OUTSOURCING INFORMATION TECHNOLOGY

SERVICES

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Dedicated to:
Jozelle
Kayla and
Michael

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BESTUURSOPSOMMING:

Die skripsie is nie uitsluitlik gemik op die bestuur van 'n Inligtingstegnologie (IT) funksie in Suid-Afrika nie, maar ondersoek ook die vele ander aspekte van die geheelbeeld van 'n besigheid. IT het gedurende die laaste vyf tot tien jaar vele gedaanteverwisselings ondergaan. Die tradisionele bestuur van inligting waar monetêre ondersteuning slegs beskikbaar is ten opsigte van 'n waterdigte besigheidsaak, het dramaties verander tot 'n strategiese besigheidseenheid wat met behulp van dieselfde reëls bestuur word as enige ander deel van 'n besigheid.

Die navorsing in die skripsie is daarop gemik om die waters romdom IT kostes, dienslewering en vennootskappe tussen maatskappye en leweransiers wat die betrokke dienste kan lewer, te toets. Die resultate voortvloeiend uit die navorsing dui op 'n groot gaping waarvoor daar oënskynlik nog nie oplossings bestaan nie. Die fokus areas met betrekking tot besorgdhede wat na vore gebring is, is as volg:

- IT-model wat ondersteuning bied gedurende besigheidsoornames en samesmeltings vir topbestuur.
- IT-model wat koste- en dienstevergelykings tussen maatskappye vergemaklik.
- IT-waardeproposisie wat nie deeglik deurdink en omskryf is nie.
- IT wat nie belyn is met besigheidsdoelwitte nie.
- IT word beskou as 'n uitgawe en nie kern-besigheid nie.

Resultate voorspruitend uit die vraelyste onderstreep 'n duidelike gevoel van verdeeldheid tussen maatskappye ten opsigte van belangrike aspekte gebaseer op **strategie, personeel, bevoegdheid, leierskap, stelsels, gedeelde waardes en struktuur**. Die ooglopende realiteit dui op 'n ontbrekende vergelykingsmodel wat uitkontraktering ondersteun tesame met 'n effektiewe bestuursmodel. Die sogenaamde Federale Model in IT bestaan wel, maar is tot dusver nie op die proef gestel nie. Die Pareto beginsel vorm ook deel van so 'n model en is inderdaad ook geensins nagevors in die IT-omgewing nie en verdere navorsing kan baie waardevol wees.

Samevattend bied die skripsie as resultaat 'n **TDi-model** (Technology Diversity Indicator) wat behulpsaam is met die vergelyking van maatskappye se IT-funksie op strategiese vlak. Bykomend verskaf dit ook 'n oplossing rakende verandering in die bestuur van die IT-model indien dit uitverkoop is as 'n diens. Die IT-arena se transformasie moet strategies bestuur word om risiko tot die minimum te beperk vir alle maatskappye.

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EXECUTIVE SUMMARY:

This dissertation is not specifically aimed at the management of an Information Technology (IT) function in South Africa, but also investigates the many other aspects of an organisation's image. During the past five to ten years, IT has undergone numerous changes. The traditional management of information, where financial support was allocated by means of a watertight business plan, has dramatically changed to a strategic business entity that is managed by the same rules and regulations as any other department within an organisation.

The research conducted in this dissertation is aimed at investigating the relationship between IT costs, service delivery and business relationships between organisations and the service providers providing the service. The outcome of the research indicates a gap in this relationship for which there is no obvious solution yet. The following focus areas have been identified by the writer as areas of concern:

- An IT model that offers support to top management during periods of "take–overs" and amalgamations
- An IT model that assists in cost and service delivery comparisons between business divisions / departments
- An IT value proposition that is not clearly and thoroughly thought through
- IT that is not aligned with business goals
- IT is regarded as an overhead expense and not as core business

The results of the questionnaire conducted indicate a clear difference between divisions departments with regard to important aspects based on **strategy, personnel, competence, leadership, systems, shared values and structure.** The reality of this suggests a comparison model that supports outsourcing in conjunction with an effective business model. The so-called Federal Model in IT does indeed exist, but to date has not been researched. The Pareto Principle also forms part of such a model but this has also not been investigated in the IT environment. Further research in this environment could be very valuable.

In conclusion, this dissertation suggests that a **TDi-model** (Technology Diversity Indicator) would assist with the comparison of divisions' / departments' IT functions on a strategic level. In addition, it also offers a solution with regard to a change in the management of the IT model should it be outsourced as a service. The transformation of the IT environment must be managed strategically to ensure that risk is limited to the minimum for all divisions / departments.

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Chapter 1

Nature and scope of study

1.1. Introduction

Information Communication Technology outsourcing is the subject of discussion for this dissertation. During the last decade several companies with a global footprint on all the continents transformed themselves from Mainframe Information Technology driven environments to Integrated Network Solutions, based on any outsourced model available (Hammer, 2004:7). Companies regarded Information Technologies (IT) as non-core business and the only requirement was to manage the supply side in order to be cost efficient or cheaper as far as possible (Hammer, 2004:7). Was this a more cost-effective and a wiser option to achieve better and problem- free IT operation? The study will aim to answer the questions asked with regard to the under mentioned outsourcing. Companies that embarked in IT outsourcing contracts:

- Sasol and Engen (Synthetic Fuels) http://www.sasol.com
- Petronas and Total (Liquid Fuels) http://www.petronas.com
- Sasol Gas and Mosgas (Synthetic and Natural Gas) http://www.sasol.com
- Natref (Oil Refinery) http://www.sasol.com
- AECI and Sasol (Chemically related) http://www.mbendi.com/coae.htm
- DOW (Chemicals) http://www.dow.com
- Mittal Steel RSA (Steel related) http://www.mittall.com
- ESKOM (Electricity) http://www.eskom.com
- TELKOM (Telecommunications) http://www.telkom.com
- ABSA Bank RSA (Financial) http://www.absa.com

(Websites provided to obtain company profiles and general business information)

These companies were leading the outsourced process and were really focusing to do this as effectively as possible. The day the outsource deal is signed a general perception is created that a milestone has been reached and that everything that has been outsourced will assist the organisation to operate better, faster and cheaper. There is a danger that far from being the leader in the transformation process, the IT function runs the risk of becoming an inhibitor to change and therefore irrelevant in adding value to the company's business strategy (Ralph, 2003:44).

There are, of course, many valuable and successful IT functions such as infrastructure, applications, Enterprise Resource Planning Systems (ERPs), and bandwidth that are much appreciated by the business. When technology breaks down, all communications in the corporate world come to a grinding halt, resulting in huge financial losses. Losses can include the commerce section in the industry receiving orders from clients or even production units unable to confirm production orders for dispatch purposes. Every year an award is handed out in South Africa for the best Information Manager. Congratulations to him for the award, but in the whole, there are not a lot of them who feel good about their IT functions as a business enabler (White, 2001:2).

The general crisis for the internal IT function as researched by White (2001:109) suggests that there is wide dissatisfaction with service delivery, cost and the quality of in-house Information Technology (IT) as a service. It seems that business in general has a problem with the time taken, the cost of developing information systems solutions, and IT support. Moreover, the process of solution development is seen as inflexible and cumbersome. Business executives are unable to assess whether they are getting value for money from their IT dollars. They know that they need IT but they have a sneaky suspicion that things were better before the advent of these so-called miracle machines (White, 2001:101).

These executives were wrong of course (Questionnaire results Chapter 3 page 61); it is probably the most competitive tool (computing) of the era, but not in the way their IT departments are delivering it. IT processes do not seem to be tuned into business cycles that are dedicated to the need to respond quickly to the market. Furthermore, the rules have changed: quality and price are basic prerequisites. What matters now is the speed of implementation and new ideas, which now defines the competitive edge (White, 2001:3).

When talking to people about the need to radically change the way they do in-house IT, the most common response is that business is being too critical towards the IT department and their service delivery (White, 2001:111). There may have been problems with the way IT operates in the business, but that is because they did not know what we know today. In modern enterprises it will be impossible to run a business without a computing function as a resource. In Chapter 3 the

study directs the focus on the specific problem regarding the tools and functions that drive businesses today.

Business just needs more and better tools (such as ERPs and Manufacturing Execution Solutions) in the form of integrated personal computing solutions, or understanding from the business as to why the company is outsourcing and why it is so expensive (White, 2001:113). The bad news is that the basics are wrong, so going back to them will make things worse, not better. The basics in this case refer to the mainframe that was outsourced versus the network that is currently in place operating the business (La Grange, 2005).

Someone once said that the definition of an insane person is someone who does the same thing again and again and expects different results. But this seems to be many executives' responses to the changing environment. The rules such as ownership and shared infrastructure to optimise cost have changed and it is now outsourced and not under company control as executives would have liked (White, 2001:33). (Control meaning security, ethics and integrity are ensured and not delivered by a second and third party strategic partner)

The first challenges in developing a new IT mindset are that cost is optimal and should be managed to deliver the required services and also, to be able to really see what is happening with the money paid for these services. Once IT has found a new freedom in which you are not constrained by old attitudes, it can look at business for some answers. Business provides many models and ideas for IT people to adopt. Many of the functions and in some cases, all of the IT functions are outsourced, and if they had a choice it would not have been the same if the decision had to be made again today. Some reasons for this are:

- Cost leadership
- Differentiation
- Innovation
- Growth
- Alliances

These reasons are hard to change if your company is in a contract for ten years with a strategic partner that does not make profit margins grow with turnover, when it increases the service delivery (White, 2001:37). The outsourcing partner should constantly investigate the following strategic areas to keep his focus on continuous improvement:

- Information Technology (LAN, WAN and GAN)
- Solutions Management (Enterprise Resource Plans)
- Communication Technologies
- Program and Portfolio Management
- Continuous Improvement (Net Gain Principles)
  (White, 2001:47).

In general these intended strategies were to implement networks and environments based on technology suppliers such as Hewlett Packard, Compaq, Alcatel, IBM and Cisco infrastructure as the core backbone infrastructure. The distribution and access layers as part of the LANs were hosted on Hewlett Packard, Mecer, Compaq and Dell. The idea was to continuously improve the environment by means of better technologies as well as optimising the current investment during the depreciation period of the asset.

The supply of connected desktops, laptops and all peripherals were strategically given to Compaq, DELL, IBM, ACER, Proline and Hewlett Packard, just to mention a few. These brands were selected on technology combinations that were compatible, high quality and affordable. A typical example of company growth that caused the IT environment to grow and escalate their IT cost is Sasol. Sometimes company growth causes IT to inflate because of joint ventures and mergers that form part of the company strategy for growth. In many instances joining companies causes IT cost to grow because of technology alignment that does not allow you to consolidate and therefore create double costs.

During the study the Sasol group of companies is used as examples referring and also comparing relevant information. The Sasol group of companies grew its Liquid Fuels business (like many industries during the last decade) from thirty thousand-employees to a fifty thousand employee

company with a product line of chemicals, oil, gas and technology worldwide (Cox, 2005). When companies grow, the technical environment will definitely increase; in the case of Sasol it grew to a total of one thousand three hundred servers situated worldwide in ninety six data centres. Workstations increased from eight thousand to thirteen thousand, causing the information management company's cost to increase from R500 million to R1.5 billion annually (Zwiegelaar, 2003). Workstations generally increase in line with the growth of employees in the industry when companies are joined or acquired.

At the stage that the study was conducted in 2004, Sasol was contractually bound with Hewlett Packard to supply all desktops and network equipment. (In the South African industry Hewlett Packard equipment was used to a large extent in companies on account of the support available in South Africa. The strategic suppliers in the outsourced deals also recommended it as the better choice at the time.) The weak Rand at the time the contract was signed (1999/2000) forced Sasol to sign a hedge contract at a fixed reduced exchange rate that allowed for savings at the time. The contract was signed for 5 years (expiring 2005) with Hewlett Packard as the sole supplier of back-office equipment and workstations.

The Sasol Limited Group's IM strategy to use as few technology suppliers as possible caused the business units to become misaligned, creating separate infrastructure platforms and designs that supported their unique requirements (Zwiegelaar, 2003). The strategic partnership with Business Connexion (BCX) allowed external expenditures to increase to unacceptably high levels as per the Gartner model (higher than 1.5 % of total revenue, excluding depreciation of capital).

The implementation of SAP R/3 cost the company almost R0.3 billion and was hosted on ORACLE and SQL. The total amount of SAP production instances supporting the businesses were 17. The international benchmark from Meta and Gartner (White, 2001:18) indicated that the amount of SAP users in Sasol were 8000, and could be hosted on a single instance called a "Super Dome". A Super Dome allows you to have one instance (Server or Box) instead of 17, making SAP configuration for different companies possible on one technology platform.

