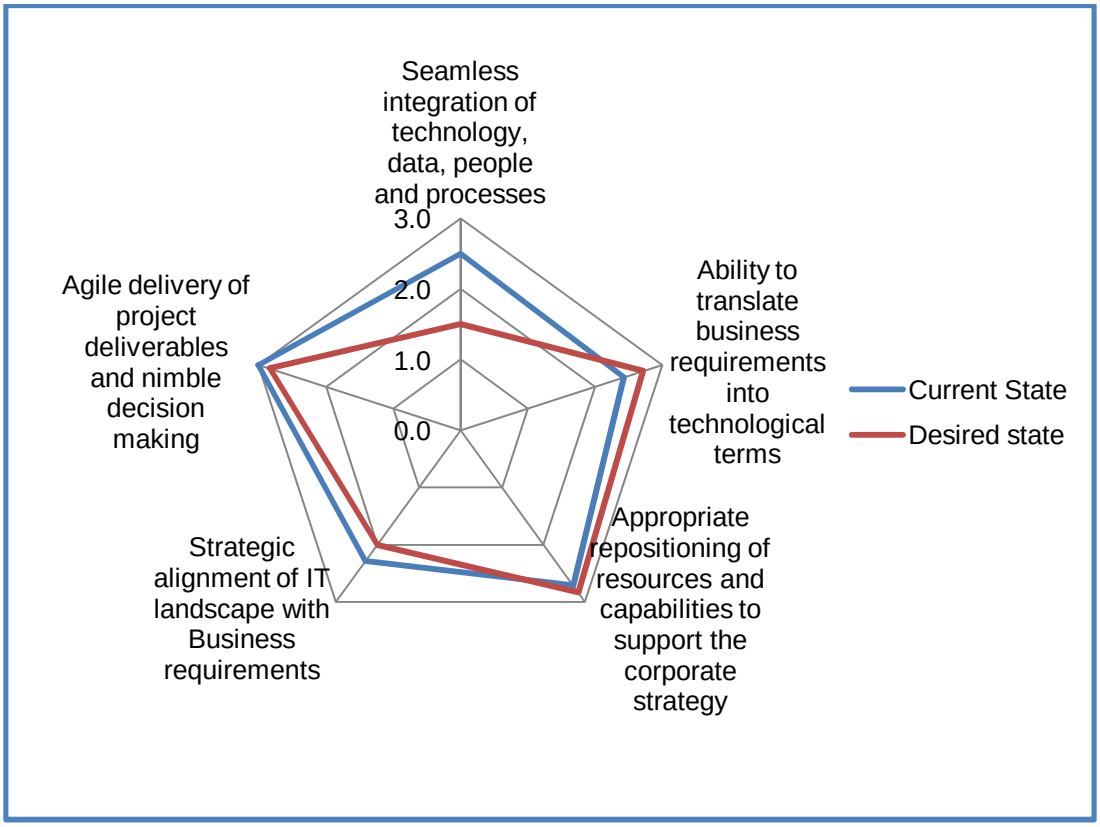
Where the future or desired state of the cluster was assessed, respondents ranked *seamless integration of technology, data, people and processes* as most critical (50%). It is interesting to note that, in Merriott's case, 50% of respondents ranked *the appropriate repositioning of resources and capabilities to support the corporate strategy* as *less critical*.

TABLE 21: MERRIOTT - DESIRED BUSINESS PERFORMANCE

Desired Business Performance Situation	**Rank**			
	1	2	3	4
Seamless integration of technology, data, people and processes	50%	50%	0%	0%
Ability to translate business requirements into technological terms	29%	14%	14%	43%
Appropriate repositioning of resources and capabilities to support the corporate strategy	0%	33%	50%	17%
Strategic alignment of IT landscape with Business requirements	43%	29%	14%	14%
Agile delivery of project deliverables and nimble decision making	17%	17%	33%	33%

Reviewing Figure 35 it is important to note that, in some instances, the current average state was collectively ranked higher than the desired state. This implies that the current state is focused on the respective area more than it will in future.

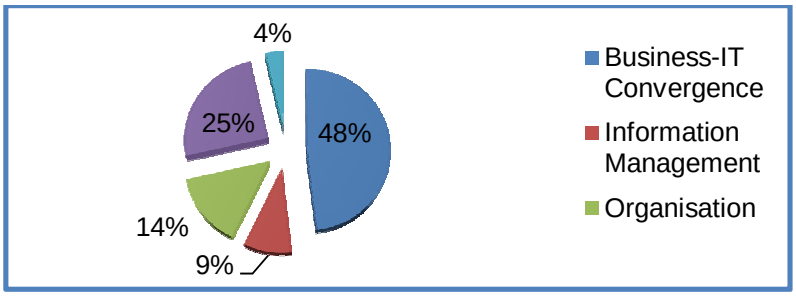
FIGURE 35: MERRIOTT BUSINESS PERFORMANCE: SUMMARY OF CURRENT AND DESIRED STATE



5.5 HOLISTIC VIEW

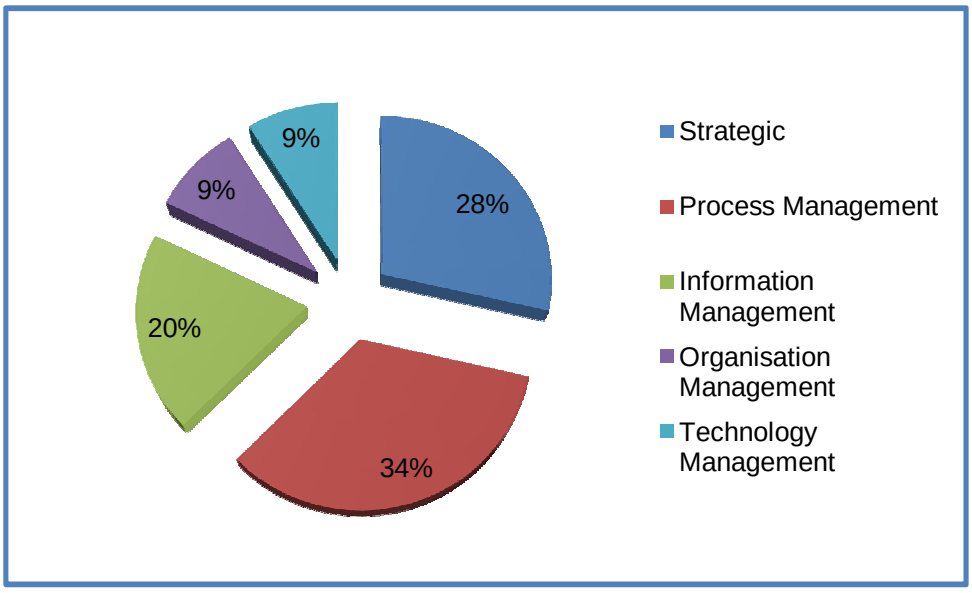
When the data of all four clusters was collated the results indicate a lack of business-IT convergence as a major problem.

FIGURE 36: ALL BANKS STRATEGIC POSITION: BIGGEST PROBLEMS



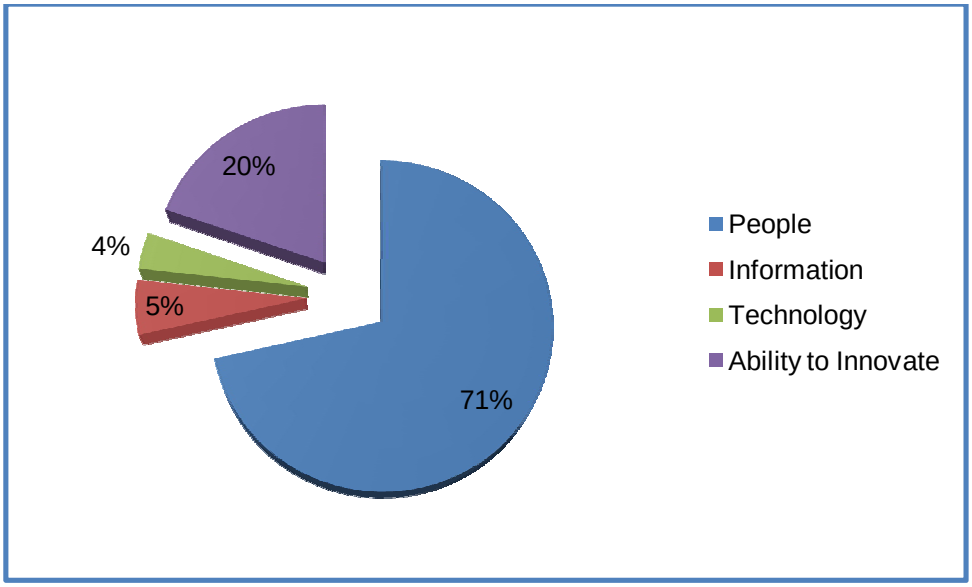
The collated data also reflected the biggest challenge as process management. Strategy and information management were also perceived to be challenging.

FIGURE 37: ALL BANKS STRATEGIC POSITION: BIGGEST CHALLENGE



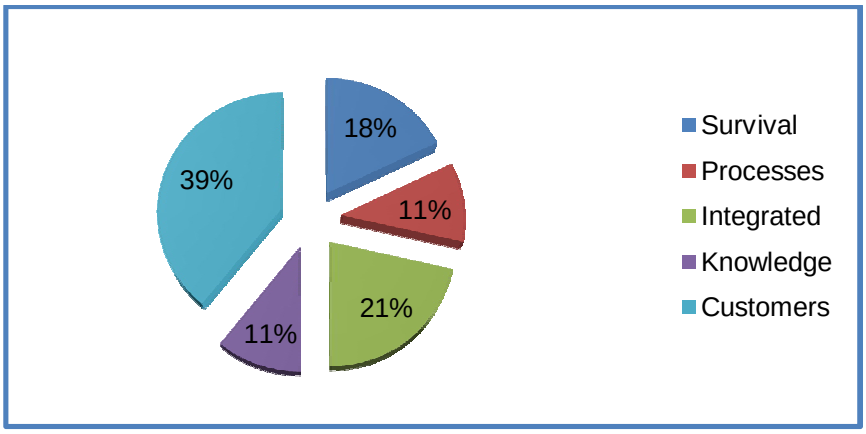
The collated data indicated that the people aspect was perceived to be the greatest asset (72%).

FIGURE 38: ALL BANKS STRATEGIC POSITION: CLUSTER'S GREATEST ASSET



Above results set is interesting when compared to the overriding priority which was indicated as customers (39%) and integration (21%).

FIGURE 39: ALL BANKS STRATEGIC POSITION: CURRENT PRIORITY



The following aspects were pertinent in the collated data set:

- The majority of respondents (34%) believed that the overall challenge was process management.
- The lack of business-IT convergence was indicated by 48% of respondents as a major problem coupled with prioritisation (25%) which is a critical success factor of business-IT convergence.
- Integration was highlighted in the collated data set as a key focus area which ties back to above pointer.

5.5.1 BUSINESS-IT MATURITY

The results of the collated data set, in terms of CMM, are reflected as stage two (with stage two correlating to *Established*– see 4.4.1). This tied into results indicating that the current priority was integration (43%), with customers (14%), processes (14%) and knowledge (17%) in secondary position.

With the exception of *alignment between corporate and IT strategy* which was rated as *standardise*d, respondents viewed none of the assessed business-IT

factors as beyond *established*. *Demand/supply planning* and *innovation* was rated on *unstable* level.

The majority of respondents viewed the following business-IT convergence factors as established and thus only on level two of the CMM:

- *Project implementation where IT enabled Business to develop strategic and organisational flexibility and the capability to respond to customer demands on time* (39%).
- *The relationship between IT and cluster staff* (38%).
- *Prioritisation where management identifies the IT projects that strongly support strategic intent, ranking them by future business impact* (30%).
- *Alignment where Business and IT management decide together which existing IT initiatives would get resources, rather than assuming that everything currently in operation is critical for the business and should be supported* (41%).

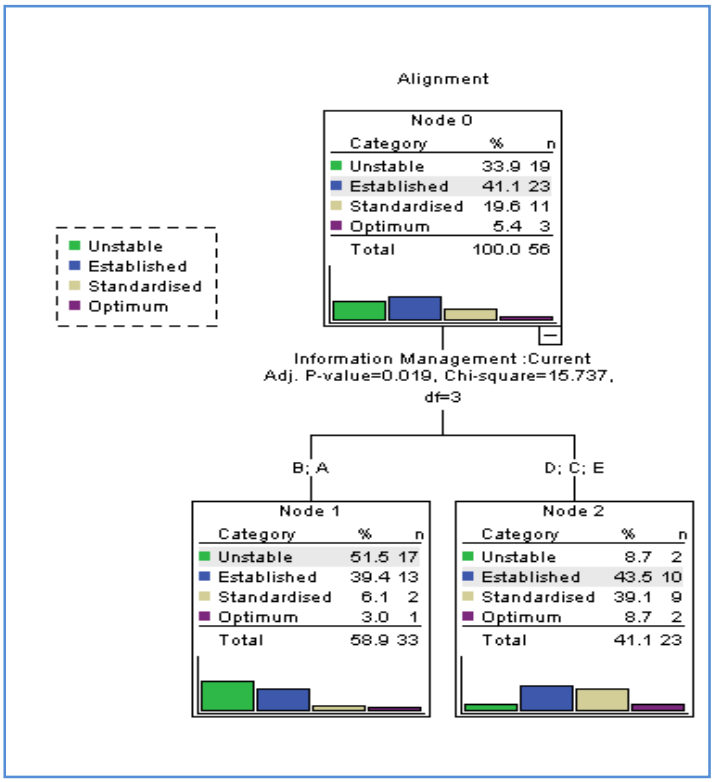
CHAID analysis was done regarding the lack of alignment between IT and business. The analysis revealed that the subgroup with the highest proportion of "*unstable*" alignment (51.5%) was the one with respondents who viewed the future with regard to information management as characterised by "d*ata metrics which are in isolated pockets and are ill-defined*" and "d*efined and consistent information policies and measurement criteria*" This probability was much higher than that of the overall sample (33.9%).

In figure 40 the top node (Node 0) represents the entire sample (containing 56 cases) and is known as the root node. The figure lists the different categories of

the variable a*lignment* and the number and percentage of cases in each category. This dataset had 19 cases which were coded as having an "unstable" a*lignment*, which accounted for 33.9% of the entire sample, "e*stablished*" had 23 cases (41.1%), "s*tandardised*" had 11 cases (19.6%) and 3 cases (5.4%) on "o*ptimum"*.