Sasol decided to embark on a pilot project (proof of concept) to develop a new management model and then possibly reduce IT cost as far as possible. The pilot project was initiated by Sasol in the Sasolburg environment, consisting of mainly chemical businesses. This enabled Sasol Limited to evaluate whether a business case existed for consolidating the total Information Management function globally. During this pilot project the main focus areas were identified as:

- Data centres, server rooms and disaster recovery plans (DRPs)
- Applications and SAP (Enterprise Resource Plan (ERP))
- Core, distribution and access layers (Wide and local area networks)
- Programme and portfolio offices (White, 2001:18)
- Digital output convergence (O'Brien, 2001: 109)
- Communications Voice Over Internet Protocol (VOIP) (Robichaud, 2005: 112)
- Manufacturing Execution Solutions (MES)
- Executive Information System Portals (EISPs)

The pilot project research was conducted in Sasolburg as per Appendix 1, at high risk to the Sasolburg Campus business units. It therefore needed full top management buy-in to make sure the commitment was visible and measured at high level. The aim was to meet the research statistics by the Gartner and Meta Group in R/user, indicating the IT expenditure as a percentage of total company revenue (1.5%) excluding depreciation of capital expenditure (White, 2001:11).

This entailed a total cost of ownership reduction of twenty percent based on total revenue, excluding depreciation on capital for the company or division. If this target was achievable it would be presented to the General Executive Committee for approval and to implement throughout Sasol Limited.

Table 1.1: Cost categories for Sasol Infrachem (Pilot Project)

ANNUAL COST PER CATEGORY IN MILLIONS	FY02/03 (Rm)	FY04/05 (Rm)	% Reduction
Desktops	4	3	25%
Laptops	2	1.5	25%
Services	34	28	18%
Infrastructure	18	11	**39%**
Digital convergence	16	6	**62%**
Enterprise Resource Plan (System)	25	18.5	26%
Telecommunication	6	4	33%
Total	105	72	31%
Total Delta %	**Reduction**	31.4	**31%**
Annual cost per user	R23333-00	R16000-00	31%
Monthly cost per user	R1944-00	R1333-00	31%

Source: (Extract from Financial Statements from 2002 until 2005 Sasol 1, Sasolburg)

The focus areas for operation expenses are the cost buckets as presented in Table 1.1. These cost buckets also form the key performance areas for the Information Manager. It usually focuses on the areas that are the most costly for the management of information when the service is outsourced. Services and Enterprise Resource Systems are the most expensive components and are also the main applications for running the business. This created risk for the company when a possible reduction in costs would affect the availability of systems to do business. Looking at the results of the pilot project it is clear that the total cost has decreased by 31% during two financial cycles indicating clear room for improvement in the historically outsourced model. The biggest improvement was achieved in the digital convergence (62%) and infrastructure environments (39%). This is a clear indication of merging technologies and disruptive innovation affecting the cost positively. Also standing out is the 26% reduction in ERP cost confirming the stabilisation of

the business processes. The cost is reduced because the consulting service is reduced due to less support required.

1.2. Implementation of Federal Models in South Africa

South Africa has transformed itself over the last decade into a technologically developed country with modern communication structures supporting IT networks. The problem is that South African companies are experiencing the painful transformation into process driven enterprises (third world country with first world systems). This causes the world class systems and applications to generate huge supporting costs (Table 1.1). The following companies were used for research because they have implemented the so-called Federal Model (Chapter 4) to outsource their IT function.

Table 1.2: Companies used for research

Sasol RSA	AST RSA
Sasol USA	NATREF RSA
Sasol Europe	MOSGAS RSA
Mittal Steel RSA	IBM UK
ESKOM RSA	NEDBANK RSA
TELKOM RSA	DOW RSA
ABSA Bank RSA	Other
BCX RSA	

Source: (www.top300.co.za)

Based on their experience during the last five years of outsourcing we can be sure that the population represents the best possible findings for the study. All these companies have a South African footprint that not only allows them to compare their findings, but also to form an idea of what the real business need is for IT to succeed as a business partner.

1.3. Problem statement

Business identifies gaps in the Information Technology model (Figure 2.2) that they need addressed, enabling them to be more effective (as discussed in Chapter 2). Typical gaps such as the following as listed bellow.

- IT model to support mergers, joint venture during the due diligence phase
- IT model not in place to use for benchmarking
- IT value proposition not clearly defined to business
- IT not aligned with business processes and demand
- IT is seen as expense, and not core business
- Congruent time cycles in sourcing strategies

Companies such as Sasol in South Africa outsourced their Information Technology component based on business requirements. This created an opportunity to evaluate the possibility to outsource the international IT component to optimise the economies of scale for Business Connexion as the strategic supplier of all IT related services.

The following areas of technology were of concern in South Africa linking up the gaps identified in the above paragraph (La Grange, 2005).

- Local Bandwidth requirements (ATM switching and Virtual Private Networks)
- Telkom stability (WAN and GAN)
- Different SAP R/3 version and contracts (ORACLE versus SQL)
- Diverse technology implemented infrastructure
- Committed outsourced contracts
- Uncontrolled spending with regard to service consulting, consumables and peripherals.

There is a general belief in the business that IT only increases expenses without adding the necessary value required from them as a business enabler, in assisting the company in creating

wealth for shareholders (La Grange, 2005). The shortage of proper management models to guide IT departments to achieve their goals is becoming an opportunity to investigate.

1.4. Objectives of the study

The study will focus on primary and secondary objectives to answer the objectives for the reader. The study will provide information and research supportive of both the primary and secondary objectives, but more in detail the primary ones. The study will search for answers to support the final objective of a management model and comparison tool.

1.4.1. Primary objectives

The primary objective of an IT department should be to support the company strategy. In most cases the strategy is twofold, namely business alignment and a process driven enterprise. The problem statement in the above paragraph 1.3 becomes the primary objective of this study. The following issues are seen as problem statements to address the business alignment and process driven enterprise.

- Currently, there is no accepted model in the industry to compare the costs between companies, divisions or departments.
- Also adding to this is the availability of a management model to be used to manage the IT department assuring business alignment of any process driven enterprise.

This can enable companies to merge and join forces, based on an easy and understandable cost base for IT. But the question still remains as an overall objective: *Can IT support the business in executing its strategy and reduce the total cost to company for IT expenditure?* This reduction in total cost to company and to achieving alignment with world class platforms and standards with regard to technology at low cost, is based on an IT outsourced Model. The current model that is popular is the so-called Federal Model. It is moulded formed to suit the IT function and has no formal methodology to execute or implement. The Federal Model utilises demand and supply as

a platform for execution of the outsourced environments strategy; this model needs in-depth research to be implemented successfully.

1.4.2. Secondary objectives

The immediate cost reduction was not necessarily the focus, but rather to keep the cost fixed, and still grow your business while creating a stable and secure environment, identifying the risks, and managing them effectively, thereby enabling business to operate with a twenty four seven business plan. A proper management tool must be designed to evaluate and manage the risks and stability. A questionnaire will be used to support the management tool to be effective in identifying the issues. Previously the process performance based contracting was used to force commitment from the suppliers used in the process (risk and reward).

1.4.3. Literature

The study is based on information gathered in South Africa during the period 2000 until 2005. The pilot project in Sasol will mainly be used as input information, as well as research, benchmarking and interviews to support a bigger picture (generalised model). The research and results from the pilot project will be used as input to the transformation process for companies. To simplify and reduce the probable risk caused by the alignment, it is important to utilize the results from the pilot project, which is already aligned with the bigger business model. In order to sell this initiative to executives, the risk must not affect the business's growth or stability and most of all, its increased expenditure.

1.4.4. Empirical method

The overall empirical study was based on the IT Model (Federal IT Model Figure 1.1) and a strategic partner that must support the Information Technology trends, as well as the business model that this strategic partner supports by mainly focusing on the growth and stability of the business. The general outsourced IT model is based on "demand versus supply". Figure 1.1 demonstrates the way that the model executes itself, and stipulates the discipline to make it

effective and stable. Customers must take the lead in demanding the delivery from second party suppliers of IT services, and on the other hand IT companies must take the lead in supplying and satisfying this demand based on a master agreement.

Figure 1.1: Federal (IT) Model
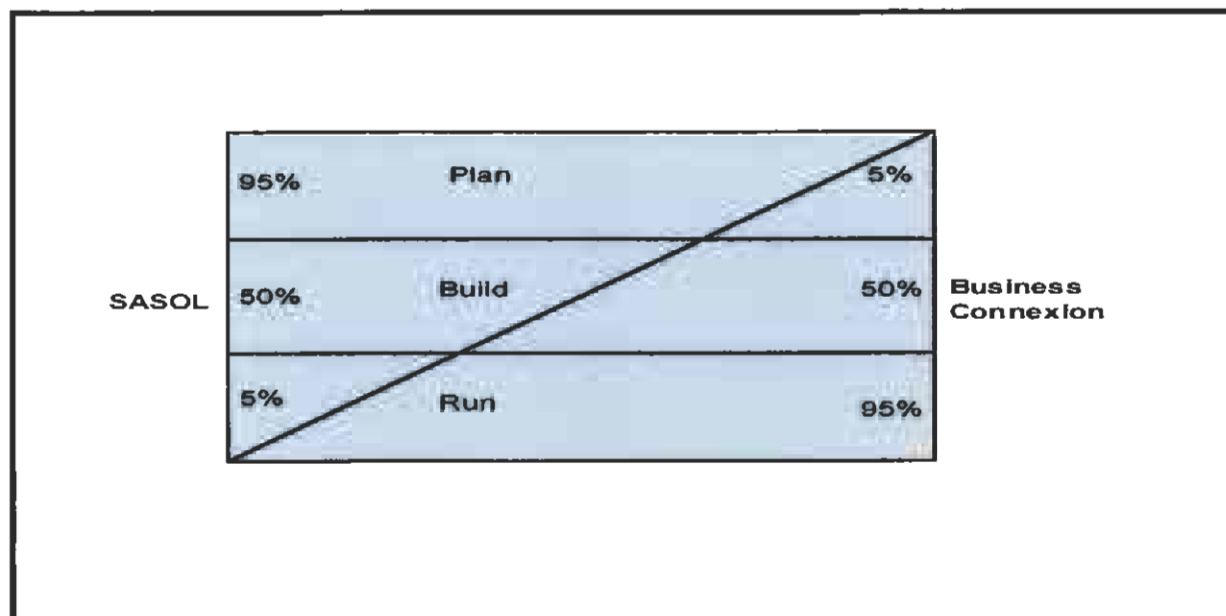
Source: (White, 2001:23)

(Replacing customer with Sasol (y-axle) and IT Partner (X-axle) with Business Connexion)

Figure 1.1 shows the three phases that the IT Model has for implementation (plan, build and run). The line from the bottom left to top right divides the responsibility between the two parties when initiatives are designed, implemented and managed. The strategic use of an IT Model and focus areas during the day-to-day operations will ensure that customers take the lead in driving research of new technologies, and then propose this research to the strategic partner in order to advocate the use of the technology and application that will give them a market edge. It is very important to take note of the planning (strategising) phase, which is owned by the customer for 95% of the time and the partner only 5% for their inputs. The building phase forces the two parties to commit time, resources and funds into a 50/50 partnership. This will ensure that both strive for success with the initiative. The final phase will leave the 95% management in the hands of the partner and the customer only involves himself with the management of the contract and service level agreement. The objective of the model is to make sure that the company does not fall behind with

technology, and also to support them at low cost in managing the IT total supply on demand (Robichaud, 2005: 10).

1.5. Scope

The scope of this study is to strategically evaluate the IT operation and expenditure in the outsourced environment: The next step is allowing the stakeholders to highlight their concerns by means of a questionnaire. The responses from the industry can then be used as an input to design a management model for the modern IT department. Rather than building on an existing evaluation model enabling comparisons to take place between IT departments and companies, a new model will be designed. This model will take the critical cost factors into consideration. The 7S-model (McKinsey, 2005) will be used as a base to create a questionnaire for the survey that will be conducted. The model focuses on the seven elements of general business management (Figure 3.1).

1.6. Deliverables

From 1995 to 2000 most corporate companies in South Africa outsourced their IT functions. It seems that the "buzzwords" were the Federal Model and federalism. It also addresses the so-called "Federal Model" as a measurement for supply from demand that was used to see if the strategic IT suppliers were meeting requirements as per the 7s-model by McKinsey. Companies such as Mittal Steel Limited and Sasol Limited used it as a model based on supply and demand to outsource their IT functions to IT companies such as AST and BCX respectively. This study will supply the IT function with feedback from company executives with regard to their experience with the outsourcing status. The research will then be used together with the survey results to design two elements (comparison and management models) that can support the CIO to manage his or her departments better if outsourced. The final outcome of the study will address the following two aspects in detail:

- A management model that can address the resources needed as well the structure to support them (O'Brien, 2001: 88).

- A comparison model allowing IT departments to compare their business alignment and its costs (Robichaud, 2005:152).

1.7. Data collection methods

All data was collected via the Meta and Gartner websites, research, benchmarking, interviews and CIO forums. The data was used as input to do interviews with top management executives, and the results from the pilot project in Sasol served as the guideline for implementation. The questionnaire was then designed to gather information needed to design a new IT outsourced model based on criticism in the current outsourced state of South African companies. This questionnaire will be mailed to 80 possible participants to improve the accuracy of the information. Important to take note of is the fact that the questionnaire was not sent to any CIO or IT resource; it was clearly focused on business executives and management (senior and junior). This would target 15 management teams with their members as participants that live with the IT situation on a daily basis.

1.8. Data analysis

All data received from the questionnaires, pilot project and research were carefully evaluated and kept confidential. The detail was used to align the objectives of the study. Examples of changes were the creation of CoE's and a smaller executive committee. Where possible, more interviews were conducted to obtain inputs in the design of the management and comparison models. The interpretation of the information must support the business requirements and reflect the possible solutions in the applicable models to be designed. The results from using such models must assist business and IT departments in achieving better results with the outsourced IT situations.

Pareto Principle: The possibility of a Pareto Principle stating that 80% of expenses are caused by 20% of the environment or suppliers has not been proven in the IT environment. After searching all possible sources it could not be proven that the Pareto Principle applies to IT in South Africa. Looking at two companies - Mittal Steel Limited and Sasol Limited - the percentage looks quite different than the 80/20 approach.

Table 1.3 illustrates that the 80/20% Pareto Principle does not apply for these two companies when it comes to IT costs. The figures indicate that four out of the seven cost buckets are responsible for 88.6% of the IT costs in Sasol Limited and 89.4% in Mittal Steel Limited. When considering the seven cost buckets it indicates that 57% of the costs in these two companies are responsible for 89.4% and 88.6% of the total IT costs.

Table 1.3: Cost categories from financial statements

Sasol Limited	FY02/03	%	FY 04/05	%
Desktops	4	3.8	3	4.2
Laptops	2	1.9	1.5	2.1
Services	34	32.4	28	38.9
Infrastructure	18	17.1	11	15.3
Digital convergence	16	15.2	6	8.3
Enterprise Resource Plan (System)	25	23.8	18.5	25.7
Telecommunication	6	5.7	4	5.6
Total	105	100.0	72	100.0
Mittal Steel Limited	FY02/03	%	FY 04/05	%
Desktops	3	3.5	3	4.5
Laptops	1	1.2	2	3.0
Services	28	32.9	25	37.9
Infrastructure	15	17.6	17	25.8
Digital convergence	12	14.1	3	4.5
Enterprise Resource Plan (System)	21	24.7	12	18.2
Telecommunication	5	5.9	4	6.1
Total	85	100.0	66	100.0

Source: (La Grange, 2004) and (Van der Bank, 2005)

1.9. Conclusion and recommendations

After evaluating all the information from the research, pilot project, survey and interviews, a conclusion will be made to what the outcome of the study was based upon. The conclusion will direct the reader to form a well supported idea to what the general status of the outsourcing models in South Africa is; it will also indicate the possible gaps that management sees as opportunities to improve.

The conclusion and recommendations are done to assist companies in addressing problem areas by using a management model as guideline and also a comparison model to compare different IT functions on a neutral basis. Lastly, strategic business thinking will generate new ideas for the renegotiation of the outsourced contract.

1.10. Summary of research methodology and layout

There was a fixed and firm methodology used because of the diversity of information needed, information such as management and user feedback to how they felt about the service rendered to them by IT and the outsourcing partner. The important factor was to ensure that all the results from the pilot project could be verified and supported by some success stories in other companies. The research makes the results factual and real with kinetic and potential energy driving the momentum for continuous improvement. No ERP Model can be implemented in all business environments, because it has no limitations and every company is unique (White, 2001:88).

Table 1.4: The layout of the dissertation

Chapter 1:	The nature and scope of the study and sketching the problem statement. The primary and secondary objectives of the study.
Chapter 2:	A comprehensive literature study guiding the dissertation in a direction to evaluate the problem statement in achieving the objectives of the study.
Chapter 3:	An empirical study done by means of textbooks, the Internet, interviews, questionnaires, financial results from companies and by combining all of these empirically to make sense of all the data. The study designs a cost comparison and management model and illustrates how to use them in combination to come to conclusions and recommendations.
Chapter 4:	Based on all 3 chapters the study will give a clear understanding to come to a conclusion and make recommendations for companies with an outsourced IT function.

1.11. Terminology clarification

Table 1.5: Terminology clarification

Acronym	Descriptions
AECI	African Explosives Chemical Industries
AST	Advance System Technologies
BCX	Business Connexion
BD&I	Business Development and Implementation Tool
BPO	Business Process Optimisation
BT	British Telecom
CARG	Calculated Annual Revenue Growth
CIO	Chief Information Officer
COBIT	Central Objectives for Information and Related Technologies
CoE	Centre of Excellence
CSC	Critical Success Factors
DOV	Definition of Victory
DRP	Disaster Recovery Plan
EDS	Enterprise Development Systems
EISP	Executive Information System Portal
ERP	Enterprise Resource Plan
GAN	Global Area Network
GIM	Group Information Management
HP	Hewlett Packard
ICT	Information Communication Technology
ITIL	Information Technology Infrastructure Library
MES	Manufacturing Execution Solutions
NPV	Net Present Value
PMO	Programme Office
SAP	Systems Application data Processing
SOLM	Solutions Management
TCO	Total Cost of Ownership
TCOR	Total Cost of Ownership Reduction
VOIP	Voice Over Internet Protocol

1.12. Implementation summary

It is strongly recommended, when using this study, to make use of an implementation model to assist them in the process. The model (Example BD&I model) will assist them in making the correct decisions at the correct time before implementing any results. A good model to use (especially when handling the implementation as a project) is the Business Development & Implementation model developed by Sasol Technology. See Appendix 3 for more detail and how the model is designed. The model guides the process of implementation and assists in closing gaps from all project management angles.

Figure 1.2: Implementation Model (See also Appendix 3)
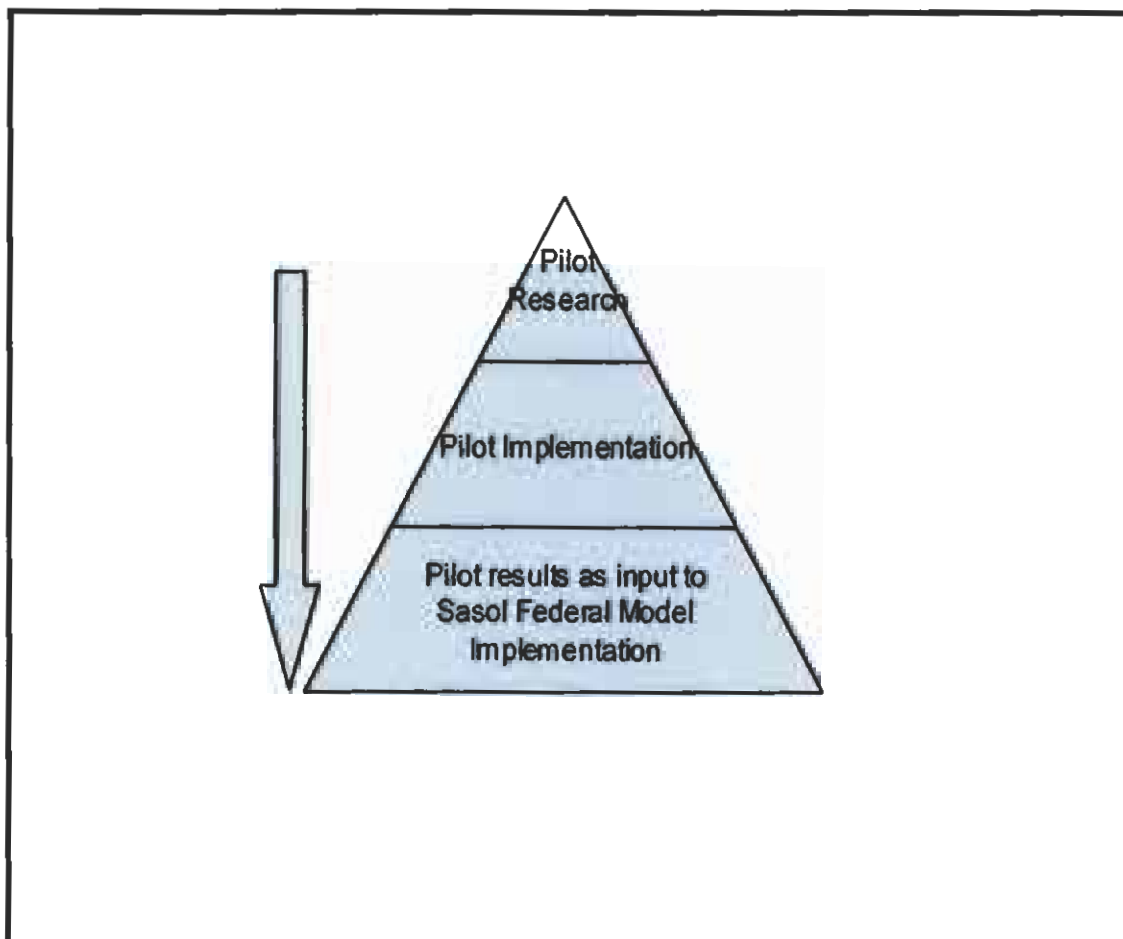
Source (Sasol Technology's BD&I model)

The model in Figure 1.2 (as extracted from the BD&I model) is used in Sasol for all strategic projects ensuring one follows the correct procedures to be successful. The model has 3 basic steps and then 7 gates that should be passed for approval:

- Gate 1 Idea packaging
- Gate 2 Pre-feasibility
- Gate 3 Feasibility
- Gate 4 Basic development
- Gate 5 Execution
- Gate 6 Start-up and hand-over
- Gate 7 Evaluation and operation

1.13. Summary

The IT transformation in the world during the last decade caused the cost to escalate dramatically. The new Chief Information Officer will have to take a firm stand in order to reduce costs and sweating IT assets. Boards approving IT expenditures without proper business cases are something of the past (Robichaud, 2005: 88). The one major IT question still stands out: Does the cost for IT meet the expected delivery and value add company executives thought they would get? This study acts as the introduction to a well formulated method for any IT environment to react to the challenge by senior management in order to prove that the expenditure was correctly done in the past. The study also evaluates the possible design of a comparison model between IT functions in different companies in the industry. The model then unfolds itself from a management model approach to support a best practice organisational structure to make IT part of the strategy and core business of a company. The scope of this study is limited to boundaries of the South African border during the period 2000 until 2005.

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Chapter 2

Literature study

2.1. Introduction

The literature study focuses on the specific drivers in the IT environment that are used for deciding which models and methods must be used to outsource its IT function, still adding value to the business to be profitable. It seems that cost, IT knowledge and business processes are on top of the list with all when outsourcing is discussed. The internal and outsourced resources can play a major role in the success of the models and methods used when outsourcing is considered. How they all fit into each other must be researched to enable us to build the optimal model and method for outsourcing an IT function. One of the ways that can assist IT professionals/organisations to get a good view into the results and lessons learned up to 2005 when it comes to IT outsourcing, is to benchmark with the international market and find out what is being measured to have a successful outsourcing strategy and also to have the results as a possible management information.

(Take note that Meta and Gartner merged during the time the study was conducted).

2.2. Additions to support problem statement further

Supportive to the initial problem statement the following needs to be addressed in chapter two. The IT outsourcing problem is bigger than the scope of this study and as previously mentioned and thus the study will only deliver a management model and a comparison tool for business and information technology in assisting them to be more business orientated and cost effective.

2.2.1 IT model to support mergers, joint venture during the due diligence phase

Modern companies are always looking for strategies in the businesses to grow or sell parts of their businesses; this means that the IT model must be extremely flexible when it comes to mergers, joint ventures and the buying and selling of part of a company. The IT operational model must be designed to flex itself around any situation in order to support the initiative with as few limiting factors as possible. The model must attract the new venture in such a way that the value proposition is acceptable for all parties as a good one (Gartner, 2005:19).