Of all the independent variables used in this analysis t*he future with regard to information management* was the best predictor for determining *alignment*. As a result, the sample was split into two sub groups namely, *A* and *B* on one side and *C*, *D* and *E* on the other side. Respondents who felt that the future with regard to information management would be a case of "*data metrics which are in isolated pockets and are ill-defined*" and those who were of the opinion that it would be "d*efined and consistent information policies and measurement criteria*" are indicated on the left of the diagram. Respondents who felt that the future with regard to Information management would be characterised by "a*ppropriate data sharing and use*", *"integrated data and metrics across the business*" and those that felt that it would be characterised by "*intelligent decision making/routines; experimental benchmarking*" are indicated on the right. This accounted for approximately a 59-41 split of the dataset.

FIGURE 40: ALL BANKS CHAID ANALYSIS: ALIGNMENT



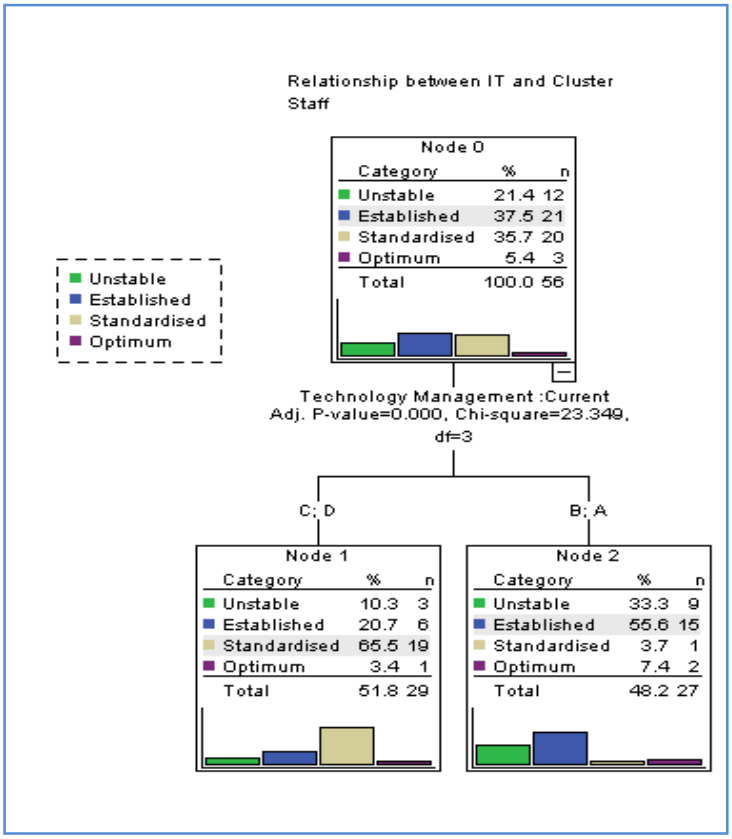
CHAID analysis was also done on the relationship between IT and the business staff. The analysis revealed that the subgroup, on the right, with the highest proportion of "*unstable*" technology management (33.3%) was the one with respondents who felt that the current situation with regard to technology management was characterised by "*a lack of required automation for appropriate tasks and functions*" and "*consistent, co-ordinated use with complete, related integration*"

In figure 41 the top node (Node 0) represents the entire sample (containing 56 cases) and is known as the root node. The figure lists the different categories of the variable r*elationship between IT and cluster staff* and the number and percentage of cases in each category. This dataset had 12 cases which

indicated an "*unstable*" relationship between IT and cluster staff, which accounted for 21.4% of the entire sample, "*established*" had 21 cases (37.5%), "*standardised*" had 20 cases (35.7%) and 3 cases (5.4%) on "*optimum*".

The *current situation with regard to technology management* was used as the dependent variable. As a result, the sample was split into two; namely *C* and *D* on the left side and *A* and *B* on the right side. Respondents who felt that the current situation with regard to technology management was characterised by "*automation of appropriate tasks and functions with some co-ordinated use*" and "*full automation and co-ordinated use with partial, related integration*" on the left and those who felt that the current situation with regard to technology management was characterised by "*a lack of required automation for appropriate tasks and functions*", and "*consistent, co-ordinated use with complete, related integration*" on the right. This accounted for approximately a 52-48 split of the dataset.

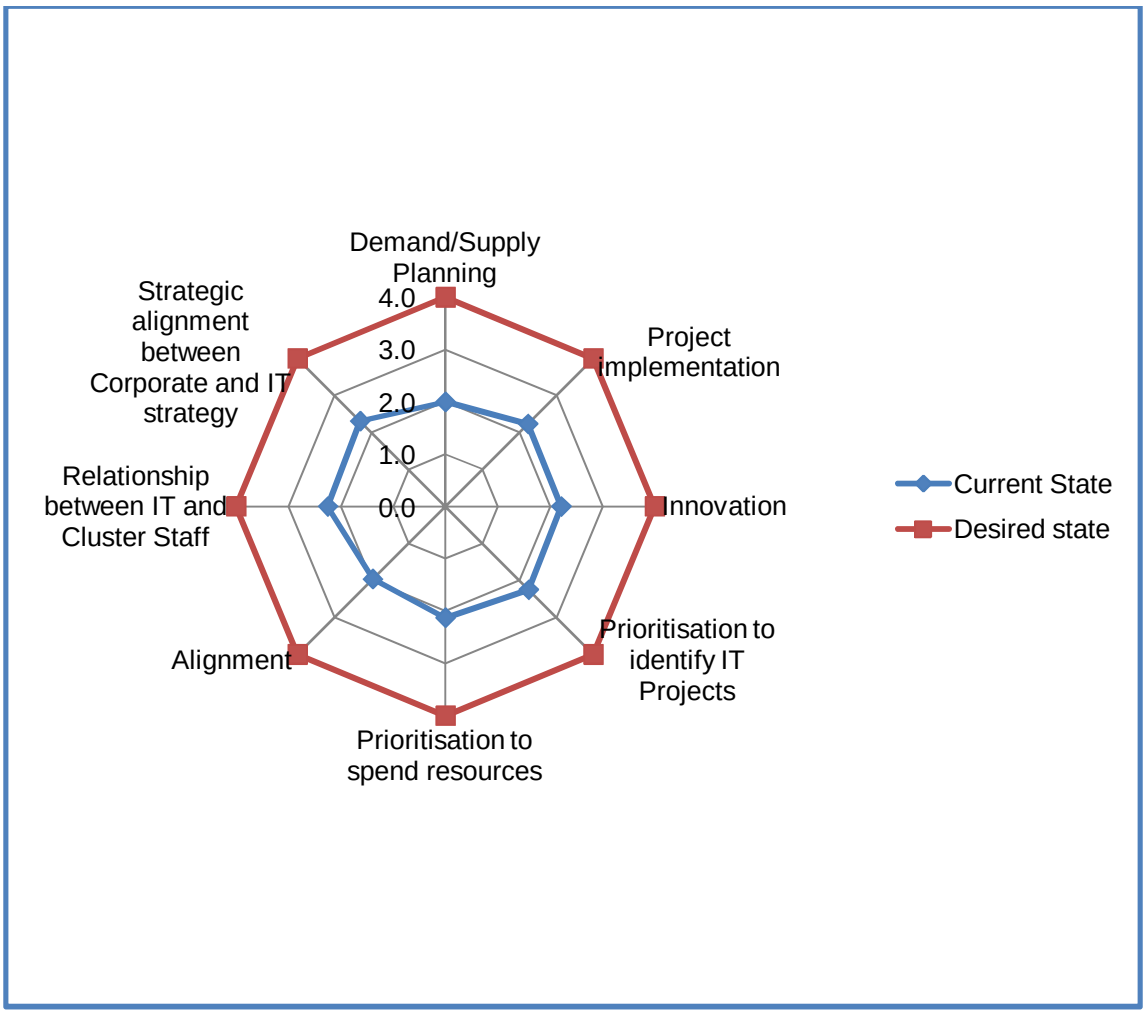
FIGURE 41: ALL BANKS CHAID ANALYSIS: RELATIONSHIP BETWEEN IT AND BUSINESS



From the above CHAID analysis and the collated data set an *established* (level two) environment is reflected where *effective processes are practiced and documented and where the level and procedures for managing new projects are established* (Hoque et al. , 2009).

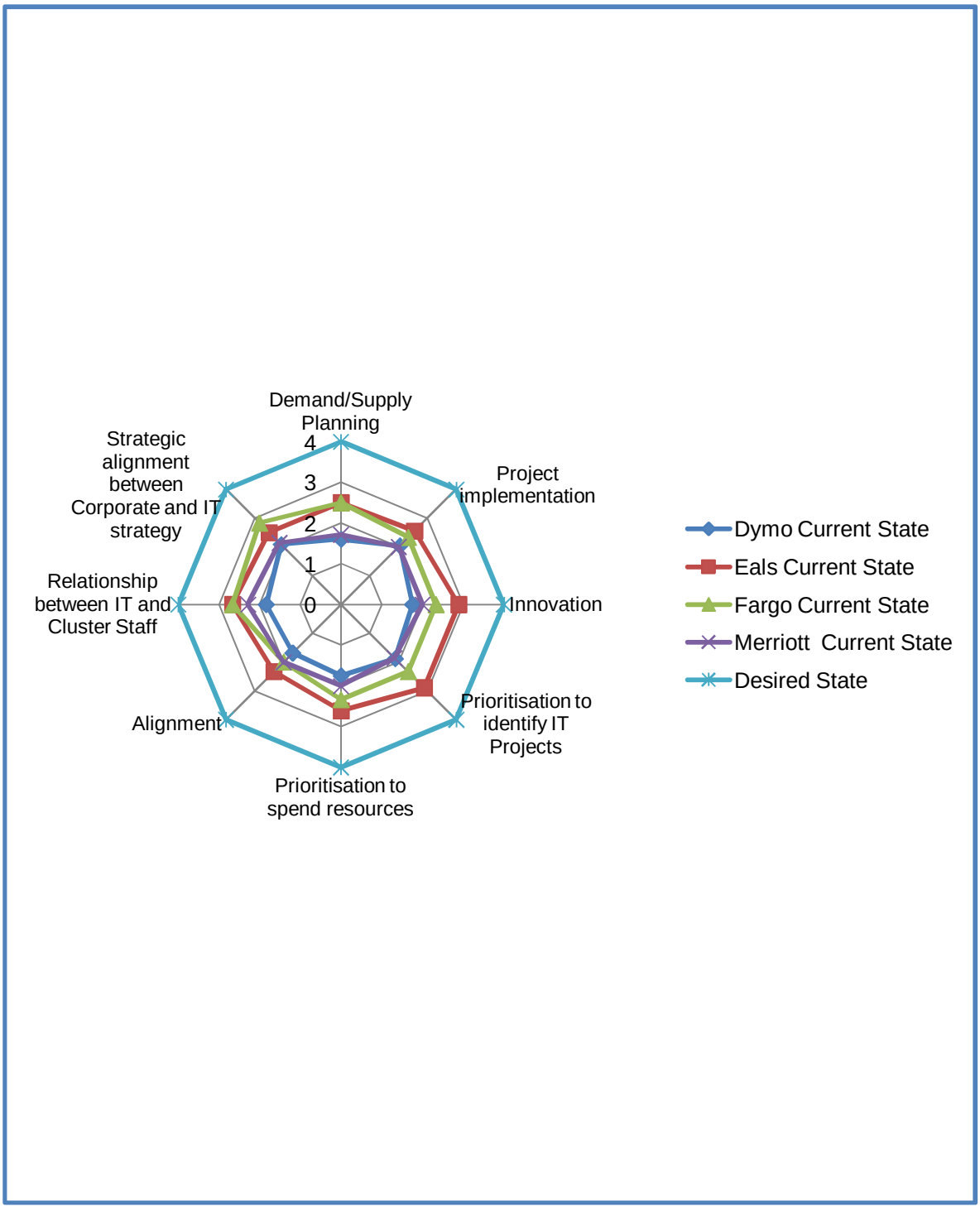
Results for the collated data set with regards to the first set of business-IT maturity factors are illustrated in Figure 42.

FIGURE 42: ALL BANKS SUMMARY OF CMM



The CMM "positions" of the respective clusters with regards to the first set of business-IT technology maturity factors are depicted in Figure 43. DYMO's maturity, in terms of CMM, was reflected as unstable. Both MERRIOTT and FARGO were assessed as stage two (e*stablished).* Lastly EALS reflected a standardised maturity and thus placed at *stage three* of the CMM model.

FIGURE 43: ALL BANKS COMPARISON OF CMM



5.5.2 BUSINESS PERFORMANCE

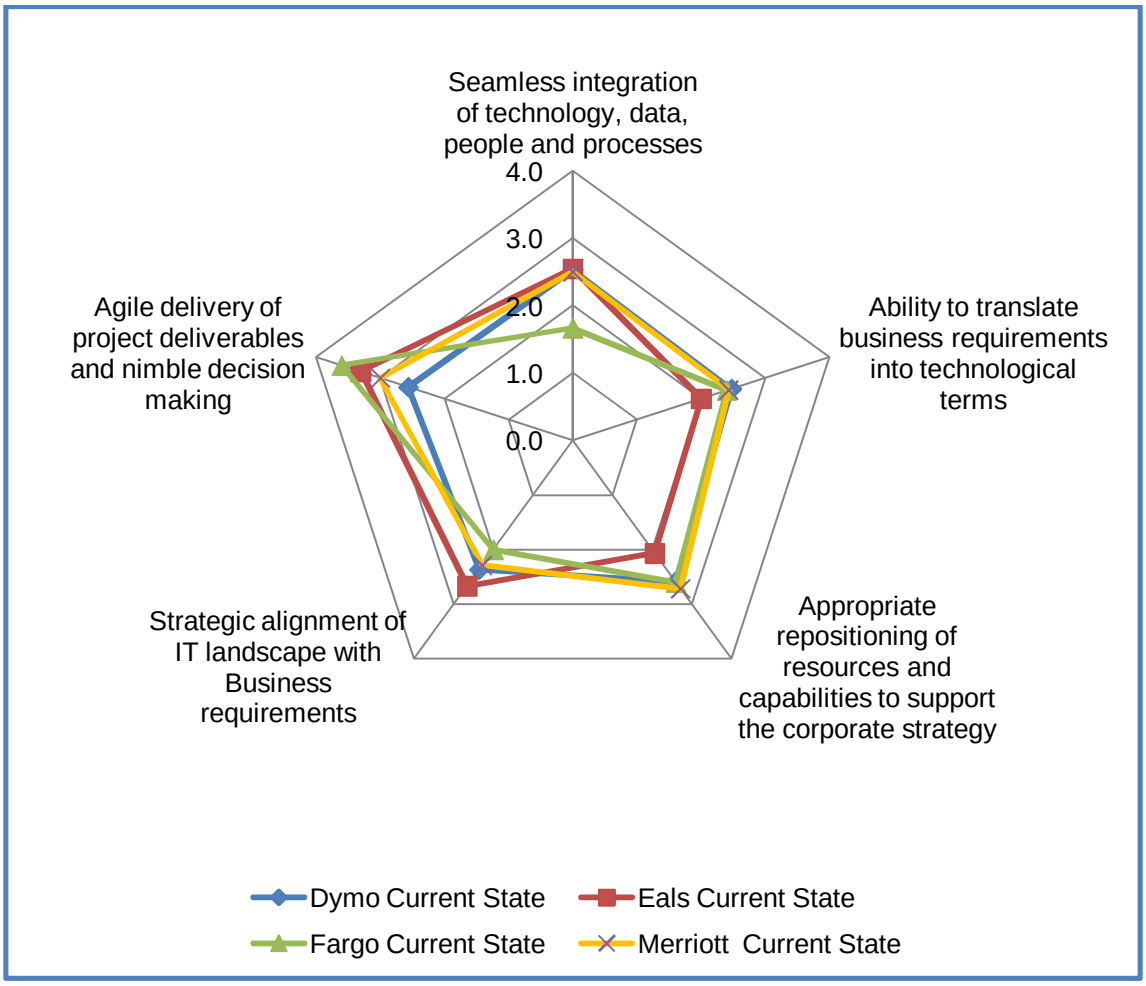
In both the current and desired states the following factors were consistently ranked most critical with regards to business performance:

- Seamless integration of technology, data, people and processes.
- Ability to translate business requirements into technological terms.