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2.2.2 IT model not in place to use internationally as a benchmark

Structuring the actual spend buckets to enable the company to benchmark is extremely important. This must allow for "apple with apple" comparisons and creating opportunities to improve the service delivery (La Grange, 2005). Worldwide CIOs are striving to find a solid comparison model that will enable them to compare IT costs between companies. When designing metrics that does exactly this; measurement is difficult in the sense that IT is unique in every company depending on the size and type of business. The aim of the study will be to look at a cost comparison and management model to support the metrics needed by the industry to manage their outsourced IT function.

2.2.3. IT value proposition not clearly defined to business

The business feel (from interviews done) that IT people do not market themselves well and many times the initiatives driven in IT is seen as costs that must be spent to keep up with technology. The problem is that after the money is approved the business case flies out of the window and never gets communicated if it was proven or successfully implemented. This creates the idea of Black Hole spending (White, 2001:202). The general management feeling is that money just disappears and the value is never extracted.

2.2.4. IT not aligned with business processes and demand

If the IT model does not allow the Information Manager to have a seat in the top management team resulting in reactive management and creates misalignment between IT and the business objectives. IT must be part of the strategic design of the company enabling the company to execute its strategy with the technology that supports it optimally (Swinden, 2004:14).

2.2.5. IT seen as expense and not core business

As soon as the stage of misalignment (IT strategy versus business strategy) is reached between the business and the IT function, cost becomes an issue. This could sometimes drive the wrong behaviour to cripple IT in the effective delivery of the IT services needed to operate as a business enabler (Durie, 2005:7).

2.3. International Information Technology industry on outsourcing

2.3.1. The British private sector and IT outsourcing

In further support to the total objective the study, the research must investigate international reports and information to make a comparison between the South African industry and the international industry. Research by Swinden (2004:2), a UK-based research group, shows that the British private sector buying outsourcing services is concentrating more on IT outsourcing than business processes. The report highlights a large increase in private sector outsourcing, with IT contracts driving the increase in value. The British private sector looks at outsourcing moving towards technology driving the future of the businesses. Best practices are generally captured in outsourced models with technology-driven processes to support them. The report further indicates that by 2005 to 2006, the total value of all UK private sector's IT and business outsourcing will reach £46.5 billion, representing a growth of 228 % from 2000 to 2001 (Swinden, 2004:3).

Figure 2.1: Manufacturing Value Chain
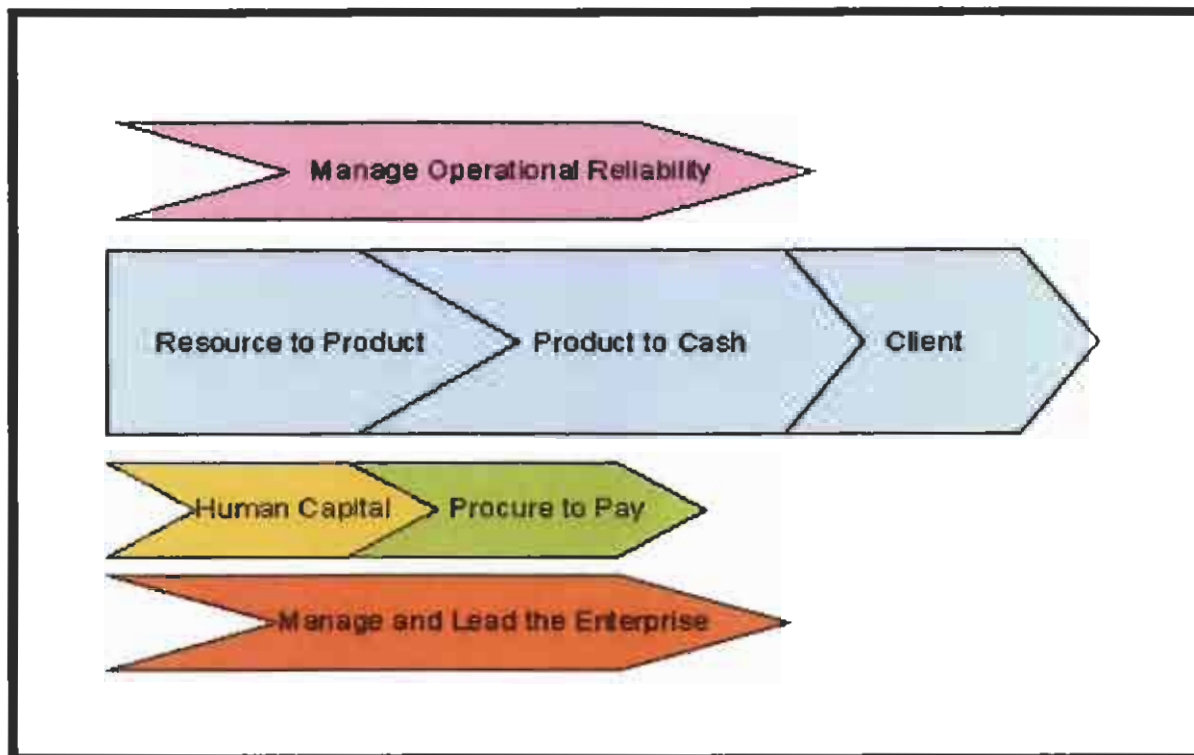
Source: (Swinden, 2004:99)

Process driven enterprises usually implement integrated systems to drive their operations. Referring to figure 2.1 the main focus for any business will be the operational value chain resource to product, product to cash and delivery to the client (Swinden, 2004:13). The supporting functions such as managing operational reliability, human resources, procurement and finances must be integrated with the core business, allowing real-time reporting and informed decision-making. When businesses implement Enterprise Resource Planning systems the idea is to have a complete implementation in order to extract the maximum value from the technology investment.

According to Gartner, the general outsourced models are outsourcing everything in IT i.e.: Infrastructure, Applications, Call Desks and Human Resources, security and hardware (Gartner, 2005:45). Research by Swinden states that the trend in the UK is moving toward outsourcing: Not only IT, but other functions as well, such as logistics, marketing, payrolls, maintenance and financials. Outsourcing all of this puts the business in the hand of a strategic vendor as an

outsourced model. This creates risk when not understood properly when deciding the method of operation between the two parties. Risk to mitigate in this regard is the way that outsourced partners will handle their client's sensitive information with regard to backups and intellectual property.

Information Technology has also increased as portions of the total expenditure on outsourcing. From 2003 to 2004 IT accounted for 56% of the total United Kingdom market, followed by communication outsourcing and Business Process Optimisation (BPO), each of which accounted for 19 % of the market. Managed services have the lowest proportion of spending, at around £2 billion. The outsourced IT function is reaching the economy of scale needed to make the IT market in the UK cheaper compared to in sourcing (Gartner, 2006). There seem to be a general consensus that BPO is fuelling the outsourcing market, but Kable's analysis of public sector, clearly demonstrates that Information Technology is playing the leading role. This forecast is to continue for the next few years to determine if the results is worthy of the investment (Swinden, 2004:4).

The study shows that the biggest outsourcing activities has been in the health service, where outsourcing contracts escalated by 54 % from 2002 to 2003 to reach just under £35.5 billion by the end of 2003 to 2004, mainly as a result of the National Health Program. The British health sector must have used some form of information to make the decision to outsource. The new fields of out sourcing can use IT as a benchmark to use before outsourcing is done.

2.3.2. Outsourcing in Australia

Offshore outsourcing Information Technology has the potential to create new jobs, provided the Information Technology industry can assertively position itself as a destination for offshore work, by creating support centres that will serve as call centres for any company to use worldwide. This is a myth. The reasoning behind the myth is that technology changes. The following laws quoted by Gartner supports the myth (Gartner, 2005:65):

- Metcalfe's law: The value of a network rises with the square of the number of users.

- Gilder's law: Communication bandwidth doubles every six months.
- Moore's law: Data density of computer chips doubles every two years.

The value in this is the economies of scale as well as the solution database that is created to solve IT problems. Modern technology assists support centres to remotely support users by taking over control of their workstations to fix problems. A factor that creates risk is distance between the call centre and the user being influenced by weather, storms and other natural disasters. Business leaders feel that outsourcing models and IT governances are not living up to standards worldwide. The reason for taking a few steps back is costs; why is it not showing lower cost with better support?

The objective of outsourcing a decade ago was based on IT equipment that is totally outdated and redundant in the modern industry. Do companies still seek support for the same environment as they did ten years ago? Is the cost per end user the same and do they pay the lowest rate with the newest technology? Speaking at an offshore outsourcing summit, the Australia Industry Information Association's (AIIA) CEO, Rob Durie, said: "The overarching priority of AIIA, both in publishing this research and in its policy deliberations, take advantage of the global sourcing phenomenon (Durie, 2005:4).

Durie (2005:4) then criticized other media commentators for painting a grim Information Technology picture of how offshore outsourcing would affect Australia. CIO's should, rather than following the lead of other reports and commentators which have thought to tell the industry how it should respond to the challenges of global sourcing, ask their customers what their intentions and the implications are for the industry. The outsourcing and supporting of industries in the Information Technology sector is a business-unique process with customized outsource models. Does the model support technology and does it support the end users? In many cases the IT department stands in front of the executive teams and does not know how to defend the expenditure for the last decade, and the value that IT adds to supporting core business processes, as well as how it is adding to the bottom line. The answer might be a model that is re-invented for current needs.

Australia is relatively slow in adapting to the global sourcing model; technology buyers process a pragmatic view of off-shoring, and that, where sensible alternatives for their organisations emerge, they will use it with little or no consideration for Information Technology industry implications. In response, the Australian Information Industry Association has developed ten recommendations that seek to address the challenges of global sourcing from both an industry and personal perspective.

The recommendations cover a number of areas, including issues surrounding aggressively promoting Australia in the United States of America and Western Europe as destinations for offshore work for both local Australian companies and Australian branches of multinationals, as well as assisting Small Medium Enterprises to identify core capabilities, workload capacity and providing feedback on their best offshore strategy. Australia, and other countries, can look at the ten recommendations to improve their outsourced model improving the delivery dramatically from a business point of view (Durie, 2005:5).

These ten recommendations are:
- Selective component outsourcing
- Performance-based contracting
- Maximum of three year contract period
- No first right of refusal
- Trade agreements for employees resigning from IT companies
- Multiple vendors in outsourced deal managed by demand party
- Quarterly rate negotiations
- Utility computing (pay per workstation for support)
- Separate vendor for help desk only
- Technology improvement incentive for cost reduction

Companies must base the outsourcing deal on a risk and reward model that balances the risk between the customer and supplier, this will enable the industry to achieve better results for the outsourcing environment (Durie, 2005:2).

2.3.3. IT and outsourcing requirements in the UK

Huge growth in IT and outsourcing-related consulting gave rise to double digit permanent management consultancy revenues in the UK over the last year (Durie, 2005:1). IT consulting revenues have grown by 59% since the consulting industry turned around in 2002, creating double figure increases in revenue and profits. The Millennium Challenge Association claims there is also a return of the "war for talent" at senior levels in the sector with 54% of firms reporting difficulty in filling positions for senior and management consultants. The financial services, transport and telecommunications public sector are offering the best prospects for consultancy work in the next quarter because they are the late entrants into the outsourced arena. The risk and impact is huge in the sense that all public finances, daily transport and communication can cripple the industry in a country if the services are interrupted or not available (Durie, 2005:2-4). The question remains unanswered until Chapter 3: *Is there a connection between the IT world and the service industry that has a value proposition for outsourcing IT?*

2.3.4. Information Technology and service delivery

Huge players in the IT outsourcing industry will face hard competition from service providers' alliances. Outsourcing providers face up to changes in their businesses and are gearing them to regroup their business models to be ready for the next round of outsourcing deals that will come their way. This creates an opportunity for smaller grouped alliances to challenge bigger market players with better service offerings and pricing structures that might change the way outsourcing is decided in the next round (McCue, 2005:2).

Some call centre companies have started to move away from being commodity "bums on seats" businesses by offering a more complex mix of services in an attempt to take a slice of the overall IT services market globally. Margins amongst call centre outsourced providers are being squeezed hard. This is, a result, in part, of the loss of call centres to near-shore countries like Eastern Europe, North Africa and cheap labour destinations like India. Add to this the fact that

firms are increasingly implementing web- and phone-based self-service solutions (McCue, 2005:9).

This is changing the types of call centre agents and has a potential to lower call volumes (McCue, 2005:1). One should keep in mind that the political climate and also the labour relating to this can place a huge risk on the user and also that cheap labour are only in the programming resources for Microsoft products. The IT resources are not yet freely available at low cost (McCue, 2005:90). These business models are alliances that can challenge the cost from big "guns" currently cashing in on outsourcing deals. IT resources are freely available and users are better skilled to handle basic problems, leaving call centres with fewer calls, but higher levels of solutions needed to solve user problems. Corporate enterprises are increasingly turning to outsourced providers who can transform the actual building phase, as well as running phase into reality for them, as part of an overall outsourcing deal, rather than merely outsourcing part of the existing business function. Outsource deals will have to cater for more than is currently in place to achieve the IT business enablement required. This is called a new breed of full service providers (FSPs) that offer a one-stop shop from everything from strategic consulting, through systems integration to call centre and business process outsourcing solutions (McCue, 2005:2). These trends are moving towards outsourced services with minimum risk for the customer and client. Outsourced services for e-mail, workstations, back-up and storage, and even digital convergence, bring lower costs to the user and superior service. When BT and HP announced in May 2004 that they would be developing shared go-to-market services, including a call centre proposition, they started a trend, says Powell (2004:2). Recently a number of alliances/partnerships have been announced between various players in the IT service and outsource space. These alliances aim to bring together various elements of the IT service and outsourcing puzzle to address customers' increasingly complex demands (McCue, 2005:3). However, a number of the elements of the services that outsourced providers, front-offices (call centre) and back-office (business process outsourcing), offer, do not differ dramatically from the next one. It will be crucial, therefore, for outsource providers to ensure they differentiate their services in innovative ways in order to win businesses, concludes Powell (2004:2). Implementing a solution in the form of ITIL or COBIT can assist businesses to successfully manage their Service Level Agreements (SLA's). A successful SLA obtained by contract from an outside

supplier, based on good measurement and an honest, open and transparent relationship, assists in driving down cost in order to reach maximum economies of scale. One of the largest challenges in developing relevant SLA's is the self-awareness and knowledge of the organization seeking the outsourcing. Too many organizations do not do a good quality job of defining their needs and solutions in a measurable manner, thus defeating a successful outsourcing engagement.

2.4. South African IT environment and outsourcing

Comparing the international research with the South African environment aligns the problem with outsourcing worldwide. In many countries South Africa is seen as a third world country and comparing some of the information around information technology outsourcing might bring light to the subject.

2.4.1. South African IT outsourcing market

The recent study by MBI-Tech-Knowledge, a South African based IT market research firm, predicts that the country's IT outsourcing revenue will show a CAGR of 15% over the next five years to reach nearly R5.25 billion by 2006. According to Stuart Herd (COO eQuals Group) the growth refers to IT-focused outsourcing and does not include Business Process Optimisation revenue. He added that the study should dispel scepticism from some local quarters, whose opinions are that the outsourcing potential will arguably fall short of delivery and the expected provision of jobs and profits (Herd, 2004:2).

Herd (2004:3) also adds that attracting foreign investors to South Africa and enticing them to regard the country as one of the preferred IT offshore outsourcing destination, depends on a number of factors, such as how much value is offered by providers. The study cited the telecommunications infrastructure as a vital consideration, and the ability to sell South Africa as a viable and profitable destination with a range of advantages. Herd also noted that the country enjoys cheap electricity supply apart from competitive cost of labour even at a fairly high skills level. Although South Africa is not really known as a good outsourcing choice, we need not only to look at the cost factor. The country needs to focus more on trying to add value and to offer

high levels of skills and service, but at a good price. If we are 20 or 30 % more expensive than countries like India or China, but our quality and service levels are better, then we have a good chance of attracting Business Process Optimisation business (Herd, 2004:2). Designing the outsourcing models to create innovative thinking for both the user and supplier can be one of the answers to the problem and also to address the period that contracts in IT are signed, based on the fact that new IT equipment actually reduce in price as time goes on.

2.4.2. Designing outsourcing to create innovating thinking

First Rand Chief Executive Laurie Dippenaar prides himself on leading a company driven by innovation and entrepreneurship. Dippenaar (2004:1) likens the group to the American Federal system. "We are not a monolith, but rather a confederation of profit centres all with their own policies, cultures and operating styles". The First Rand business philosophy underlies all the businesses. Our businesses are small, focused and swiftly exploit the profitable niches that become evident. Organisations that choose a Federal design are attempting to achieve the benefits of both centralised and decentralised designs (Wainright *et al.*, 2005:603).

Figure 2.2: Classic Federal IS (IT) organisational design
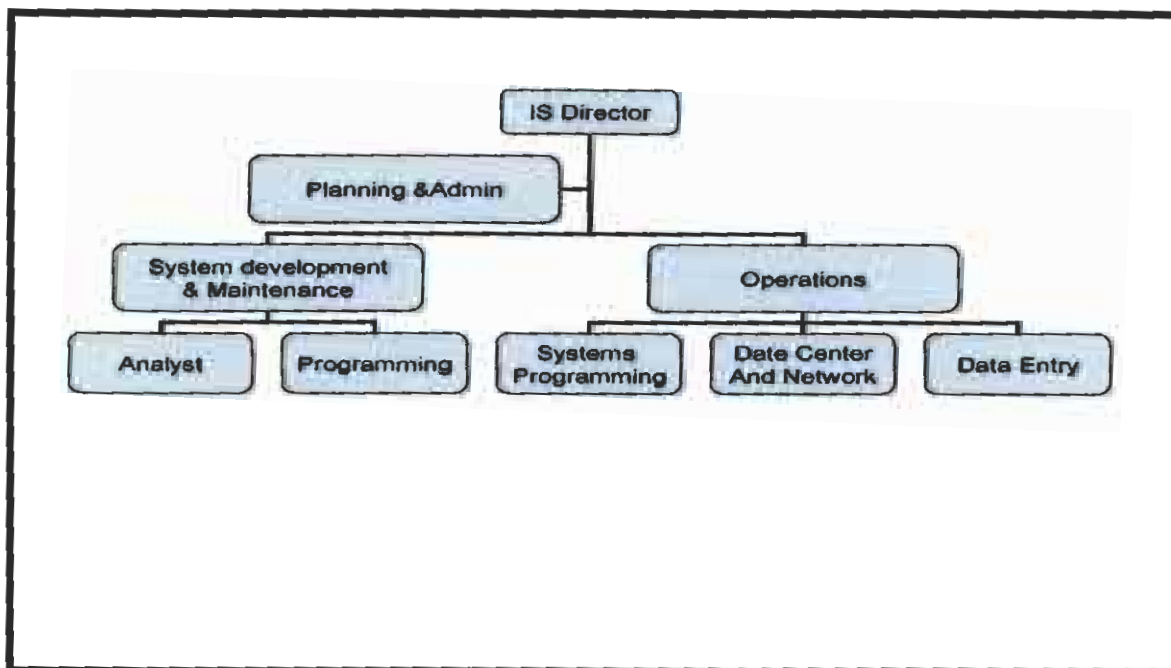
Source (Wainright *et al.*, 2005:604)

Figure 2.2 indicates the basic design for a Federal Model approach. It relates to the following terms in the South African Information Management environment where the Chief Information Officer is the IS director. This reporting makes execution of the IM strategy easier for the CIO (Wainright *et al.*, 2005:604). As previously mentioned, the Federal Model for IT has not been researched. The basic principle "demand and supply" is used to contract with a strategic supplier in outsourced deals. The Federal Model for IT was born at the same time as the Y2K and ERP implementations, where companies were desperately looking for methods to eliminate risk (Wainright *et al.*, 2005:609). The basic design in Figure 2.2 only addresses the organisational issues of design principles and not the implementation or the "how" for outsourcing IT services.

Figure 2.3: Federal Model at Sasol Ltd.

Source: (La Grange, 2005)

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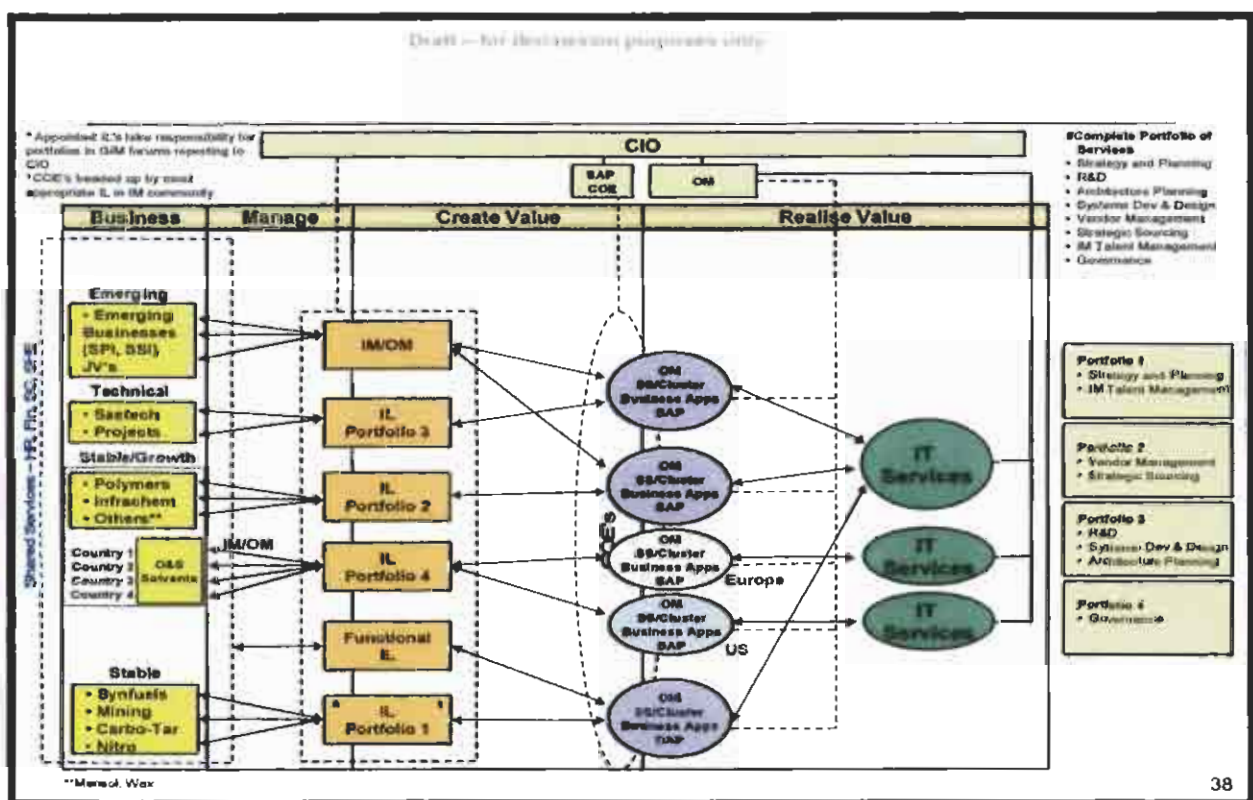
The Federal Model, as customised by Sasol Ltd, is based on a three tiers structure:

- Tier one is the IM Executive Committee, which is the decision-making body.
- Tier two is the Information Managers as part of the Business Units' management teams.
- Tier three looks at the operational issues and also the Centre of Expertise for joint applications (MES, SAP and process computing).

Once again it only focuses on the "what" and not the "how" needed in the form of a management tool or model. Using the Federal Model in this structure opens an opportunity for the most critical success factor, namely the contract and the SLA that must drive the model to excellence. A rule of thumb for good governance when IT services is outsourced, is centralised decision-making with decartelised implementations (McKinsey, 2006).

2.5. Service Management and Information Technology Infrastructure Library (ITIL)

Tools and methodologies used in outsourcing deals such as COBIT and ITIL are handy to address issues in the supplier relations environment and service delivery.

2.5.1. Linking between ITIL and outsourcing

Outsourcing your nerve system to a vendor of choice is a brave decision, says Nunes (2004:1). It also indicates the rule very clearly in which he is of the opinion that it is the key success factor for deciding on a partner and a process. The rule states that the outsourcing partner must understand the supported company's business model and take ownership of the company information it supports. In many cases the outsourced strategic partner will treat you as a user. When IT is in sourced the salary of the IT personnel depends on the delivery that they provide to the business and the end users.

When a dispatch system is down on a Friday afternoon the internal IT personnel will take ownership far better than any outsourced individual. It is here where methodologies like ITIL play an enormous role to support the business with the most effective Service Level Agreements,

as well as solution data bases for quickly solving problems affecting the performance of the business when placed in an outsourced partner's hands.