This is relevant in that both the current and desired states of business performance, the agile delivery of project deliverables and nimble decision making was ranked as least critical. Agility was integral to both above pointers and crucial to attain full business-IT convergence (Merlyn, 2011).

The average ranking of the current business performance of all four clusters is illustrated in the below radar chart. The closer the average ranking is to the centre of the chart the **higher** the ranking and the further it is from centre the **lower** the ranking.

FIGURE 44: ALL BANKS COMPARISON OF BUSINESS PERFORMANCE



This concludes the Results chapter. The results of the four clusters will be reviewed and recommendations made in Chapter 6.

CHAPTER 6 – DISCUSSION OF RESULTS

The discussion of the findings is presented within the following themes:

- Business-IT maturity in terms of the Capability Maturity Model (CMM)
- Business-IT maturity in terms of BTM (Business-Technology Maturity Model).

6.1 BUSINESS-IT MATURITY IN TERMS OF CMM

6.2.1 DYMO

In terms of the CMM, the results implied that most of the respondents did not see the cluster's maturity as beyond *stage one* of the model (with stage one correlating to *Unstable* – see 4.4.1). This tied into the responses which indicated that the cluster's current priority was survival and integration (see Figure 8). An interesting insight gained was that only 28 percent of respondents indicated that customers were priority.

Furthermore the majority of respondents viewed the following business-IT convergence factors as unstable:

- *Demand- and supply planning where business and IT management achieved consensus on where the organisation is going and what IT can do to help* (56%).
- *Project implementation where IT enabled Business to develop strategic and organisational flexibility* (40%).

- *Innovation provided a way to feed business opportunities made possible by IT onto business strategic and tactical planning* (56%).
- *Prioritisation helped management identify the IT projects that strongly supported strategic intent, ranking them by future business impact* (44%).
- *Prioritisation helped management to spend resources in the tight places, for the right reasons, with Business and Management agreeing on the right decisions* (48%).
- *Alignment where Business and IT management decide together which existing IT initiatives should get resources* (48%).

Based on the above data the cluster did not reflect a stable environment and lacked sound management practices while a reactive approach appeared to undermine the benefits of good practice (see *4.4*).

6.2.2 EALS

In terms of the CMM, most of the respondents viewed the cluster's maturity as *stage three* of the model (*Standardised*).The following business-IT convergence factors were voted as standardised:

- *Project implementation where IT enabled Business to develop strategic and organisational flexibility and the capability to respond to customer demands on time* (50%).
- *Innovation provided a way to feed business opportunities made possible by IT onto business strategic and tactical planning* (38.9%).

- *Relationship between IT and cluster staff is on standardised level* (55.6%).

Based on the above responses the cluster reflected a *standardised* environment where processes are documented and integrated into a coherent whole and the process capability is based on an organisation-wide understanding of the activities, roles and responsibilities within a well-defined process (see *4.4.1 – Standardised level* as per CMM).

6.2.3 FARGO

As in EALS' case, most of the respondents viewed the cluster's maturity, in terms of CMM, as stage three (*Standardised*).

The majority of respondents viewed the following business-IT convergence factors as standardised:

- Project implementation where IT enabled Business to develop strategic and organisational flexibility and the capability to respond to customer demands on time (50%).
- The relationship between IT and cluster staff (67%).
- The level of strategic alignment between corporate and IT strategy (50%).

The cluster reflected a standardised environment where processes are documented and integrated into a coherent whole and the process capability is

based on an organisation-wide understanding of the activities, roles and responsibilities within a well-defined process.

6.2.4 MERRIOTT

The cluster's maturity, in terms of CMM, was assessed as stage two (*Established)* - the majority of respondents voted the following business-IT convergence factors on level two:

- Project implementation where IT enabled Business to develop strategic and organisational flexibility and the capability to respond to customer demands on time (100%).
- Innovation as a way to feed business opportunities made possible by IT onto business-strategic planning and tactical planning (57%).
- The relationship between IT and cluster staff (71%).
- The level of strategic alignment between corporate and IT strategy (50%).

Merriott thus reflected an established environment where *effective processes are practiced and documented and where the level and procedures for managing new projects are established* (see *4.4*).

6.2 BUSINESS-IT MATURITY IN TERMS OF BTM

6.2.1 DYMO

Based on the Business-Technology Maturity Model (see 2.7), taking the current state of business performance in consideration, Dymo was assessed as a level

two organisation exhibiting limited capabilities; attempting to assemble information for major decisions, and consult the technology function on decisions with obvious business-technology implications (Hoque et al., 2009). The table below reflects the means per maturity component (A=1; B=2: C=3; D=4 and E=5).

TABLE 22: **DYMO** - BUSINESS-TECHNOLOGY MATURITY STATISTICS

	N	Minimum	Maximum	Mean	Std. Deviation
Process Management :**Current**	25	2	5	2.56	.87
Process Management :Future	25	2	5	4.28	.79
Organisation Management :**Current**	25	1	3	2.16	.89
Organisation Management :Future	25	1	5	3.88	1.20
Information Management :**Current**	25	1	5	1.84	1.14
Information Management :Future	25	2	5	3.92	.75
Technology Management :**Current**	25	1	3	2.08	.86
Technology Management :Future	25	3	5	4.48	.82

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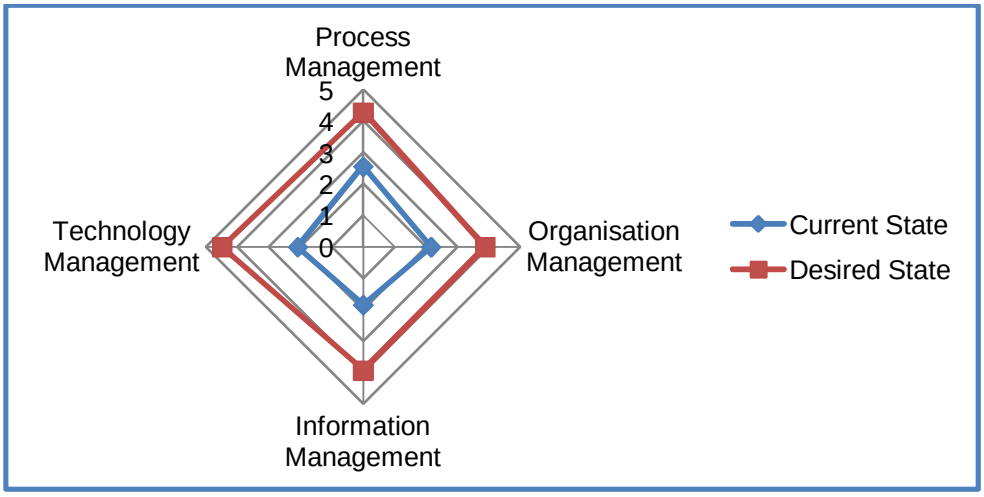
Figure 45 depicts the four pillars of Dymo's business-technology maturity graphically.

FIGURE 45: **DYMO** BUSINESS-TECHNOLOGY MATURITY



6.2.2 EALS

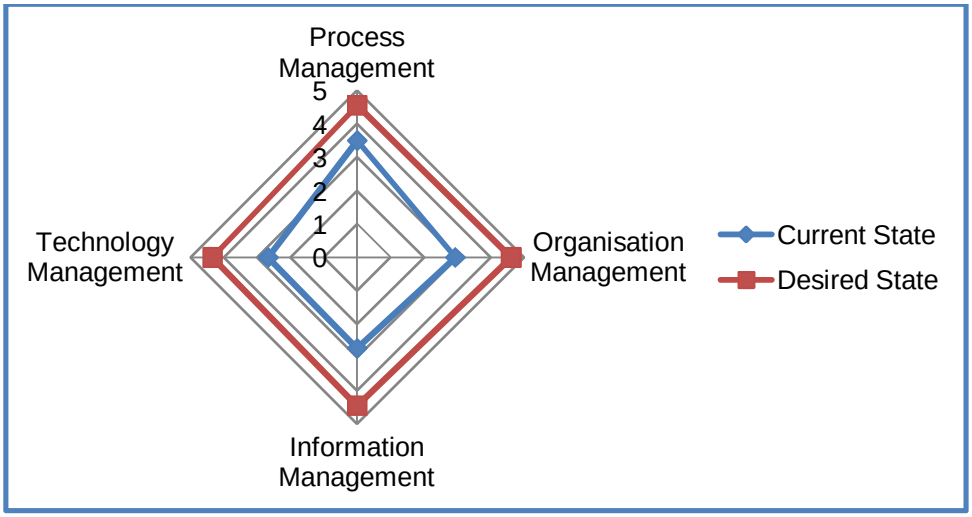
Taking the current business performance state in consideration, Eals was assessed as a level three organisation which is functional with respect to the BTM model capabilities but far from full convergence. See table 23 below, reflecting the means per maturity component in column five (A=1; B=2: C=3; D=4 and E=5).

TABLE 23: **EALS** - BUSINESS-TECHNOLOGY MATURITY STATISTICS

	N	Minimum	Maximum	Mean	Std. Deviation
Process Management :**Current**	18	2	5	3.50	1.04
Process Management :Future	18	3	5	4.56	0.61
Organisation Management :**Current**	18	2	5	2.89	1.02
Organisation Management :Future	18	3	5	4.61	0.60
Information Management :**Current**	18	1	4	2.72	0.89
Information Management :Future	18	4	5	4.44	0.51
Technology Management :**Current**	18	1	4	2.67	0.68
Technology Management :Future	18	3	5	4.33	0.68

Figure 46 depicts the four pillars of the cluster's business-technological maturity graphically.

FIGURE 46: **EALS** BUSINESS-TECHNOLOGY MATURITY



6.2.3 FARGO

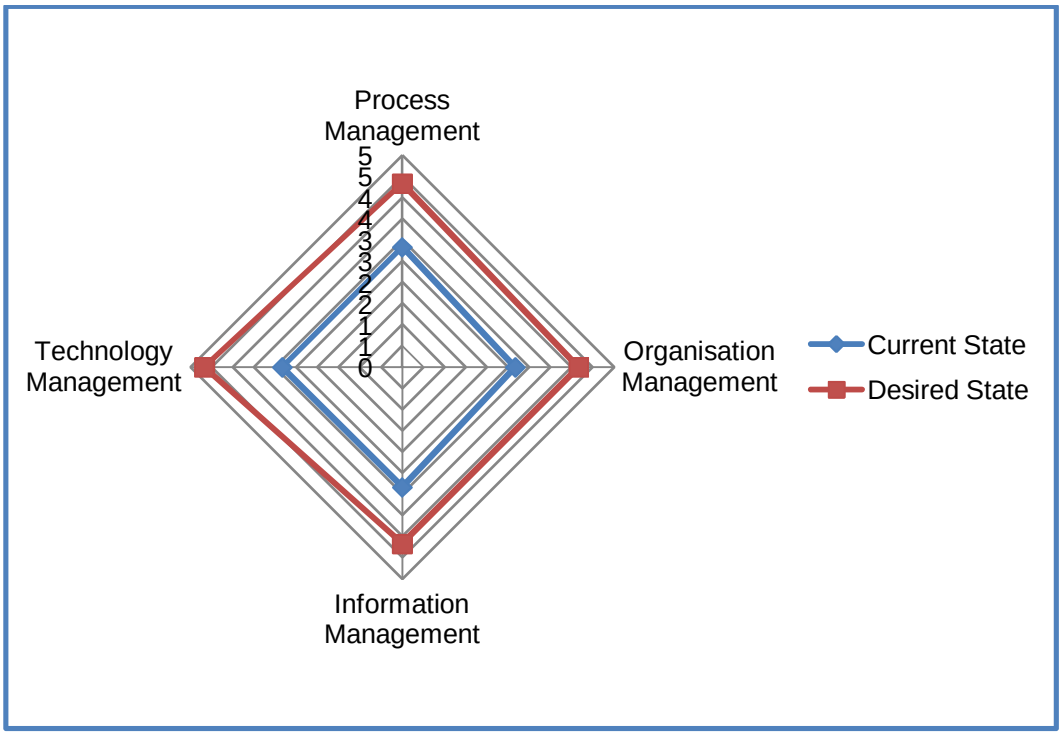
Fargo was assessed as a level four organisation which, according to Hoque et al. (2009), has the business-IT maturity capabilities implemented but has not yet achieved *full* convergence. See below table reflecting the means per maturity component in column five (A=1; B=2: C=3; D=4 and E=5).