Information Technology Infrastructure Library and COBIT are tools that are well-known in the industry for supporting outsourced models such as Information Technology supply and demand (White, 2001:28). In Nunes's paper he also indicated that service management must be the foundation for an outsourced Information Technology department that will lean on a model for success. To make sure that companies do it correctly the first time round, the following should be considered: the case for change, outlining the benefits and critical success factors foreseen for the intervention and the analysing of the process described in ITIL (Nunes, 2004:1).

The ITIL partitioning thereof into in house and outsource service roles and responsibilities, and the development of a new ITIL based structure utilizing the existing non-ITIL compliant staff and subsequent implementation thereof, can improve the IT delivery (Nunes, 2004:1). Change management issues relating to the staff, customers, user base, management and board members are crucial. The adaptation required suiting the environment such as relationship management; procurement and IT service champions, and the learning from the journey (Nunes, 2004:1).

Figure 2.4: ITIL Framework:
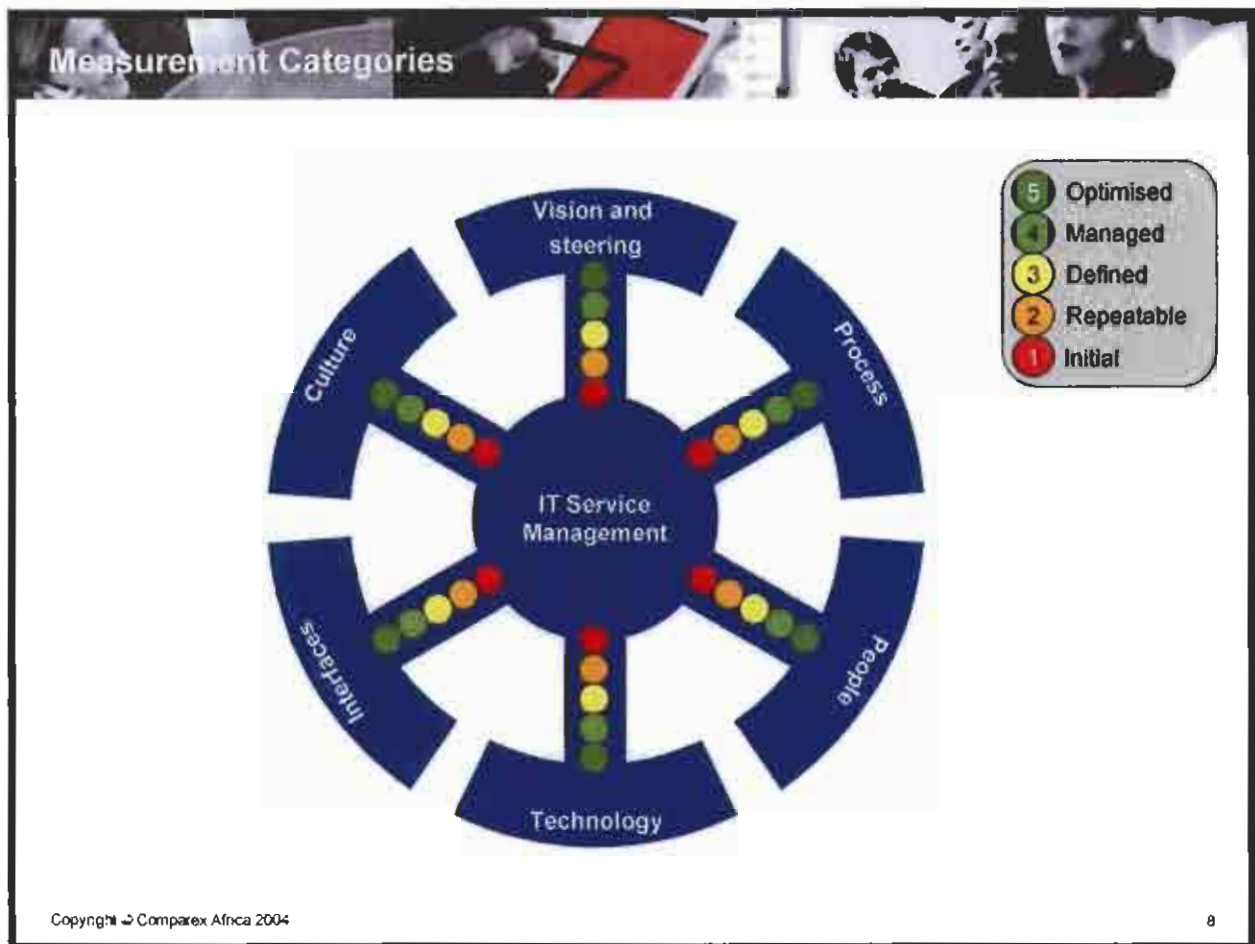
Source: (BCX: 2005)

Figure 2.4 indicates the six criteria used to compare the vendor with the service rendered. This is done by means of facilitation in workshops with applicable stakeholders. The robots will indicate as fully optimised and red, indicating the initial starting phase. The most important focus areas would be vision and steering. When the focus is correct the remaining five categories will automatically be affected in a positive manner, improving the total model. The levels of maturity required between the two parties must be contracted as part of the project charter.

Figure 2.5: Evaluation method:
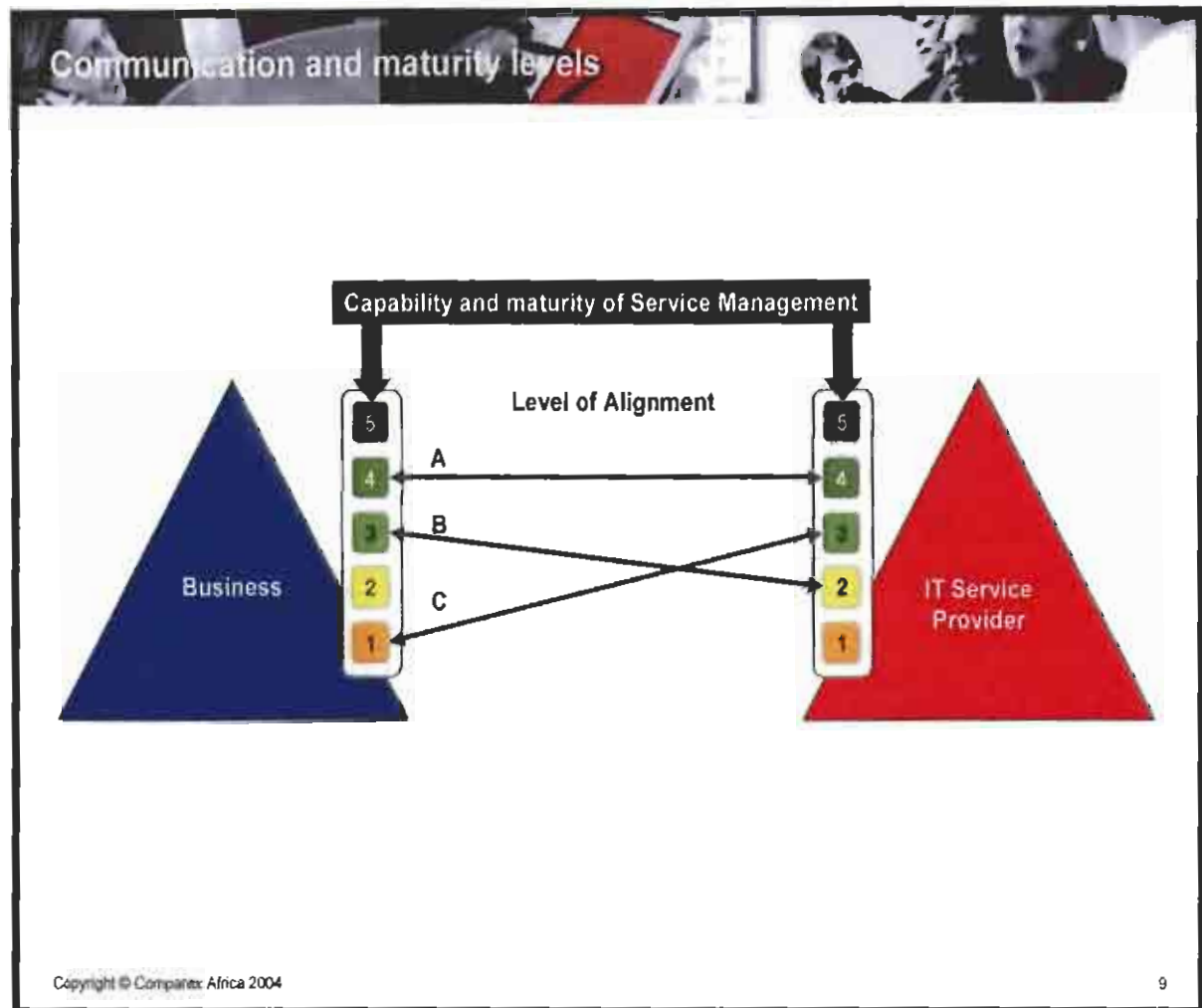
Source: (BCX, 2005)

Figure 2.5 indicates the identification of possible mismatches between the users and suppliers as seen by both parties. In many cases the customer and supplier is focusing on different categories to measure their success. This causes misalignment leaving the two thinking that they have achieved success. The customer usually pays for the service and will feel that the supplier is not meeting the required SLA as agreed upon, whilst the supplier feels he is doing extremely well with his delivery of the IT service.

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Figure 2.6: Sasol's desired state results for incident management (Pilot Project):
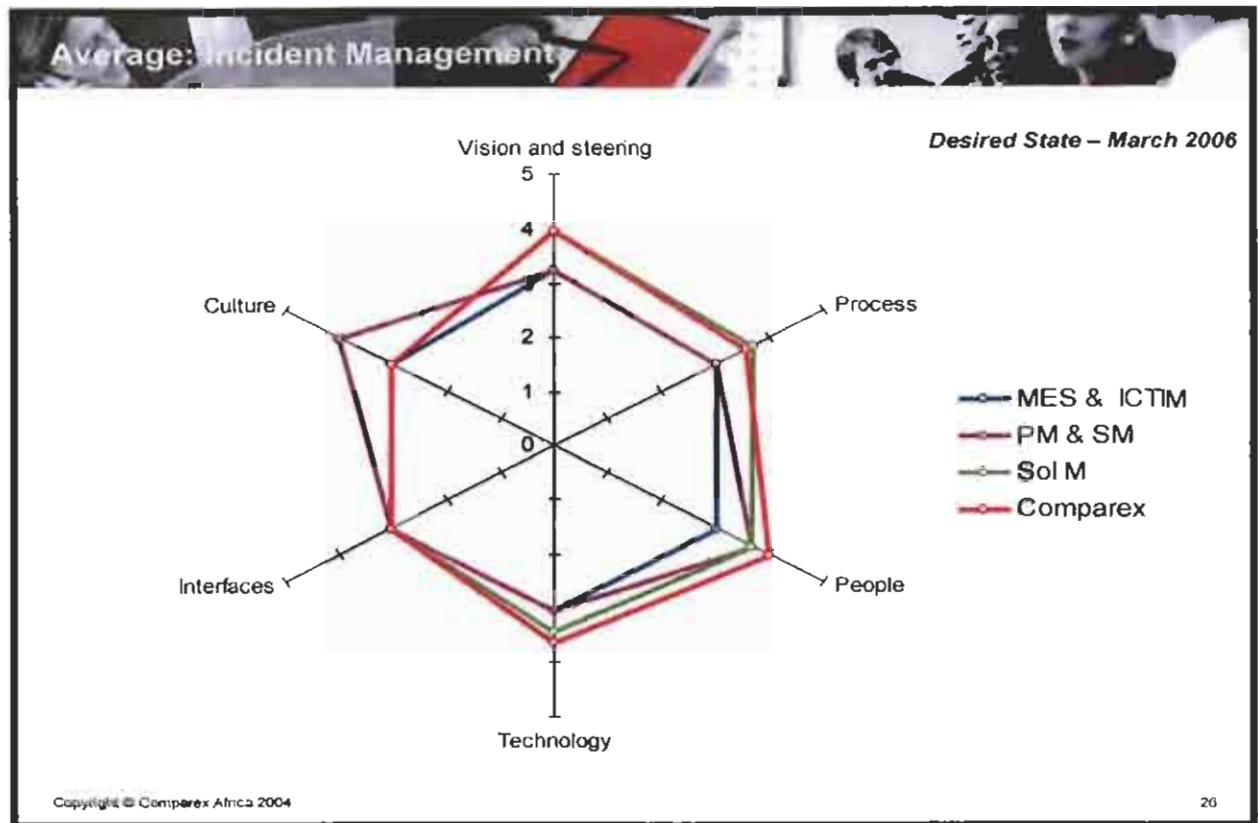

Source: (BCX, 2005)

Figure 2.6 is an example of the results from a typical workshop where the incident management function between the two parties was evaluated. It shows that four categories have different opinions and perceptions in regard to the delivery of this service. Using this model for each outsourced service can easily assist the two parties in identifying the possible gaps that can be filled to solve the problems. In this example huge effort is placed on people and nothing on culture. This state is part of the desired outcome of both parties before the project is started.

2.5.2. Service delivery Management Model in Information Technology

Information is one of the strategic corporate resources. It seems that the term Information Management is coming to the definition of only managing information and not technology. Daily business decisions are made based on the information provided by the systems implemented and used. This is a strategic resource that can enhance the business or have a detrimental effect on

strategy (White, 2001:28). The management of information and Information Technology requires a partnership between Top Management, Business Management and Information Technology.

Figure 2.7 Enterprise to control system integration framework
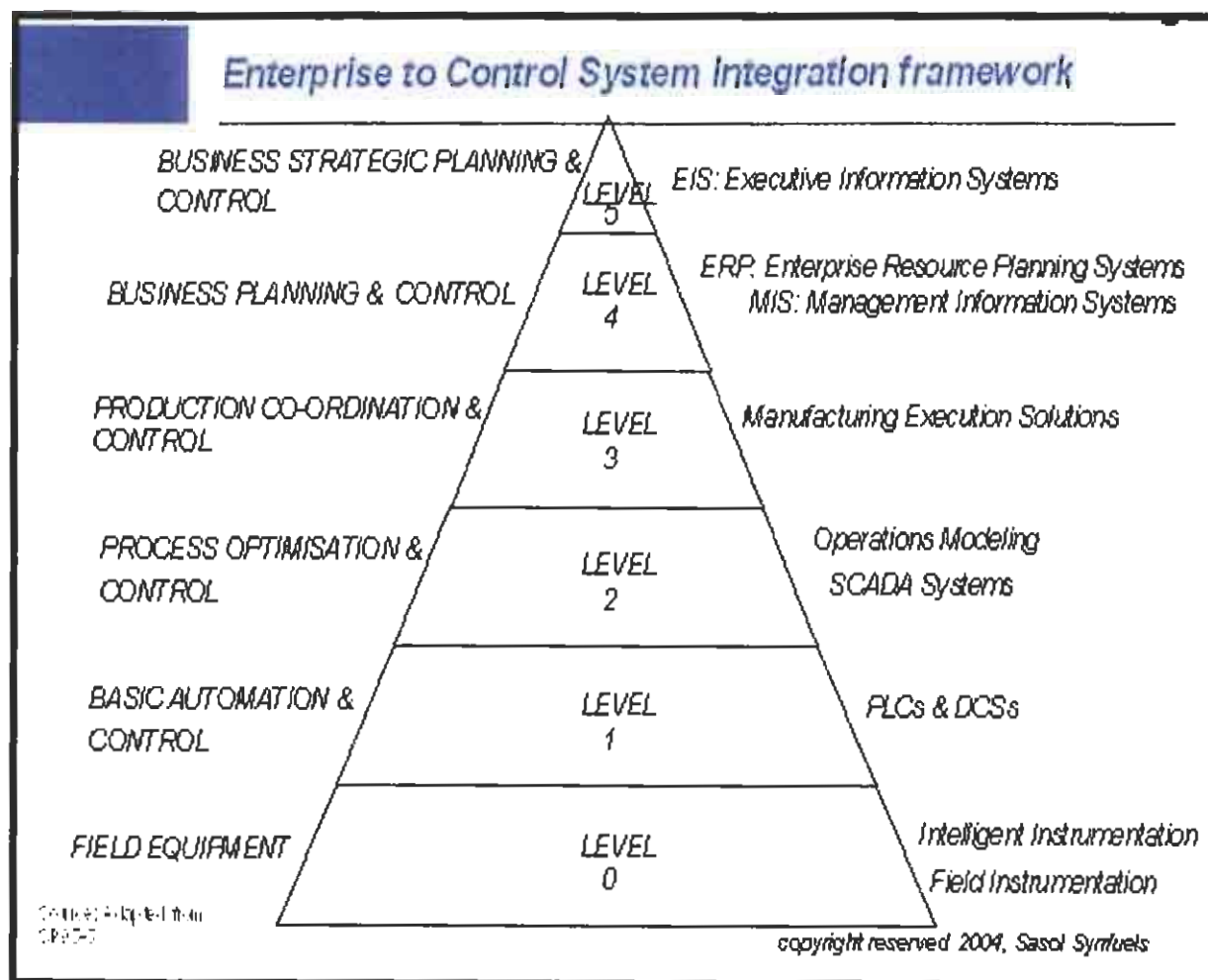
Source: (La Grange, 2005)

These layers, according to White (2001:62), provide the top management structures with correct business information to steer the company. Information Technology becomes the process owner of these processes and can therefore take the lead to establish a new paradigm - one that creates an environment which has direct linkage between operations and product delivery to customers: Customer Relations Management (White, 2001:128). New challenges emerge for Information Technology and the service delivery in relation to our partners. Creating the capacity in the partner to manage the technology under their control efficiently, transferring of skills,

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establishment of rules, standards and procedures sharing the best practices, are all experiences that were collected over some technological generations.

2.5.3. Service management in South Africa (ITIL)

Quite often companies contract consultants in and then expect that they are going to solve all the company's IT problems by implementing something like an ITIL framework. These frameworks should be part of the outsourced contract to deliver the service in any form of framework. ITIL and COBIT are but two of the mentioned methodologies that can be used to drive effective IT service delivery (Madiny, 2004:27). The reality is that there are a lot of intangibles that play a huge role in building a service-focused organisation. Firstly, IM cannot implement Service Management without changing the culture of the organisation to that of being functionally focused or even outwardly focused in terms of your customer, or start seeing yourself as a service organisation instead of a technology organisation.

The reasons for outsourcing the (five years ago) IT function could have been market- driven, or possible cost reduction shifting the responsibility to a second and third party vendor. The contractual agreement did not address the service management element of the contract delivery. The missing link is a management model to guide the process of outsourcing in the IT arena. What most organisations fail to do when implementing something like service management frameworks for supporting an outsourced model, is to provide the correct leadership and change management processes and focusing on people issues, because Service Management requires re-engineering the organisation (Madiny, 2004:47).

2.5.4. Culture connection to excellent service management

No matter which way one looks at it, when implementing service frameworks (ITIL) or any service management methodology it is not only about implementing the process or looking at the technology to fit, it is all about the people and the culture issues. Organisational Change Management is becoming an extremely important part of any IT project.

These initiatives to change organisations are based on four pillars:

- Organisational diagnosis
- Implementing change
- Approach to change and interventions
- Evaluation of the intervention

(Coetsee, 2004:196).

The four pillars that Coetsee uses for effective change management is aligned with the baseline approach that the general service frameworks uses to drive change in the IT environment. The one component that is not part of service management models is the motivational aspect. This slows down the effective implementation of any service model.

2.5.5. Business strategy supported by outsourcing IT

Nearly 40 % of international IT departments have an outsourced policy that is out of "sync" with the strategy of the business they are supporting, according to research by Gartner (2005:1). Despite the importance of IT outsourcing deals to the success of the business, 21 % of IT directors questioned by the analyst firm said their outsourced policy was "not at all aligned", with the business. This snapshot of IT outsourcing emerged from a Gartner survey of 68 executives in large companies during its annual European outsourcing and IT service Summit in April 2004. The survey revealed widespread dissatisfaction of suppliers. More than 50 % of those questioned, most of whom were IT directors said they were in the process of changing suppliers (Gartner, 2004:2). The survey also underlined the rise of offshore outsourcing – 57 % of respondents said they were considering outsourcing some IT functions to offshore locations.

IT Directors' top priorities were cost efficiency, service quality, adaptability and relationship management. Few of those surveyed listed how to build a business case and disaster recovery as among their top priorities when outsourcing. Wide Area Networks were the most popular part of IT to outsource, followed by voice and video networks and the IT help desk. Of all the services outsourced, they found one of them to stand out from the others as the worst part, the IT help desk (Gartner, 2005:2).

2.5.6. Revising outsourcing after five years

Technology in the IT environment or any electronic market declines in value, mainly because of disruptive innovation. Outsourcing the IT function must provide the company with contract clauses that focus on the reduction in prices that could not automatically be passed on to the user if not managed. A personal computer can cost 50% less one year later and leasing them will put you in a position that the payment accumulated at the end of the schedule, exceeds the price of a new one by far. It is imperative not to fix contracts in the IT arena longer than the opportunity to get a better outsourced deal. According to the META Group, as an US-based provider of IT research and advisory service, 80% of organisations will outsource at least one function by 2005, while 70% of that group will renew their outsource contracts. Many will reduce both the scope and the duration of the original agreement (Anderson, 2005:1).

Anderson (2005:1), Senior Research Analyst of the META Group, in explaining about the change in scope of the initial period, said, "Vendor performance may factor into the decision to cut back on existing outsourcing arrangements, yet the trend is really driven by the need for organisations to regain control of the Information Technology strategy and architecture." Anderson added that the growing popularity of asset leasing arrangement and the increased focus on business and IT alignment are also playing important roles in the decision to curtain outsourcing arrangements. Reporting further, he adds that despite the reductions in scope and duration of outsourcing, the options will continue to grow as a viable option for organisations seeking to remain competitive during the next decade (Anderson, 2005:2).

However, he cautioned what companies may not realize, is a return on their investment, unless significant attention is paid to many factors during the initial stages of an outsourcing agreement (Herd, 2004:19). These factors include setting the correct expectations, clearly defining the primary objectives of outsourcing and the risk associated with various options. Selecting a capable outsourcing vendor apart from negotiating Service Level Agreements and then, overall management of contracts (Hammer, 2004:27).

Although outsourcing is a strategic decision, the tactical and operational implementation of an outsourcing agreement often neglects many of the fundamental elements required for success (Anderson, 2005:3). Focusing on the information systems in the business will guide management with strategic decision-making when it comes to outsourcing.

2.5.7. Difficulties in outsourcing alliances

Many major outsourcing contracts are structured to expand over long periods of time. However, these agreements exist in a world of fast-moving technical and business change. Eight to ten years are a normal period of a contract in this environment in which computer chip performance is improving by 20 to 30 % per year (Lynda *et al.*, 2003:562). The standard contract length addresses the customer's difficulties in switching the vendors, as well as economic issues. But a deal that made sense in the beginning of the contract may not make economic sense three years later and may require adjustments to function effectively (Lynda *et al.*, 2003:562). The timing of benefits to the customer and the vendor exacerbates the situation. Benefits in the first year are clear to the customer, who often receives a one-time capital payment in exchange for the assets that are being transferred to the vendor. Having been paid and having shifted problems and issues to the vendor, the customer firm may feel relieved. Moreover, the tangible payments in the first year occur in an environment where the outputs most closely resemble those anticipated in the contract. In each subsequent year, however, the contract payment stream becomes less and less tied to the initial set of planned outputs (as the world changes) and thus more subject to negotiation and possible misunderstanding between the customer and vendor (Lynda *et al.*, 2003:562).

2.5.8. The IT role in the modern enterprise

Before the actual role of IT is defined, the company must accept that IT is a valuable corporate resource and the old approach must be reviewed. The introduction of a CIO is imperative, based on the models for managing other corporate resources (money and people).The technology is driven by fast growing hardware technologies and being doubled every 18 months, with significant cost drops. This enables applications that were only dreamt about: technologies such

as digital convergence that allows the merging of technology such as communication and computers in the office space (VOIP) (Coetsee, 2005:8).

Corporate executives can enable the processes as well as the techno-structure function to re-engineer the IT strategy and approach. IT functions are seen as management, solution development, maintenance and support, call centres, operations, plans and controls, research and development, and finally, architectures. In opposite corners the business solution lifecycle points to ideas, feasibility, design, development or acquire, integrate, implement, produce, maintain and support and evaluation (Coetsee, 2005:13).