TABLE 24: **FARGO** - BUSINESS-TECHNOLOGY MATURITY STATISTICS

	N	Minimum	Maximum	Mean	Std. Deviation
Process Management :**Current**	6	2	3	3.83	0.40
Process Management :Future	6	3	5	4.33	0.81
Organisation Management :**Current**	6	1	4	3.67	1.36
Organisation Management :Future	6	2	5	4.17	1.16
Information Management :**Current**	6	1	4	2.83	1.47
Information Management :Future	6	2	5	4.17	1.16
Technology Management :**Current**	6	2	4	2.83	0.75
Technology Management :Future	6	4	5	4.67	0.51

Figure 47 depicts the four pillars of Fargo's business-IT maturity.

FIGURE 47: **FARGO** BUSINESS-TECHNOLOGY MATURITY



6.2.4 MERRIOTT

Merriott was assessed as a level three organisation which implies it was functional with regards to the business-IT maturity capabilities (Hoque et al., 2009). See below table reflecting the means per maturity component.

TABLE 25: **MERRIOTT** - BUSINESS-TECHNOLOGY MATURITY STATISTICS

	N	Minimum	Maximum	Mean	Std. Deviation
Process Management :**Current**	7	2	5	3.29	0.95
Process Management :Future	7	3	5	4.29	0.75
Organisation Management :**Current**	7	1	5	3.14	1.46
Organisation Management :Future	7	2	5	4.00	1.00
Information Management :**Current**	7	1	4	2.00	1.15
Information Management :Future	7	4	5	4.71	0.48
Technology Management :**Current**	7	1	3	2.14	0.90
Technology Management :Future	7	4	5	4.57	0.53

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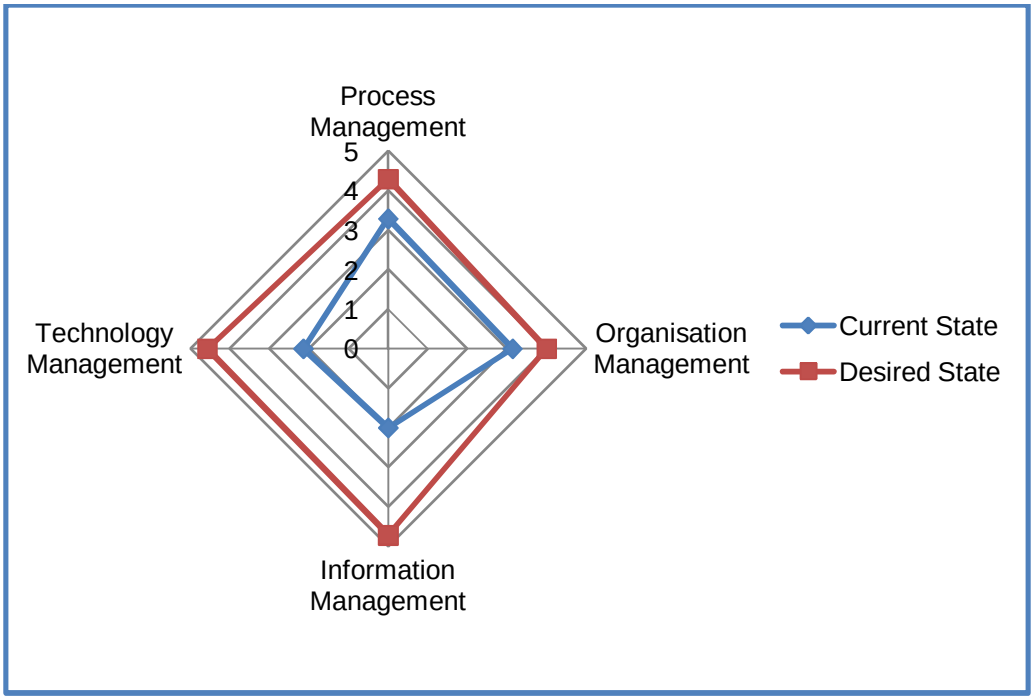
Figure 48 depicts the four pillars of Merriott's business-technological maturity graphically.

FIGURE 48: **MERRIOTT** BUSINESS-TECHNOLOGY MATURITY



The assessment of all four clusters in collated data format indicated the following:

- In terms of the CMM the business-IT maturity level was observed as level two ("e*stablished*") and thus only a level higher than level one ("*unstable*").
- If the business-IT maturity level is assessed in terms of the BTM, level three is attained which reflects being "*functional*" with respect to the mentioned business-IT maturity as per Hoque et al. (2009) and thus far removed from full business-IT convergence (level five).

6.3 REFLECTION ON RESEARCH QUESTION ONE

The research primarily set out to answer the following: What are the critical success factors for business-IT convergence? Congruent to the literature review undertaken in this research project (see Chapter 2), question 6 – 21 in the questionnaire assessed the critical success factors for business-IT convergence in the four clusters (See Appendix 1).

The questionnaire measured the following business-IT convergence factors as per the CMM and the Business-Technology maturity model (Benson et al., 2005; Hoque et al., 2009):

- Level of demand/supply planning
- Level of project implementation
- Level of innovation
- Level of prioritisation

- Level of alignment
- Level of relationship between IT and Business
- Level of strategic alignment between corporate and IT strategy
- Level of process management
- Level of organisation management
- Level of information management
- Level of technology management

It is important to note that, during the course of the research, it was not necessary to change the questionnaire. Findings related to the critical success factors pointed to business-IT convergence not being optimal in all cases. This is congruent with the literature review (Chapter two) which stated that for two decades, IT alignment (let alone business-IT convergence) has consistently appeared as a top concern for IT practitioners and company executives (Luftman et al., 2005).

6.4 REFLECTION ON RESEARCH QUESTION TWO

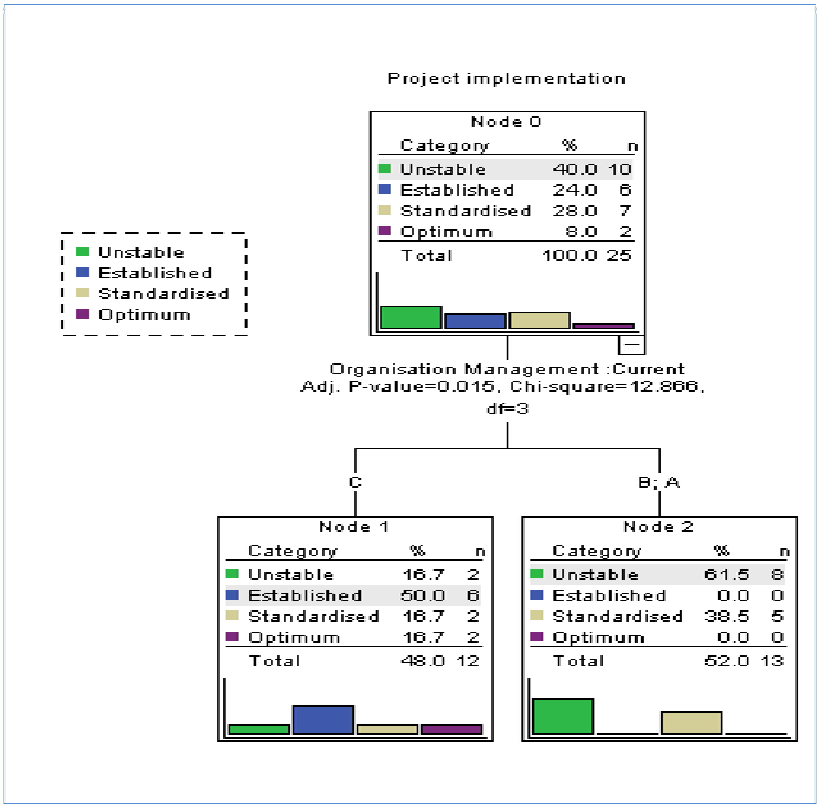
Research question two (*Is there a correlation between business-IT convergence and project success*?) was contained in question seven of the questionnaire (see Appendix 1). In accordance to the authors as quoted in the literature review, project implementation by IT should ideally enable Business to develop strategic and organisational flexibility and the capability to respond to customer demands in time (McLaughlin, 2008; Girma & Kneller, 2005).

The DYMO data set allowed for CHAID analysis of this question. The lack of business-IT convergence was reflected by the majority of DYMO respondents (48%) as a major problem and was congruent to the CHAID analysis presented below, which indicated that project implementation, as one of the critical success factors for business-IT convergence, was rated as unstable (40%). The correlation between business-IT convergence and project implementation was therefore found to be positive.

In contrast to DYMO, the lack of business-IT convergence was reflected by the minority of FARGO respondents (only 16.7%) as a major problem. Furthermore project implementation was rated as "standardised" by FARGO respondents which iterates the positive correlation between business-IT convergence and project success.

Each box in the diagram below represents a group or subgroup, and is called a Node. The top node (Node 0) represents the entire sample (containing 25 cases) and is known as the Root Node. The diagram lists the different categories of the variable "project implementation' and the number and percentage of cases in each category. The dataset had ten cases which were coded as having an "unstable" Project Implementation by IT, which formed 40% of the entire sample, "e*stablished*" had six cases (24%), "s*tandardised*" had seven cases (28%) and two cases (8%) voted "o*ptimum"*. Of all the independent variables used in this analysis, the current situation with regard to organisation management was the best predictor for determining project implementation. As a result, the sample was split into A and B on one side and C on the other side.

FIGURE 49: DYMO: CHAID ANALYSIS OF PROJECT IMPLEMENTATION



Respondents who felt that the current situation with regard to organisation management pointed to “some existing structures, with related roles executing per defined responsibilities and decision rights” are indicated in the group on the left of the diagram. Respondents who voted for “missing structures and unidentified or unclear roles/responsibilities/decision rights” are indicated in the middle and those who voted for “identified and defined structures and related roles/responsibilities” are indicated on the right. This was roughly a 50-50 split of the dataset (48% and 52% respectively).

In the tree diagram presented above, the two child nodes (1 and 2) were also terminal nodes since they were not split further. The analysis revealed that the subgroup with the highest proportion of “unstable” project implementation was the one with respondents who voted for “missing structures and unidentified or

unclear roles/responsibilities/decision rights" and those who voted for "identified and defined structures and related roles/responsibilities" (A and B). This subgroup was indicated as "*unstable*" and the probability was much higher than that of the overall sample (40%).

6.5REFLECTION ON RESEARCH QUESTION THREE

A possible link between business-IT convergence and agility, as per the literature review (Pennings & Puranam, 2001; Hacklin, 2004), forms the basis of research question three (Is there a correlation between business-IT convergence and agility?). This research question was contained in questions 22 and 23 of the questionnaire (See Appendix 1). Respondents were required to rank the "*agile delivery of project deliverables and nimble decision making*" from most critical to least critical.

The collated data of the four clusters revealed that, the majority of respondents (48%) indicated a lack of business-IT convergence as a major problem. Congruent to this result, the majority of respondents indicated *agile delivery of project deliverables and nimble decision making* as *least critical* in both the current and desired states (46%:current state and 33%: desired state). This finding points to a positive correlation between business-IT convergence and agility.

6.6 REFLECTION ON RESEARCH QUESTION FOUR

Research question four (*Why are central role players unaware of the central success factors in favour of achieving business-IT convergence*?) was

contained in questions 15, 17, 19 and 21 of the questionnaire (see Appendix 1). Respondents were required to select (from multiple statements) their *desired* state of process-, organisation, information- and technology management. These statements were based on the Business-technology maturity model (Hoque et al., 2004). All *E* statements were congruent to level 5 which depicts full convergence (Hoque et al. 2004).

The collated results of the business performance of all four clusters are reflected in table 26.

The following equating was performed in an effort to calculate the means:

A = 1; B=2; C=3; D=4; E=5.

TABLE 26: ALL BANKS - DESIRED BUSINESS PERFORMANCE

	N	Minimum	Maximum	Mean	Std. Deviation
Process Management :Future	56	2	5	4.38	0.728
Organisation Management :Future	56	1	5	4.16	1.041
Information Management :Future	56	2	5	4.21	0.756
Technology Management :Future	56	3	5	4.46	0.713

If the means of table 26 are reviewed, level five (full business-IT convergence) was not achieved by any of the four clusters. This could possibly point to their ignorance of the critical success factors for business-IT convergence which could in turn be due to unawareness thereof.

The following section will provide suggestions to address concerns identified in the findings and discussion of the research results. The recommendations are formulated to address the research objective, which is to assess the critical success factors for business-IT convergence within the four clusters. Furthermore the recommendations include lessons learnt and best practices

from organisations as derived from the Literature Review section in Chapter two.

6.7 RECCOMENDATIONS

6.7.1 ENHANCED AWARENESS OF BTM

The findings suggest that awareness of the BTM model is promoted within the four clusters as to be in a position to strive mindfully towards attaining full business-IT convergence. Of the five levels of maturity, the top two levels (level four, the threshold of synchronisation and level five, full convergence) of the Baseline/BTM organisations enjoyed an advantage in positive performance results as compared with their industry groups (Hoque et al., 2009). In addition, these organisations clearly showed that even when performing below industry averages, they were significantly better off than less-converged organisations in that these organisations had efficient and optimised business-technology management and their convergence contributed to growth and profitability (Hoque et al., 2009).

6.7.2 BUSINESS LED IT SOLUTIONS WITH AN ENABLING INFRASTRUCTURE

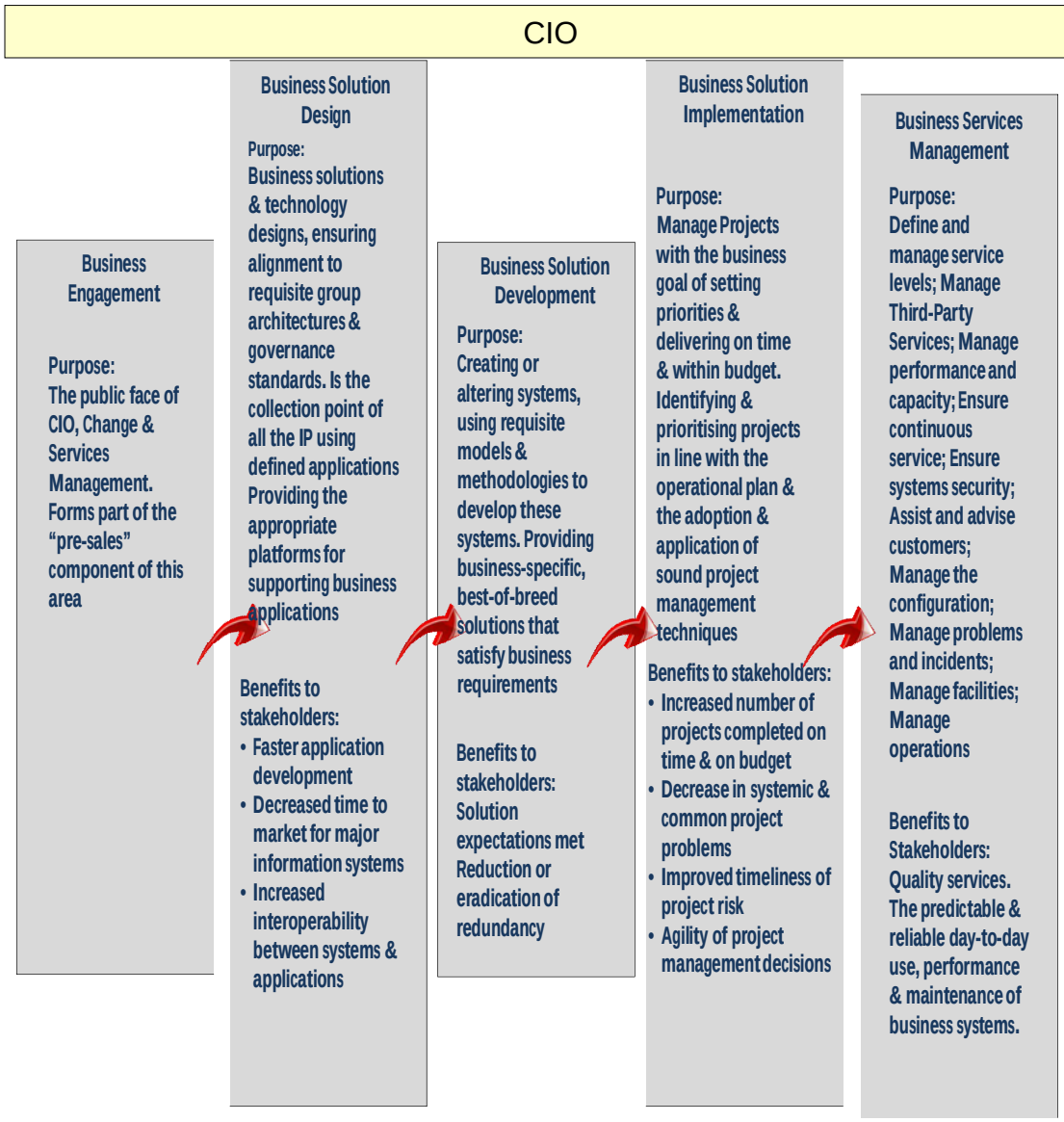
The Baseline/BTM 500 study indicated that as an organisation's maturity in terms of business-IT convergence extends above level three (Hoque et al., 2009) the resulting synchronisation of business strategy and technology delivery makes the company more agile and adaptable. For such organisations,

changes in the business environment – such as the recent global economic downturn, rapidly drive appropriate adjustments to strategy and its execution, thereby limiting the damage of falling revenue and share prices, while at the same time exhibiting the superior performance needed to position an organisation for the growth cycle that historically follows a downturn.

6.7.3 DECENTRALISED GOVERNANCE

In accordance to King III, IT governance should be embedded within the performance and sustainability objectives of the company (King, 2009). Dennis and Cohen (2010) argue that the CIO plays a crucial role in this respect and that the effects of the CIO's organisational position on the business value of IT were found to be mediated by CIO competence. Dennis and Cohen (2010) further concluded that CIO business, interpersonal/political and technology management competence were significant determinants of an organisation's ability to extract value from their IT investments. In order to promote congruent delivery and to identify opportunities to improve the performance and sustainability of the company through decentralised IT governance the following architecture is recommended (Cohen & Dennis, 2010):

FIGURE 50: RECOMMENDED ARCHITECTURE

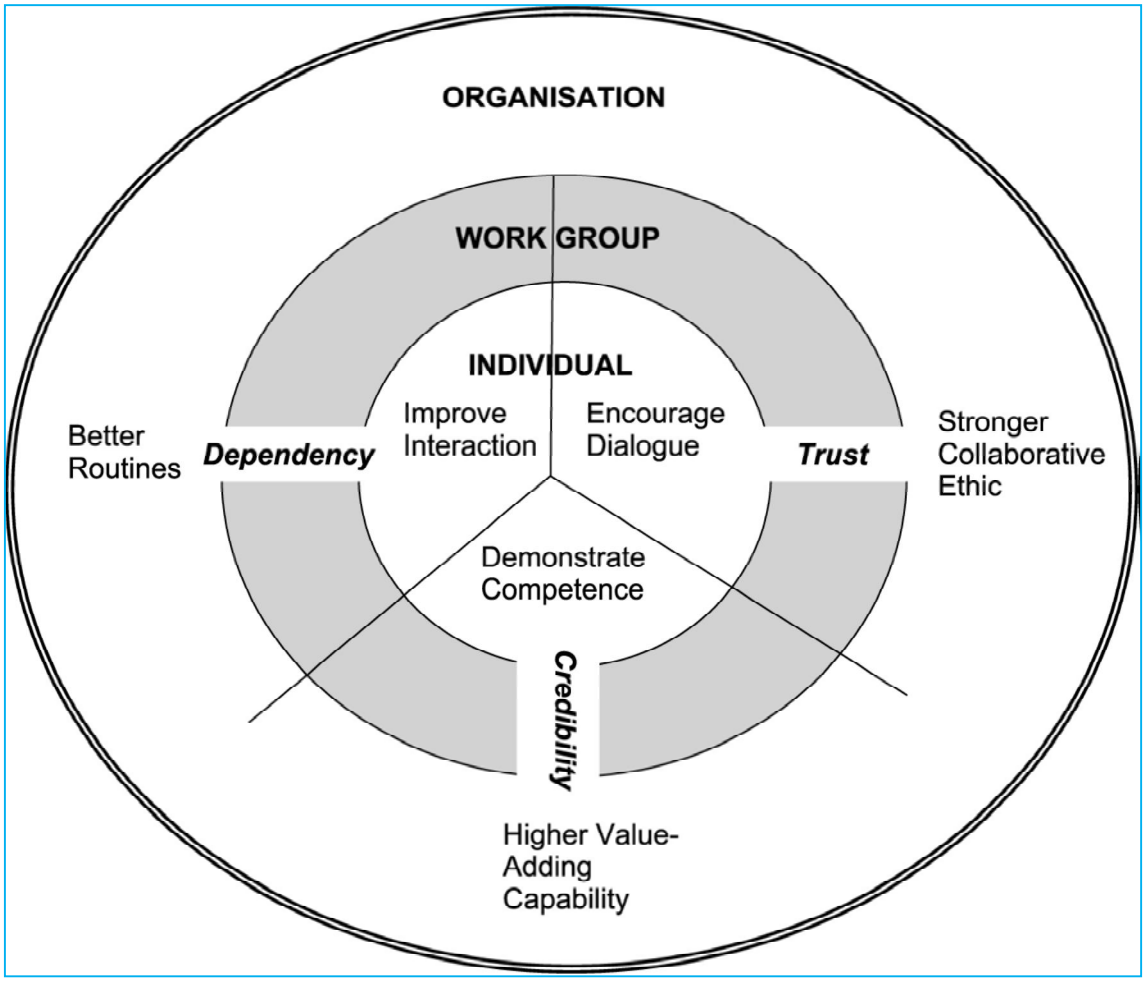


6.7.4 IMPROVED ORGANISATIONAL ROUTINES

A well-structured and transparent set of processes for IT services identification, prioritisation and evaluation will help reduce doubt and uncertainties that cause

disappointment and dissatisfaction (Day, 2007).To achieve this, the organisation must ensure that IT professionals have full access to the resources necessary to fulfil service objectives and be appropriately empowered to make decisions that will directly affect the business. The genuine sharing of decision-making powers, common responsibilities and clear accountabilities will strengthen a feeling of partnership.

FIGURE 51: DEVELOPING THE BUSINESS-IT PARTNERSHIP



6.7.5 A STRONGER COLLABORATIVE ETHIC

The physical separation of IT from other parts of the business inhibits accessing the skills and experience of other groups forming the corporate social network.

Continuous dialogue between IT and business is crucial as to ensure IT understands the organisational and business context. A common language is needed for the parties in a working relationship and, in this respect, it is also necessary to develop the knowledge transfer competencies of IT staff (Day, 2009). Leadership plays a key role here and need to articulate those behaviours they wish IT professionals to exhibit. Day (2009) furthermore argues that it is at the operational level that ignorance and wilful misunderstandings are more likely to originate and where there is an antipathy towards IT professionals and intolerance of mistakes that would be acceptable from others. So the aphorism is not so much for IT to be “user friendly” but for IT to have “friendly users”.

6.7.6 ENHANCED VALUE ADDING CAPABILITY

Inter-departmental co-location can help to build a perception of value as well as facilitate sharing of knowledge of the possible benefits provided by an IT service. However, the advantages of IT systems are not always visible and because of this, the contribution of IT professional to the business can be obscured. In order to gain credibility, IT professionals need to continuously scan their internal market, asking their customers what they would like to know and then feeding back the knowledge to explain not only “what” has been done but also “why” things have been done in a particular way.

CHAPTER 7 – CONCLUSION

From the research undertaken in this project the following conclusions were made:

- Progressive IT- and business leadership would need to work at repositioning the IT organisation as a business enabler where IT capabilities are placed within the Business environment (Merlyn, 2011). Business-IT convergence should be a joint responsibility between business and IT executives. From the research it can be concluded that there is a need for top management to *mandate* a planning process that ensures business-IT convergence. The actions of IT leadership alone are not sufficient to achieve convergence.

- With regards to information management (and in particular knowledge sharing) that was assessed as a burning point within all four clusters, it seems there is a need to educate IT professionals to be more business-oriented. This is congruent to the literature review (Chapter two) in which the importance of on-going communication between IT and business people at all levels cannot be over-emphasised (Bassellier & Benbasat, 2004).

- The South African banking sector would need to invest more on innovation and in particular the part played by pro-active relationship management in supporting creativity and innovation - rather than being

absorbed in “milking the current cash cow and meeting short-term obligations to shareholders” (Annesley, 2006). The historical dysfunctional relationship between business and IT has a negative impact on innovation so much so that IT professionals are often not recognised as knowledge agents of organisations (Day, 2009).

- This study has furthermore found that, in the case of the four clusters that were assessed, business-IT convergence is far from optimal due to a lack of the following factors:

    - Demand/supply planning.
    - Innovation.
    - Relationship between IT and Business.
    - Strategic alignment between corporate and IT strategy.
    - Project implementation where IT enables Business to develop strategic and organisational flexibility and the capability to respond to customer demands on time.
    - Prioritisation where management identifies the IT projects that strongly support strategic intent, ranking them by future business impact.
    - Alignment where Business and IT management decide together which existing IT initiatives would get resources, rather than assuming that everything currently in operation is critical for the business and should be supported.

- Lastly, in assessing the critical success factors for business-IT convergence, it was clear that these clusters would need to pro-actively plan for the new economy by merging its corporate and IT strategies.

7.1 LIMITATIONS OF STUDY

This research report was based on the opinions of limited resources within the four banking clusters. The quantitative method that was followed was possibly not the most accurate method of assessing the critical success factors for business-IT convergence, but was regarded as the most viable option. The researcher attempted to mitigate this by using a structured questionnaire and adpoting recognised analytical models (the CMM and the BTM model) to relate the responses to the theory.

Furthermore the sample size of each cluster was limited to 30 which may not have been truly representative of the population. However, the distribution of role players across the four clusters was diverse and representative of the central workforce. Given more time and resources, a possible solution would have been to analyse a larger, random sample.

Lastly the structured questionnaire may have introduced bias, as the respondents may have had additional information which was not captured. This was limited by providing the respondents with various choices for each question covering the full range of possible answers.

7.2 RECOMMENDATIONS FOR FURTHER RESEARCH

In the realm of IT research, studies of interactions between individuals tend to be limited to the relations maintained by project- or programme managers. In a marketing sense, the IT value proposition has historically been framed in terms of its transactional utility and not its relational worth. There is a need to encompass the interaction of IT operations resources and business resources (Day, 2007). Therefore further research is recommended to develop a framework that will provide a comprehensive and holistic view of the relationship phenomenon, with a specific focus on the role of the IT professional within the organisation.

Further research is also recommended to determine the following:

- How the business value of IT can be increased using social tools to transform the ways business-and IT communities interact, share and collaborate.
- How social networking and collaboration capabilities can be used to increase organisational clarity and drive higher engagement amongst business-and IT professionals.
- How the knowledge transfer process can be improved between business- and IT professionals.
- How the information stored within the realms of the business-IT convergence reality can be used to generate wealth.
- How the business value gained by business-IT convergence could be measured.

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APPENDIX 1 – BLANK QUESTIONNAIRE

This appendix contains a sample of a blank questionnaire.

Dear Respondent,

Thank you for agreeing to participate in my research project by completing below survey. The aim of my research project is to explore the critical success factors for business-IT convergence in the South African banking sector. This is based on the premise that business-IT convergence is increasingly becoming a source for competitive advantage.

Your participation is voluntarily and you can withdraw at any time without penalty.

Please be ensured that confidentiality and anonymity will be maintained throughout and after the course of the research in that no names will be recorded and that data will be stored without identifiers. Organisational identity will be protected by using the following indicators – each bank will be identified by an alias:
Bank 1: Dymo
Bank 2: Eals
Bank 3: Fargo
Bank 4: Merriott

If you have any concerns, please contact me or my supervisor. Our details are provided below.

Researcher name: Maryna Theron	Research Supervisor name: Roy Page-Shipp
Email: maryna.theron@yahoo.com	Email: roy@pageshipp.co.za
Phone: 082 494 5170	Phone: 082 447 6289

MBA Research Questionnaire

This questionnaire was designed to assess the views of a sample of Group Finance staff members on the topic of business-IT convergence. Your individual views will be kept totally confidential.

INSTRUCTIONS	***Answer***
Please read each statement before choosing the most appropriate answer. Please record your choice in the blue column on the right hand side. All completed questionnaires may be returned via email or may be printed out and returned to me in person. The questionnaire contains 23 questions which should take you approximately 10 minutes to complete. There are 3 types of questions with the possible answer types indicated in Red (only one answer per question). Multiple choice questions which will require a choice of either A, B, C, D, or E. Ranking questions, requires ranking choices 1 = most critical, 2 = critical, 3 = less critical, 4 = least critical. Maturity questions: U = Unstable, E = Established, S = Standardised, O = Optimum. *Abbreviations: IT = Information Technology, IS = Information Systems, Mgt = Management*	
Number of Years service within Cluster	
Designation or Job Title: e.g. Profitability Analyst	
Grade e.g. PP	
Department	

Cluster's Strategic Position

Below multiple choice questions require a choice of either A, B, C, D, or E.	
1 Cluster Mgt's biggest challenge is: **A**:strategic **B**: process mgt **C**: information mgt **D**: organisation mgt **E**: technology mgt.	

2 Cluster's greatest asset is its **A**: people **B**: processes **C**: information **D**: technology **E**:ability to innovate	
3 Cluster's biggest problem is its lack of: **A**: business-IT convergence **B**: information mgt. **C**: organisation mgt. **D**: prioritization **E**: IT spending	
4 Which of the following best describe Cluster: **A**: unstable **B**: efficient **C**: integrated **D**: outcome driven **E**: flexible	
5 What is Cluster's current priority: **A**: survival **B**: processes **C**: integration **D**: knowledge **E**: customers	
Cluster's Business-IT Maturity Level	
Below maturity questions require a choice of either U = Unstable E = Established, S = Standardised, O = Optimum.	
6 **Demand/supply planning:** Business and ITMgt achieve consensus on where the organisation is going and what IT can do to help. **U E S O**	
7 **Project Implementation** by IT has enabled Business to develop strategic and organisational flexibility and the capability to respond to customer demands on time. **U E S O**	
8 **Innovation** provides a way to feed business opportunities made possible by IT onto business strategic and tactical planning. **U E S O**	
9 **Prioritisation** helps Mgt identify the IT projects that strongly support strategic intent, ranking them by future business impact. **U E S O**	
10 **Prioritisation** helps Mgt to spend resources in the right places, for the right reasons, with Business and IT Mgt agreeing on the decisions. **U E S O**	
11 **Alignment: B**usiness and IT Mgt decide together which existing IT initiatives should get resources, rather than assuming that everything currently in operation is critical for the business and should be supported. **U E S O**	
12 At what stage of development is the relationship between IT and Cluster staff **U E S O**	
13 How would you describe the level of strategic alignment between Corporate and IT strategy **U E S O**	
Below multiple choice questions require a choice of either A, B, C, D, or E. ***Choose a phrase to best complete the sentence in your opinion***	
14 The **current** situation with regard to Process management is characterised by A. an unstructured way of work with no process integration B. defining and documenting some core processes C. defining and documenting core processes with some integration between key process areas D. repeatable, predictable and consistent process execution, fully integrated across the business E. continuous process optimization, experimentation and innovation	
15 The **future** situation with regard to Process management should be characterised by: A. an unstructured way of work with no process integration B. defining and documenting some core processes C. defining and documenting core processes with some integration between key process areas D. repeatable, predictable and consistent process execution, fully integrated across the business E. continuous process optimization, experimentation and innovation	
16 The **current** situation with regard to Organisation management is characterised by A. missing structures and unidentified or unclear roles/responsibilities/decision rights; *ad-hoc* collaboration B. identified and defined structures and related roles/responsibilities C. some existing structures, with related roles executing per defined responsibilities and decision rights; sequential collaboration; COE (Centre of	

Excellence) or equivalent D. fully implemented structures with all roles executing to defined responsibilities; fully functioning COE E. evolving organisation structures, roles and decision rights; synchronous collaboration	
17 The **future** situation with regard to Organisation management should be characterised by A. missing structures and unidentified or unclear roles/responsibilities/decision rights; *ad-hoc* collaboration B. identified and defined structures and related roles/responsibilities C. some existing structures, with related roles executing per defined responsibilities and decision rights; sequential collaboration; COE (Centre of Excellence) or equivalent D. fully implemented structures with all roles executing to defined responsibilities; fully functioning COE E. evolving organisation structures, roles and decision rights; synchronous collaboration	
18 The **current** situation with regard to Information management is characterised by A. data metrics which are in isolated pockets and are ill-defined B. defined and consistent information policies and measurement criteria C. appropriate data sharing and use; integrated operation metrics and use of internal benchmarking D. integrated data and metrics across the business; use of both internal and external benchmarking E. intelligent decision making/routines; experimental benchmarking	
19 The **future** situation with regard to Information management should be characterised by A. data metrics which are in isolated pockets and are ill-defined B. defined and consistent information policies and measurement criteria C. appropriate data sharing and use; integrated operation metrics and use of internal benchmarking D. integrated data and metrics across the business; use of both internal and external benchmarking E. intelligent decision making/routines; experimental benchmarking	
20 The **current** situation with regard to Technology management is characterised by A. a lack of required automation for appropriate tasks and functions B. partial or sporadic automation of appropriate tasks and functions C. automation of appropriate tasks and functions with some co-ordinated use D. full automation and co-ordinated use with partial, related integration E. consistent, co-ordinated use with complete, related integration	
21 The **future** situation with regard to Technology management should be characterised by A. a lack of required automation for appropriate tasks and functions B. partial or sporadic automation of appropriate tasks and functions C. automation of appropriate tasks and functions with some co-ordinated use D. full automation and co-ordinated use with partial, related integration E. consistent, co-ordinated use with complete, related integration	
Business Performance	
Rank the following list of statements in order of importance from 1 to 4. Questions 22-23need a ranking from 1-4. (Please note that only 4 of the 5 statements need to be ranked). 1=Most Critical; 2=Critical; 3=Less Critical; 4=Least Critical	
22 The **current** situation can be characterised by Seamless integration of technology, data, people and processes	
Ability to translate business requirements into technological terms	
Appropriate repositioning of resources and capabilities to support the corporate strategy	
Strategic alignment of IT landscape with Business requirements	

Agile delivery of project deliverables and nimble decision making	
23 The **future** situation should be characterised by Seamless integration of technology, data, people and processes	
Ability to translate business requirements into technological terms	
Appropriate repositioning of resources and capabilities to support the corporate strategy	
Strategic alignment of IT landscape with Business requirements	
Agile delivery of project deliverables and nimble decision making	

APPENDIX 2 - CAPTURED QUESTIONNAIRE

This appendix contains a sample of a captured questionnaire.

Dear Respondent,

Thank you for agreeing to participate in my research project by completing below survey. The aim of my research project is to explore the critical success factors for business-IT convergence in the South African banking sector. This is based on the premise that business-IT convergence is increasingly becoming a source for competitive advantage.

Your participation is voluntarily and you can withdraw at any time without penalty.

Please be ensured that confidentiality and anonymity will be maintained throughout and after the course of the research in that no names will be recorded and that data will be stored without identifiers. Organisational identity will be protected by using the following indicators – each bank will be identified by an alias:
Bank 1: Dymo
Bank 2: Eals
Bank 3: Fargo
Bank 4: Merriott

If you have any concerns, please contact me or my supervisor. Our details are provided below.

Researcher name: Maryna Theron	Research Supervisor name: Roy Page-Shipp
Email: maryna.theron@yahoo.com	Email: roy@pageshipp.co.za
Phone: 082 494 5170	Phone: 082 447 6289

MBA Research Questionnaire	
This questionnaire was designed to assess the views of a sample of Group Finance staff members on the topic of business-IT convergence. Your individual views will be kept totally confidential.	
INSTRUCTIONS Please read each statement before choosing the most appropriate answer. Please record your choice in the blue column on the right hand side. All completed questionnaires may be returned via email or may be printed out and returned to me in person. The questionnaire contains 23 questions which should take you approximately 10 minutes to complete. There are 3 types of questions with the possible answer types indicated in Red (only one answer per question). Multiple choice questions which will require a choice of either A, B, C, D, or E. Ranking questions, requires ranking choices 1 = most critical, 2 = critical, 3 = less critical, 4 = least critical. Maturity questions: U = Unstable, E = Established, S = Standardised, O = Optimum. *Abbreviations: IT = Information Technology, IS = Information Systems, Mgt = Management*	***Answer***
Number of Years service within Cluster	10 Years
Designation or Job Title: e.g. Profitability Analyst	Profitability Analyst
Grade e.g. PP	P
Department	GFR: Business Performance and Analytics

Cluster's Strategic Position	
Below multiple choice questions require a choice of either A, B, C, D, or E.	
1 Cluster Mgt's biggest challenge is: **A**:strategic **B**: process mgt **C**: information mgt **D**: organisation mgt **E**: technology mgt.	**C**
2 Cluster's greatest asset is its **A**: people **B**: processes **C**: information **D**: technology **E**:ability to innovate	**A**
3 Cluster's biggest problem is its lack of: **A**: business-IT convergence **B**: information mgt. **C**: organisation mgt. **D**: prioritization **E**: IT spending	**A**
4 Which of the following best describe Cluster: **A**: unstable **B**: efficient **C**: integrated **D**: outcome driven **E**: flexible	**D**
5 What is Cluster's current priority: **A**: survival **B**: processes **C**: integration **D**: knowledge **E**: customers	**E**
Cluster's Business-IT Maturity Level	
Below maturity questions require a choice of either U = Unstable E = Established, S = Standardised, O = Optimum.	
6 **Demand/supply planning:** Business and ITMgt achieve consensus on where the organisation is going and what IT can do to help. **U E S O**	
7 **Project Implementation** by IT has enabled Business to develop strategic and organizational flexibility and the capability to respond to customer demands on time. **U E S O**	**E**
8 **Innovation** provides a way to feed business opportunities made possible by IT onto business strategic and tactical planning **U E S O**	**O**
9 **Prioritisation** helps Mgt identify the IT projects that strongly support strategic intent, ranking them by future business impact. **U E S O**	**O**
10 **Prioritisation** helps Mgt to spend resources in the right places, for the right reasons, with Business and IT Mgt agreeing on the decisions. **U E S O**	**E**
11 **Alignment: B**usiness and IT Mgt decide together which existing IT initiatives should get resources, rather than assuming that everything currently in operation is critical for the business and should be supported. **U E S O**	**E**
12 At what stage of development is the relationship between IT and Cluster staff **U E S O**	**S**
13 How would you describe the level of strategic alignment between Corporate and IT strategy **U E S O**	**E**
Below multiple choice questions require a choice of either A, B, C, D, or E. ***Choose a phrase to best complete the sentence in your opinion***	
14 The **current** situation with regard to Process management is characterised by A. an unstructured way of work with no process integration B. defining and documenting some core processes C. defining and documenting core processes with some integration between key process areas D. repeatable, predictable and consistent process execution, fully integrated across the business E. continuous process optimization, experimentation and innovation	**C**

15 The **future** situation with regard to Process management should be characterised by: A. an unstructured way of work with no process integration B. defining and documenting some core processes C. defining and documenting core processes with some integration between key process areas D. repeatable, predictable and consistent process execution, fully integrated across the business E. continuous process optimization, experimentation and innovation	**E**
16 The **current** situation with regard to Organisation management is characterised by A. missing structures and unidentified or unclear roles/responsibilities/decision rights; *ad-hoc* collaboration B. identified and defined structures and related roles/responsibilities C. some existing structures, with related roles executing per defined responsibilities and decision rights; sequential collaboration; COE (Centre of Excellence) or equivalent D. fully implemented structures with all roles executing to defined responsibilities; fully functioning COE E. evolving organisation structures, roles and decision rights; synchronous collaboration	**C**
17 The **future** situation with regard to Organisation management should be characterised by A. missing structures and unidentified or unclear roles/responsibilities/decision rights; *ad-hoc* collaboration B. identified and defined structures and related roles/responsibilities C. some existing structures, with related roles executing per defined responsibilities and decision rights; sequential collaboration; COE (Centre of Excellence) or equivalent D. fully implemented structures with all roles executing to defined responsibilities; fully functioning COE E. evolving organisation structures, roles and decision rights; synchronous collaboration	**E**
18 The **current** situation with regard to Information management: is characterised by A. data metrics which are in isolated pockets and are ill-defined B. defined and consistent information policies and measurement criteria C. appropriate data sharing and use; integrated operation metrics and use of internal benchmarking D. integrated data and metrics across the business; use of both internal and external benchmarking E. intelligent decision making/routines; experimental benchmarking	**B**
19 The **future** situation with regard to Information management should be characterised by A. data metrics which are in isolated pockets and are ill-defined B. defined and consistent information policies and measurement criteria C. appropriate data sharing and use; integrated operation metrics and use of internal benchmarking D. integrated data and metrics across the business; use of both internal and external benchmarking E. intelligent decision making/routines; experimental benchmarking	**D**
20 The **current** situation with regard to Technology management is characterised by A. a lack of required automation for appropriate tasks and functions B. partial or sporadic automation of appropriate tasks and functions C. automation of appropriate tasks and functions with some co-ordinated use	**C**

D. full automation and co-ordinated use with partial, related integration E. consistent, co-ordinated use with complete, related integration	
21 The **future** situation with regard to how Technology management should be characterised by A. a lack of required automation for appropriate tasks and functions B. partial or sporadic automation of appropriate tasks and functions C. automation of appropriate tasks and functions with some co-ordinated use D. full automation and co-ordinated use with partial, related integration E. consistent, co-ordinated use with complete, related integration	**E**

Business Performance	
Rank the following list of statements in order of importance from 1 to 4. Questions 22-23need a ranking from 1-4. (Please note that only 4 of the 5 statements need to be ranked). 1=Most Critical; 2=Critical; 3=Less Critical; 4=Least Critical	
22 The **current** situation can be characterised by Seamless integration of technology, data, people and processes	4
Ability to translate business requirements into technological terms	1
Appropriate repositioning of resources and capabilities to support the corporate strategy	
Strategic alignment of IT landscape with Business requirements	2
Agile delivery of project deliverables and nimble decision making	3
23 The **future** situation should be characterised by Seamless integration of technology, data, people and processes	3
Ability to translate business requirements into technological terms	
Appropriate repositioning of resources and capabilities to support the corporate strategy	1
Strategic alignment of IT landscape with Business requirements	2
Agile delivery of project deliverables and nimble decision making	4

APPENDIX 3 – PROFILES OF RESPONDENTS

	Profile	Frequency
1	CIO	3
2	Group Financial Controller	2
3	Operations Manager	1
4	Programme Manager	2
5	Project Manager	6
6	Senior Strategic Manager	2
7	Business Strategic Manager	1
8	Solution architect	4
9	Profitability Analyst	6
10	Corporate Strategic Analyst	1
11	Technical Strategy Consultant	3
12	Portfolio Analyst	1
13	Data Analyst	2
14	Business Analyst	11
15	Information Analyst	2
16	Management Accountant	1
17	Systems Manager	3
18	Senior Developer	2
19	Systems Custodian	1
20	Systems Administrator	2
	Total	**56**

APPENDIX 4 – DYMO: MATRIX OF RAW DATA

No.	Question	Options	%	Response
1	Cluster Mgt's biggest challenge is: A: strategic B: process management C: information management D: organisation management E: technology management	A: strategic	48	12
		B: process management	24	6
		C: information management	8	2
		D: organisation management	12	3
		E: technology management	8	2
2	Cluster's greatest asset is its **A**: people B: processes C: information D: technology E: ability to innovate	**A**: people	84	21
		B: processes	-	-
		C: information	8	2
		D: technology	4	1
		E: ability to innovate	4	1
3	Cluster's biggest problem is its lack of: A: business-IT convergence B: information mgt. C: organisation mgt. D: prioritization E: IT spending	A: business-IT convergence	48	12
		B: information mgt.	-	-
		C: organisation mgt.	16	4
		D: prioritization	28	7
		E: IT spending	8	2
4	Which of the following best describe Cluster: A: unstable B: efficient C: integrated D: outcome driven E: flexible	A: unstable	36	9
		B: efficient	16	4
		C: integrated	20	5
		D: outcome driven	20	5
		E: flexible	8	2
5	What is Cluster's current priority: A: survival B: processes C: integration D: knowledge E: customers	A: survival	8	32
		B: processes	2	8
		C: integration	8	32
		D: knowledge	-	-
		E: customers	7	8

6	Demand/supply planning: Business and IT Mgt achieve consensus on where the organisation is going and what IT can do to help.	Unstable	56	14
		Established	28	7
		Standardised	16	4
		Optimum	-	
7	Project Implementation by IT has enabled Business to develop strategic and organizational flexibility and the capability to respond to customer demands on time.	Unstable	40	10
		Established	24	6
		Standardised	28	7
		Optimum	8	2
8	Innovation provides a way to feed business opportunities made possible by IT onto business strategic and tactical planning	Unstable	56	14
		Established	24	6
		Standardised	8	2
		Optimum	12	3
9	Prioritisation helps Mgt identify the IT projects that strongly support strategic intent, ranking them by future business impact.	Unstable	44	11
		Established	28	7
		Standardised	24	6
		Optimum	4	1
10	Prioritisation helps Mgt to spend resources in the right places, for the right reasons, with Business and IT Mgt agreeing on the decisions.	Unstable	48	12
		Established	28	7
		Standardised	16	4
		Optimum	4	1
11	Alignment: Business and IT Mgt decide together which existing IT initiatives should get resources, rather than assuming that everything currently in operation is critical for the business and should be supported.	Unstable	48	12
		Established	40	10
		Standardised	8	2
		Optimum	4	1
12	At what stage of development is the relationship between IT and Cluster staff	Unstable	40	10
		Established	40	10
		Standardised	16	4
		Optimum	4	1
13	How would you describe the level of strategic alignment between Corporate and IT strategy	Unstable	32	8
		Established	36	9
		Standardised	16	4
		Optimum	12	3
		Missing		1

14	The **current** situation with regard to Process management is characterised by	A. an unstructured way of work with no process integration	-	-
		B. defining and documenting some core processes	60	15
		C. defining and documenting core processes with some integration between key process areas	32	8
		D. repeatable, predictable and consistent process execution, fully integrated across the business	-	-
		E. continuous process optimization, experimentation and innovation	8	2
15	The **future** situation with regard to Process management is characterised by	A. an unstructured way of work with no process integration	-	-
		B. defining and documenting some core processes	4	1
		C. defining and documenting core processes with some integration between key process areas	8	2
		D. repeatable, predictable and consistent process execution, fully integrated across the business	44	11
		E. continuous process optimization, experimentation and innovation	44	11

16	The **current** situation with regard to Organisation management is characterised by	A.	missing structures and unidentified or unclear roles/responsibilities/decision rights; *ad-hoc* collaboration	32	8
		B.	identified and defined structures and related roles/responsibilities	20	5
		C.	some existing structures, with related roles executing per defined responsibilities and decision rights; sequential collaboration; COE (Centre of Excellence) or equivalent	48	12
		D.	fully implemented structures with all roles executing to defined responsibilities; fully functioning COE	-	-
		E.	evolving organisation structures, roles and decision rights; synchronous collaboration	-	-
17	The **future** situation with regard to Organisation management is characterised by	A.	missing structures and unidentified or unclear roles/responsibilities/decision rights; *ad-hoc* collaboration	4	1
		B.	identified and defined structures and related roles/responsibilities	16	4
		C.	some existing structures, with related roles executing per defined responsibilities and decision rights; sequential collaboration	4	1
		D.	fully implemented structures with all roles executing to defined responsibilities; fully functioning COE	40	10
		E.	evolving organisation structures, roles and decision rights; synchronous collaboration	36	9

18	The **current** situation with regard to Information management: is characterised by	A. data metrics which are in isolated pockets and are ill-defined	52	13
		B. defined and consistent information policies and measurement criteria	28	7
		C. appropriate data sharing and use; integrated operation metrics and use of internal benchmarking	8	2
		D. integrated data and metrics across the business; use of both internal and external benchmarking	8	2
		E. intelligent decision making/routines; experimental benchmarking	4	1
19	The **future** situation with regard to Information management: is characterised by	A. data metrics which are in isolated pockets and are ill-defined	-	-
		B. defined and consistent information policies and measurement criteria	4	1
		C. appropriate data sharing and use; integrated operation metrics and use of internal benchmarking	20	5
		D. integrated data and metrics across the business; use of both internal and external benchmarking	56	14
		E. intelligent decision making/routines; experimental benchmarking	20	5

20	The **current** situation with regard to Technology management is characterised by	A. a lack of required automation for appropriate tasks and functions	32	8
		B. partial or sporadic automation of appropriate tasks and functions	28	7
		C. automation of appropriate tasks and functions with some co-ordinated use	40	10
		D. full automation and co-ordinated use with partial, related integration	-	-
		E. consistent, co-ordinated use with complete, related integration	-	-
21	The **future** situation with regard to Technology management is characterised by	A. a lack of required automation for appropriate tasks and functions	-	-
		B. partial or sporadic automation of appropriate tasks and functions	-	-
		C. automation of appropriate tasks and functions with some co-ordinated use	5	20
		D. full automation and co-ordinated use with partial, related integration	3	12
		E. consistent, co-ordinated use with complete, related integration	17	68

22	**Business Performance**	**Scenario**	**Ranking (*1=Most Critical; 2=Critical; 3=Less Critical; 4=Least Critical)***			
			1	**2**	**3**	**4**
	The current situation can be characterised by	Seamless integration of technology, data, people and processes	29%	18%	24%	29%
		Ability to translate business requirements into technological terms	37%	11%	21%	32%
		Appropriate repositioning of resources and capabilities to support the corporate strategy	9%	41%	32%	18%
		Strategic alignment of IT landscape with Business requirements	23%	36%	23%	18%
		Agile delivery of project deliverables and nimble decision making	31%	13%	25%	31%
23	The current situation can be characterised by	Seamless integration of technology, data, people and processes	35%	12%	41%	12%
		Ability to translate business requirements into technological terms	31%	13%	6%	50%
		Appropriate repositioning of resources and capabilities to support the corporate strategy	9%	45%	27%	18%
		Strategic alignment of IT landscape with Business requirements	29%	25%	33%	13%
		Agile delivery of project deliverables and nimble decision making	24%	24%	12%	41%

APPENDIX 5 – EALS: MATRIX OF RAW DATA

No.	Question	Options	%	Response
1	Cluster Mgt's biggest challenge is: A: strategic B: process management C: information management D: organisation management E: technology management	A: strategic	11	2
		B: process management	33	6
		C: information management	33	6
		D: organisation management	11	2
		E: technology management	11	2
2	Cluster's greatest asset is its **A**: people B: processes C: information D: technology E: ability to innovate	**A**: people	9	50
		B: processes	-	-
		C: information	-	-
		D: technology	-	-
		E: ability to innovate	9	50
3	Cluster's biggest problem is its lack of: A: business-IT convergence B: information mgt. C: organisation mgt. D: prioritization E: IT spending	A: business-IT convergence	44	8
		B: information mgt.	17	3
		C: organisation mgt.	22	4
		D: prioritisation	17	3
		E: IT spending	-	-
4	Which of the following best describe Cluster: A: unstable B: efficient C: integrated D: outcome driven E: flexible	A: unstable	-	-
		B: efficient	11	2
		C: integrated	17	3
		D: outcome driven	61	11
		E: flexible	11	2
5	What is Cluster's current priority: A: survival B: processes C: integration D: knowledge E: customers	A: survival	-	-
		B: processes	17	3
		C: integration	6	1
		D: knowledge	6	1
		E: customers	72	13

6	Demand/supply planning: Business and IT Mgt achieve consensus on where the organisation is going and what IT can do to help.	Unstable	11	2
		Established	39	7
		Standardised	39	7
		Optimum	11	2
7	Project Implementation by IT has enabled Business to develop strategic and organizational flexibility and the capability to respond to customer demands on time.	Unstable	6	1
		Established	39	7
		Standardised	50	9
		Optimum	6	1
8	Innovation provides a way to feed business opportunities made possible by IT onto business strategic and tactical planning	Unstable	6	1
		Established	28	5
		Standardised	39	7
		Optimum	28	5
9	Prioritisation helps Mgt identify the IT projects that strongly support strategic intent, ranking them by future business impact.	Unstable	17	3
		Established	17	3
		Standardised	28	5
		Optimum	39	7
10	Prioritisation helps Mgt to spend resources in the right places, for the right reasons, with Business and IT Mgt agreeing on the decisions.	Unstable	6	1
		Established	45	8
		Standardised	33	6
		Optimum	17	3
11	Alignment: Business and IT Mgt decide together which existing IT initiatives should get resources, rather than assuming that everything currently in operation is critical for the business and should be supported.	Unstable	6	1
		Established	56	10
		Standardised	39	7
		Optimum	-	-
12	At what stage of development is the relationship between IT and Cluster staff	Unstable	11	2
		Established	22	4
		Standardised	56	10
		Optimum	11	2
13	How would you describe the level of strategic alignment between Corporate and IT strategy	Unstable	17	3
		Established	22	4
		Standardised	56	10
		Optimum	6	1

14	The **current** situation with regard to Process management is characterised by	A.	an unstructured way of work with no process integration	-	-
		B.	defining and documenting some core processes	17	3
		C.	defining and documenting core processes with some integration between key process areas	39	7
		D.	repeatable, predictable and consistent process execution, fully integrated across the business	22	4
		E.	continuous process optimization, experimentation and innovation	22	4
15	The **future** situation with regard to Process management is characterised by	A.	an unstructured way of work with no process integration	-	-
		B.	defining and documenting some core processes	-	-
		C.	defining and documenting core processes with some integration between key process areas	6	1
		D.	repeatable, predictable and consistent process execution, fully integrated across the business	33	6
		E.	continuous process optimization, experimentation and innovation	61	11

16	The **current** situation with regard to Organisation management is characterised by	A.	missing structures and unidentified or unclear roles/responsibilities/decision rights; *ad-hoc* collaboration	-	-
		B.	identified and defined structures and related roles/responsibilities	50	9
		C.	some existing structures, with related roles executing per defined responsibilities and decision rights; sequential collaboration; COE (Centre of Excellence) or equivalent	17	3
		D.	fully implemented structures with all roles executing to defined responsibilities; fully functioning COE	28	5
		E.	evolving organisation structures, roles and decision rights; synchronous collaboration	6	1
17	The **future** situation with regard to Organisation management is characterised by	A.	missing structures and unidentified or unclear roles/responsibilities/decision rights; *ad-hoc* collaboration	-	-
		B.	identified and defined structures and related roles/responsibilities	-	-
		C.	some existing structures, with related roles executing per defined responsibilities and decision rights; sequential collaboration	6	1
		D.	fully implemented structures with all roles executing to defined responsibilities; fully functioning COE	28	5
		E.	evolving organisation structures, roles and decision rights; synchronous collaboration	67	12

18	The **current** situation with regard to Information management: is characterised by	A. data metrics which are in isolated pockets and are ill-defined	11	2
		B. defined and consistent information policies and measurement criteria	22	4
		C. appropriate data sharing and use; integrated operation metrics and use of internal benchmarking	50	9
		D. integrated data and metrics across the business; use of both internal and external benchmarking	17	3
		E. intelligent decision making/routines; experimental benchmarking	-	-
19	The **future** situation with regard to Information management: is characterised by	A. data metrics which are in isolated pockets and are ill-defined	-	-
		B. defined and consistent information policies and measurement criteria	-	-
		C. appropriate data sharing and use; integrated operation metrics and use of internal benchmarking	-	-
		D. integrated data and metrics across the business; use of both internal and external benchmarking	56	10
		E. intelligent decision making/routines; experimental benchmarking	44	8

20	The **current** situation with regard to Technology management is characterised by	A. a lack of required automation for appropriate tasks and functions	6	1
		B. partial or sporadic automation of appropriate tasks and functions	28	5
		C. automation of appropriate tasks and functions with some co-ordinated use	61	11
		D. full automation and co-ordinated use with partial, related integration	6	1
		E. consistent, co-ordinated use with complete, related integration	-	-
21	The **future** situation with regard to Technology management is characterised by	A. a lack of required automation for appropriate tasks and functions	-	-
		B. partial or sporadic automation of appropriate tasks and functions	-	-
		C. automation of appropriate tasks and functions with some co-ordinated use	11	2
		D. full automation and co-ordinated use with partial, related integration	44	8
		E. consistent, co-ordinated use with complete, related integration	44	8

22	**Business Performance**	**Scenario**	**Ranking (*1=Most Critical; 2=Critical; 3=Less Critical; 4=Least Critical)***			
			1	**2**	**3**	**4**
	The current situation can be characterised by	Seamless integration of technology, data, people and processes	36%	9%	18%	36%
		Ability to translate business requirements into technological terms	47%	20%	20%	13%
		Appropriate repositioning of resources and capabilities to support the corporate strategy	27%	47%	20%	7%
		Strategic alignment of IT landscape with Business requirements	11%	33%	33%	22%
		Agile delivery of project deliverables and nimble decision making	8%	8%	31%	54%
23	The future situation can be characterised by	Seamless integration of technology, data, people and processes	45%	9%	9%	36%
		Ability to translate business requirements into technological terms	25%	33%	25%	17%
		Appropriate repositioning of resources and capabilities to support the corporate strategy	12%	24%	41%	24%
		Strategic alignment of IT landscape with Business requirements	28%	39%	11%	22%
		Agile delivery of project deliverables and nimble decision making	21%	14%	36%	29%

APPENDIX 6 – FARGO: MATRIX OF RAW DATA

No.	Question	Options	%	Response
1	Cluster Mgt's biggest challenge is: A: strategic B: process management C: information management D: organisation management E: technology management	A: strategic	17	1
		B: process management	33	2
		C: information management	50	3
		D: organisation management	-	-
		E: technology management	-	-
2	Cluster's greatest asset is it's a: people B: processes C: information D: technology E: ability to innovate	**A**: people	67	4
		B: processes	-	-
		C: information	-	-
		D: technology	17	1
		E: ability to innovate	17	1
3	Cluster's biggest problem is its lack of: A: business-IT convergence B: information mgt. C: organisation mgt. D: prioritisation E: IT spending	A: business-IT convergence	17	1
		B: information mgt.	33	2
		C: organisation mgt.	-	-
		D: prioritisation	50	3
		E: IT spending	-	-
4	Which of the following best describe Cluster: A: unstable B: efficient C: integrated D: outcome driven E: flexible	A: unstable	-	-
		B: efficient	17	1
		C: integrated	-	-
		D: outcome driven	33	2
		E: flexible	50	3
5	What is Cluster's current priority: A: survival B: processes C: integration D: knowledge E: customers	A: survival	17	1
		B: processes	-	-
		C: integration	-	-
		D: knowledge	67	4
		E: customers	17	1

6	Demand/supply planning: Business and IT Mgt achieve consensus on where the organisation is going and what IT can do to help.	Unstable	17	1
		Established	33	2
		Standardised	33	2
		Optimum	17	1
7	Project Implementation by IT has enabled Business to develop strategic and organizational flexibility and the capability to respond to customer demands on time.	Unstable	17	1
		Established	33	2
		Standardised	50	3
		Optimum	-	-
8	Innovation provides a way to feed business opportunities made possible by IT onto business strategic and tactical planning	Unstable	33	2
		Established	17	1
		Standardised	33	2
		Optimum	17	1
9	Prioritisation helps Mgt identify the IT projects that strongly support strategic intent, ranking them by future business impact.	Unstable	17	1
		Established	50	3
		Standardised	17	1
		Optimum	17	1
10	Prioritisation helps Mgt to spend resources in the right places, for the right reasons, with Business and IT Mgt agreeing on the decisions.	Unstable	33	2
		Established	33	2
		Standardised	-	-
		Optimum	33	2
11	Alignment: Business and IT Mgt decide together which existing IT initiatives should get resources, rather than assuming that everything currently in operation is critical for the business and should be supported.	Unstable	33	2
		Established	50	3
		Standardised	-	-
		Optimum	17	1
12	At what stage of development is the relationship between IT and Cluster staff	Unstable	-	-
		Established	33	2
		Standardised	67	4
		Optimum	-	-
13	How would you describe the level of strategic alignment between Corporate and IT strategy	Unstable	-	-
		Established	33	2
		Standardised	50	3
		Optimum	17	1

14	The **current** situation with regard to Process management is characterised by	A. an unstructured way of work with no process integration	-	-
		B. defining and documenting some core processes	17	1
		C. defining and documenting core processes with some integration between key process areas	83	5
		D. repeatable, predictable and consistent process execution, fully integrated across the business	-	-
		E. continuous process optimization, experimentation and innovation	-	-
15	The **future** situation with regard to Process management is characterised by	A. an unstructured way of work with no process integration	-	-
		B. defining and documenting some core processes	-	-
		C. defining and documenting core processes with some integration between key process areas	17	1
		D. repeatable, predictable and consistent process execution, fully integrated across the business	33	2
		E. continuous process optimization, experimentation and innovation	50	3

16	The **current** situation with regard to Organisation management is characterised by	A. missing structures and unidentified or unclear roles/responsibilities/decision rights; *ad-hoc* collaboration	33	2
		B. identified and defined structures and related roles/responsibilities	-	-
		C. some existing structures, with related roles executing per defined responsibilities and decision rights; sequential collaboration; COE (Centre of Excellence) or equivalent	33	2
		D. fully implemented structures with all roles executing to defined responsibilities; fully functioning COE	33	2
		E. evolving organisation structures, roles and decision rights; synchronous collaboration	-	-
17	The **future** situation with regard to Organisation management is characterised by	A. missing structures and unidentified or unclear roles/responsibilities/decision rights; *ad-hoc* collaboration	-	-
		B. identified and defined structures and related roles/responsibilities	17	1
		C. some existing structures, with related roles executing per defined responsibilities and decision rights; sequential collaboration	-	-
		D. fully implemented structures with all roles executing to defined responsibilities; fully functioning COE	33	2
		E. evolving organisation structures, roles and decision rights; synchronous collaboration	50	3

18	The **current** situation with regard to Information management: is characterised by	A. data metrics which are in isolated pockets and are ill-defined	33	2
		B. defined and consistent information policies and measurement criteria	17	1
		C. appropriate data sharing and use; integrated operation metrics and use of internal benchmarking	50	3
		D. integrated data and metrics across the business; use of both internal and external benchmarking	-	-
		E. intelligent decision making/routines; experimental benchmarking	-	-
19	The **future** situation with regard to Information management: is characterised by	A. data metrics which are in isolated pockets and are ill-defined	-	-
		B. defined and consistent information policies and measurement criteria	17	1
		C. appropriate data sharing and use; integrated operation metrics and use of internal benchmarking	-	-
		D. integrated data and metrics across the business; use of both internal and external benchmarking	33	2
		E. intelligent decision making/routines; experimental benchmarking	50	3

20	The **current** situation with regard to Technology management is characterised by	A. a lack of required automation for appropriate tasks and functions	-	-
		B. partial or sporadic automation of appropriate tasks and functions	33	2
		C. automation of appropriate tasks and functions with some co-ordinated use	50	3
		D. full automation and co-ordinated use with partial, related integration	17	1
		E. consistent, co-ordinated use with complete, related integration	-	-
21	The **future** situation with regard to Technology management is characterised by	A. a lack of required automation for appropriate tasks and functions	-	-
		B. partial or sporadic automation of appropriate tasks and functions	-	-
		C. automation of appropriate tasks and functions with some co-ordinated use	-	-
		D. full automation and co-ordinated use with partial, related integration	33	2
		E. consistent, co-ordinated use with complete, related integration	67	4

22	**Business Performance**	**Scenario**	**Ranking (*1=Most Critical; 2=Critical; 3=Less Critical; 4=Least Critical)***			
			1	**2**	**3**	**4**
	The current situation can be characterised by	Seamless integration of technology, data, people and processes	67%	0%	33%	0%
		Ability to translate business requirements into technological terms	20%	40%	20%	20%
		Appropriate repositioning of resources and capabilities to support the corporate strategy	20%	0%	80%	0%
		Strategic alignment of IT landscape with Business requirements	33%	50%	0%	17%
		Agile delivery of project deliverables and nimble decision making	0%	20%	0%	80%
23	The future situation can be characterised by	Seamless integration of technology, data, people and processes	33%	33%	0%	33%
		Ability to translate business requirements into technological terms	17%	0%	83%	0%
		Appropriate repositioning of resources and capabilities to support the corporate strategy	0%	0%	33%	67%
		Strategic alignment of IT landscape with Business requirements	33%	33%	0%	33%
		Agile delivery of project deliverables and nimble decision making	33%	50%	0%	17%

APPENDIX 7 – MERRIOTT: MATRIX OF RAW DATA

No.	Question	Options	%	Response
1	Cluster Mgt's biggest challenge is: A: strategic B: process management C: information management D: organisation management E: technology management	A: strategic	14	1
		B: process management	71	5
		C: information management	-	-
		D: organisation management	-	-
		E: technology management	14	1
2	Cluster's greatest asset is its **A**: people B: processes C: information D: technology E: ability to innovate	**A**: people	86	6
		B: processes	-	-
		C: information	14	1
		D: technology	-	-
		E: ability to innovate	-	-
3	Cluster's biggest problem is its lack of: A: business-IT convergence B: information mgt. C: organisation mgt. D: prioritisation E: IT spending	A: business-IT convergence	86	6
		B: information mgt.	-	-
		C: organisation mgt.	-	-
		D: prioritisation	14	1
		E: IT spending	-	-
4	Which of the following best describe Cluster: A: unstable B: efficient C: integrated D: outcome driven E: flexible	A: unstable	14	1
		B: efficient	71	5
		C: integrated	14	1
		D: outcome driven	-	-
		E: flexible	-	-
5	What is Cluster's current priority: A: survival B: processes C: integration D: knowledge E: customers	A: survival	14	1
		B: processes	14	1
		C: integration	43	3
		D: knowledge	14	1

		E: customers	14	1
6	Demand/supply planning: Business and IT Mgt achieve consensus on where the organisation is going and what IT can do to help.	Unstable	57	4
		Established	29	2
		Standardised	-	-
		Optimum	14	1
7	Project Implementation by IT has enabled Business to develop strategic and organizational flexibility and the capability to respond to customer demands on time.	Unstable	-	-
		Established	100	7
		Standardised	-	-
		Optimum	-	-
8	Innovation provides a way to feed business opportunities made possible by IT onto business strategic and tactical planning	Unstable	29	2
		Established	57	4
		Standardised	-	-
		Optimum	14	1
9	Prioritisation helps Mgt identify the IT projects that strongly support strategic intent, ranking them by future business impact.	Unstable	43	3
		Established	29	2
		Standardised	14	1
		Optimum	14	1
10	Prioritisation helps Mgt to spend resources in the right places, for the right reasons, with Business and IT Mgt agreeing on the decisions.	Unstable	43	3
		Established	29	2
		Standardised	14	1
		Optimum	14	1
11	Alignment: Business and IT Mgt decide together which existing IT initiatives should get resources, rather than assuming that everything currently in operation is critical for the business and should be supported.	Unstable	57	4
		Established	-	-
		Standardised	29	2
		Optimum	14	1
12	At what stage of development is the relationship between IT and Cluster staff	Unstable	-	-
		Established	71	5
		Standardised	29	2
		Optimum	-	-
13	How would you describe the level of strategic alignment between Corporate and IT strategy	Unstable	43	3
		Established	14	1
		Standardised	29	2
		Optimum	14	1

14	The **current** situation with regard to Process management is characterised by	A.	an unstructured way of work with no process integration	-	-
		B.	defining and documenting some core processes	14	1
		C.	defining and documenting core processes with some integration between key process areas	57	4
		D.	repeatable, predictable and consistent process execution, fully integrated across the business	14	1
		E.	continuous process optimization, experimentation and innovation	14	1
15	The **future** situation with regard to Process management is characterised by	A.	an unstructured way of work with no process integration	-	-
		B.	defining and documenting some core processes	-	-
		C.	defining and documenting core processes with some integration between key process areas	14	1
		D.	repeatable, predictable and consistent process execution, fully integrated across the business	43	3
		E.	continuous process optimization, experimentation	43	3

		and innovation		
16	The **current** situation with regard to Organisation management is characterised by	A. missing structures and unidentified or unclear roles/responsibilities/decision rights; *ad-hoc* collaboration	14	1
		B. identified and defined structures and related roles/responsibilities	14	1
		C. some existing structures, with related roles executing per defined responsibilities and decision rights; sequential collaboration; COE (Centre of Excellence) or equivalent	43	3
		D. fully implemented structures with all roles executing to defined responsibilities; fully functioning COE	-	-
		E. evolving organisation structures, roles and decision rights; synchronous collaboration	29	2
17	The **future** situation with regard to Organisation management is characterised by	A. missing structures and unidentified or unclear roles/responsibilities/decision rights; *ad-hoc* collaboration	-	-
		B. identified and defined structures and related roles/responsibilities	14	1
		C. some existing structures, with related roles executing per defined responsibilities and decision rights; sequential collaboration	-	-
		D. fully implemented structures with all roles executing to defined responsibilities; fully functioning COE	57	4
		E. evolving organisation structures, roles and decision rights; synchronous	29	2

		collaboration		
18	The **current** situation with regard to Information management: is characterised by	A. data metrics which are in isolated pockets and are ill-defined	43	3
		B. defined and consistent information policies and measurement criteria	29	2
		C. appropriate data sharing and use; integrated operation metrics and use of internal benchmarking	14	1
		D. integrated data and metrics across the business; use of both internal and external benchmarking	4	1
		E. intelligent decision making/routines; experimental benchmarking	-	-
19	The **future** situation with regard to Information management: is characterised by	A. data metrics which are in isolated pockets and are ill-defined	-	-
		B. defined and consistent information policies and measurement criteria	-	-
		C. appropriate data sharing and use; integrated operation metrics and use of internal benchmarking	-	-
		D. integrated data and metrics across the business; use of both internal and external benchmarking	29	2
		E. intelligent decision making/routines; experimental benchmarking	71	5

20	The **current** situation with regard to Technology management is characterised by	A. a lack of required automation for appropriate tasks and functions	29	2
		B. partial or sporadic automation of appropriate tasks and functions	29	2
		C. automation of appropriate tasks and functions with some co-ordinated use	43	3
		D. full automation and co-ordinated use with partial, related integration	-	-
		E. consistent, co-ordinated use with complete, related integration	-	-
21	The **future** situation with regard to Technology management is characterised by	A. a lack of required automation for appropriate tasks and functions	-	-
		B. partial or sporadic automation of appropriate tasks and functions	-	-
		C. automation of appropriate tasks and functions with some co-ordinated use	-	-
		D. full automation and co-ordinated use with partial, related integration	43	3
		E. consistent, co-ordinated use with complete, related integration	57	4

22	**Business Performance**	**Scenario**	**Ranking (*1=Most Critical; 2=Critical; 3=Less Critical; 4=Least Critical)***			
			1	**2**	**3**	**4**
	The current situation can be characterised by	Seamless integration of technology, data, people and processes	33%	17%	17%	33%
		Ability to translate business requirements into technological terms	14%	57%	0%	29%
		Appropriate repositioning of resources and capabilities to support the corporate strategy	0%	29%	71%	0%
		Strategic alignment of IT landscape with Business requirements	57%	0%	0%	43%
		Agile delivery of project deliverables and nimble decision making	0%	0%	100%	0%
23	The future situation can be characterised by	Seamless integration of technology, data, people and processes	50%	50%	0%	0%
		Ability to translate business requirements into technological terms	29%	14%	14%	43%
		Appropriate repositioning of resources and capabilities to support the corporate strategy	0%	33%	50%	17%
		Strategic alignment of IT landscape with Business requirements	43%	29%	14%	14%
		Agile delivery of project deliverables and nimble decision making	17%	17%	33%	33%