2.6. The what and how foundations of Information Systems in business

Why are information systems important? If you take a moment to bring the real world into our discussion the importance of Information Systems (IS) and Information Technology (IT). Information technology, including Internet-based information systems, are playing a vital and expanding role in the business (O'Brien, 2001:99). Information Technology can help all kinds of businesses improve their efficiency and effectiveness of their business processes, managerial decision-making, work group collaboration, thus strengthening their competitive position in a rapidly changing marketplace. This is true whether information technology is used to support product development teams, customer support processes, interactive electronic commerce transactions, or any other business activity. Internet-based information technology and systems is fast becoming a necessary ingredient for business success in today's dynamic global environment (Dippenaar, 2004: 5).

You need to know and understand the five areas of knowledge:
- Foundation Concepts
- Information Technologies
- Business Applications
- Development Process
- Management Challenges

(O'Brien, 2001: 6).

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This will allow the IT function to align the execution of the IT task with the business charters and strategies, assisting the company to meet its definitions of victory. Recognizing information systems as a business professional, you should be able to recognize the fundamental components of information systems that you encounter in the real world.

This means that one should be able to identify:

- The people, hardware, software, data and network resources they use.
- The types of information products they use.
- The way they perform input, processing, output, storage and control activities.

In many cases the team responsible for doing the outsourcing contract does not have the correct expertise. This is often the reason for all wrong and uninformed decisions (Herd, 2004:56). This new role focused on developing business applications that provided managers and users with predefined management reports that would give managers the information they needed for decision-making processes. From the 1980's up to 1990 there was a paradigm shift to the role of MIS. This allowed end-user computing to be born on a huge scale until 2005.

It is very important to remember that outsourcing was the buzzword in the late 1990's and the technology was totally different than today. The mistakes that were made during the outsourcing era (five years ago) could have been made because of this fact in new technology (Mainframe versus networks). Mainframes were still in use and today the same contract is supporting Global Area Networks, Wide Area Networks and Local Area Networks. This can be vital to the option for extending or renewing the current outsourcing deals (Lynda *et al.*, 2003:501). Managerial challenges of proactive IT managers and business professionals should become aware of the problems and opportunities presented by the use of Information Technology and Information Systems, which play a vital role in the business success of an enterprise. Placing this in an outsourcing contract takes the nerve systems of your company to a vendor to manage the risks (Anderson, 2005:3). This becomes interesting information for suppliers to lift the pricing to force you to pay for the risks businesses are not taking as a business and when they know the cost of

risk the rates will reflect it. Competitive bidding must be considered in order to have competitive Information Technologies (Hammer, 2004:17).

2.7. Competitive Information Technologies

Strategic IT and the forces in the marketplace create products, service and capabilities that will give a company an advantage to be highly competitive. It also creates a strategic information system that supports or shapes the competitive position and strategies of an enterprise.

The five competitive forces are:
- Bargaining power of customers
- Bargaining power of suppliers
- Rivalry of competitors
- Threat of new entrants
- Threat of substitutes

(O'Brien, 2001:40).

By means of evaluation derived from the forces and alignment with the competitive strategies, you are in a position to contract an outsource deal that is sustainable and cost effective with built-in flexibility to manage costs and delivery.

These competitive strategies are:
- Cost leadership
- Differentiation
- Innovation
- Growth
- Alliance
- Combination of all the above strategies

(Wood, 2001:12).

In designing the strategy for any business, alignment between IT and strategy is imperative for success and support in reaching the goals for both IT and business. There are issues that are draining the business which must be addressed. The man on the street is seeing the high cost versus high quality changing to low cost high quality because of disruptive innovation.

2.8. Important IT issues that are draining the business

2.8.1. Outsourcing the whole Information Technology department

Is the business requirement focused on the complete outsourcing of IT or are they interested in value add aligned with business objectives? The answers to that question lies in the feedback from the questionnaires and also the results that clearly indicates the business requirements stipulated in Chapter 3.

2.8.1.1. Business enablement

One needs to know what the business needs entail before supporting the management of information. Does it mean processes? Yes, definitely. Some help desks have a focus on critical areas and others on users. The best solution can be derived from the business needs, rather than the user requirement. It is better to support business continuity and focus your support directly towards satisfaction in running the business processes, enabling the service delivery to work with a "win-win" solution (White, 2001:48).

2.8.1.2. Value added services

Where do you add value with IT if it is seen as an expense with no value proposition? You need to determine the value and you have to outsource it as an asset that vendors manage on behalf of the company and business. The support from a help desk point of view must be focused on end users with specific workstation problems. The supporting function from a technology point of view must never be visible to a customer and always be the best for the specific support solution (White, 2001:50).

2.8.1.3. Excellent support desk

Measurement should play a large role to measure trends and not specifically the number of calls. Problem areas can easily be rooted down to the cause if visible in the type of calls logged. The same scenario with support on the technology side, the end user and the data centre can use the same information to optimise the total service in regard to the trends picked up in calls logged (Wood, 2001:3).

2.8.1.4. Continuous improvement

When contracts are awarded to vendors in outsourcing, the IT support deal and the reduction in costs must be linked to risk and reward to both parties involved. It must promote the reduction of cost and optimisation of technology to save both parties money (White, 2001:61). This clever thinking makes the new CIO a business manager with the same goals as the business.

2.8.2. The new way of thinking for IT

If you find yourself in a hole, stop digging. According to the book *"The unbound mind"* (Harold A. Lindstone and Ian I. Mitroff) many people have a particular way of thinking. The author calls it technical thinking: a logic-based enquiry method which attempts to solve problems and find answers. Engineers, accountants and IT people are good at this kind of thought. It is essential to reach a conclusion and move on, with the minimum wastage of time and unnecessary discussion. This in itself is an admirable, even desirable, thinking approach (Hammer, 2004:33). Five ways to be wrong: or four ways to be right. When costs become a driver for supporting and enabling business with IT there are 5 ways to be wrong. The CIO will come under pressure from top management and business owners to reduce IT cost and unlock value with the current IT investment. The wrong behaviour relates to the wrong actions as illustrated below. The rational thinking flies out the window and the decisions are based on the wrong management style to unlock this value.

These are:

- X = Y
- High cost = Retrench staff
- Re-engineering = Downsizing
- Pilfering from the stationery cupboard = Lock
- IT development = Project

(White, 2001:156)

Then, on the other hand, there are 4 possible ways to be right. The right behaviour from the CIO will unlock the value needed with the correct strategic approach to the problem that will solve itself with the correct way of right decision making and actions to reduce cost and unlock value from the current IT assets, these are:

- The first way is called "logical rightness"
- The second way is called "emotional rightness"
- The third way is called "unique rightness"
- Then finally it is called "recognition rightness"

When Chief Information Officers (CIOs) and business managers make business decisions involving IT, it is essential to address the 4 ways of being right. This will eventually support all aspects that can influence the support and drivers for outsourcing a company's IT function (White, 2001:160).

2.9. Security

Outsourcing the IT function exposes the company to a second and even third party information leakage. What can the outsource deal use to ensure that the security and ethics for a company is preserved to reduce or even wipe out any risks? It's clear that from her experience the maturity relationship can determine the level of risk and information leakage confidence for a company. It is very important to realise that the company employees are also putting the Intellectual Property at risk with the use of external storage devices. Security must be an essential part of the trust in

the outsourced contract ensuring piece of mind for the information owners (Lynda *et al.*, 2003:114).

2.10. Conclusion

Despite the mix of factors that suggest outsourcing varies widely from one company to another, a series of themes in the aggregate explains most of the pressures to outsource (Lynda *et al.*, 2003:566-567).

- Tighter overhead cost control
- More aggressive use on low cost labour
- Tough world class standards
- More effective bulk purchasing
- Better management of excess hardware capacity
- Better control of software licences
- More aggressive management of services and response time to meet strategic goals
- Professional outsourced vendors
- Leaner management structure
- The ability to access higher levels of skilled IT resources at low prices
- Creative and more realistic structuring of leases

(Lynda *et al.*, 2003:566-567).

The general perception of IT (IM) departments has changed dramatically during the last years. The fact that funds are freely available for any initiative or new project has changed to proven business cases and informed decision making. Proving the definition of victory (DOV) with a sound business case to add value to the business with the implementation of any new IT initiative is the current reality that IT managers will face in the future (Van der Bank, 2005). The education of senior management with regard to IT has improved to allow participation and informed decision-making by top management.

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Chapter 3

Empirical study

3.1. Introduction

The empirical research on outsourcing Information Technology in South Africa was based on a questionnaire (Appendix 2) as the main component. The aim of the study was to determine the state and the progress made over the last decade in regard to outsourcing IT. Outsourcing as per the Oxford English Dictionary means: "obtain by contract from an outside supplier" (Oxford Dictionary, 2005).

The opening stages of this chapter describe the development of a questionnaire for measuring the state and progress, as well as partnership success in the IT outsourcing arena in South Africa. It also includes literature to enforce the method of empirical research, as well as on the statistical review method used to analyse the data that will be presented following the questionnaire completion. The questionnaire was offered to a number of companies in order to determine the concepts and the evaluation of the state and progress made during the mentioned period of time. The chapter concludes with an evaluation of the results obtained from the questionnaire and the discussion thereof.

3.2. The raw data collection for the development of the evaluation model

Empirical research usually involves making choices in four areas (Wood, 2001:9).

- Are you going to study the existing situation, or are you going to do an experiment or a "quasi-experiment" – i.e. change something and see what effect it has? Experiments and quasi-experiments are particularly useful for gathering support for recommendations.

- What sort of sample are you going to take? Large sample, small sample or study of a single case?

- Are you going to use a standard theory or framework (and if so, which one?), or are you going to develop your own theory? In either case, theories are important.

- How is the empirical data going to be gathered? The possibilities include: a written questionnaire, interviews, observation, participant observation, documentation and data archive analysis, or the internet.

"You should not be restricted by these: good research generally uses a combination of these patterns as well as strategies which do not fit neatly into any of them" (Wood, 2001:9).

3.3. Choice of empirical research method

By means of a questionnaire the existing scenario in South Africa will be reflected in order to draw some form of conclusion relating to outsourced Information Technologies. A survey involves the collection of information from a (usually fairly large) number of "units". These units may be people, or organisations, or towns, or families, or departments. The information collected may be of any kind - e.g. financial information or opinions in the case of surveys of people, or information about the numbers of employees and organisational structures in the case of a survey of organisations. A survey provides a snapshot of the situation as it is at a particular time, usually with a view to analysing patterns and trends applying to the group as a whole. Most surveys are based on a sample of the population of interest. Surveys often use questionnaires to collect data, but interviews or observation may sometimes be preferable (Wood, 2001:10). Before developing the questionnaire, it was essential to identify all possible input variables for the model, then test and select those variables that have a high influence on the model, and finally to determine and collect the correct quantity of raw data that is required. When designing questionnaires consider the following (Wood, 2001:11) & (Neuman, 1997:231-237):

- Exactly what do you want to find out?
- Why should people fill it in? (Anonymity, confidentiality, reward for returning it?)
- Will they tell the truth?
- Length and sequence of questions.
- Wording: avoid leading, long, complicated questions asking several things, incomprehensible, unanswerable, silly, rude or annoying questions.
- The covering letter explaining who you are and what the research is for.

There are three main types of questions one can ask in a questionnaire (Neuman, 1997: 237):

- Closed questions asking for a category. (In which province do you operate from? - tick the appropriate box.)
- Closed questions asking for a number. (What is your annual IT expenditure? Questions asking respondents to rate their agreement with a series of statements.)
- Open-ended questions. (Rate your relationship with your service provider based on the improvement in customer service.) These may either be coded for analysis (in which case it may be better to use a closed question in the first place) or simply read and used for quotations and as a means of coming to understand the respondent.

With closed questions in particular, one needs to cater for respondents who do not know the answer. You don't want to force them to make up an answer! It also focuses them on the specific question asked.

Wood (2001:14) identifies the following common problems with questionnaires:

- Low response rate (What should you do about this?)
- Too much information to analyse
- Inconclusive answers
- You only find out what people want to (and can) tell you

Given this advice and using the McKinsey 7s0Model a questionnaire was then developed.

3.4. Identification and selection of input variables

In the detailed literature study in Chapter 2 we developed understanding for Information Technology internationally, as well as obtaining the views of the industry on the concept, present situation, issues, problems and future of the IT outsourced industry. By understanding these aspects after the study, they were used to formulate the input variables for the detailed

questionnaire that would be used for the environment study. The questionnaire was designed based on the 7S-model as per McKinscy. The 7S-model is based on the general aspects of management; it is structured in such a way that the focus is placed on the high-level aspect of management of people and structures. The 7 topics address both the hard and soft issues in organisations, and cross-questioning the questions to create consistency in the answers.

Figure 3.1: 7S-model
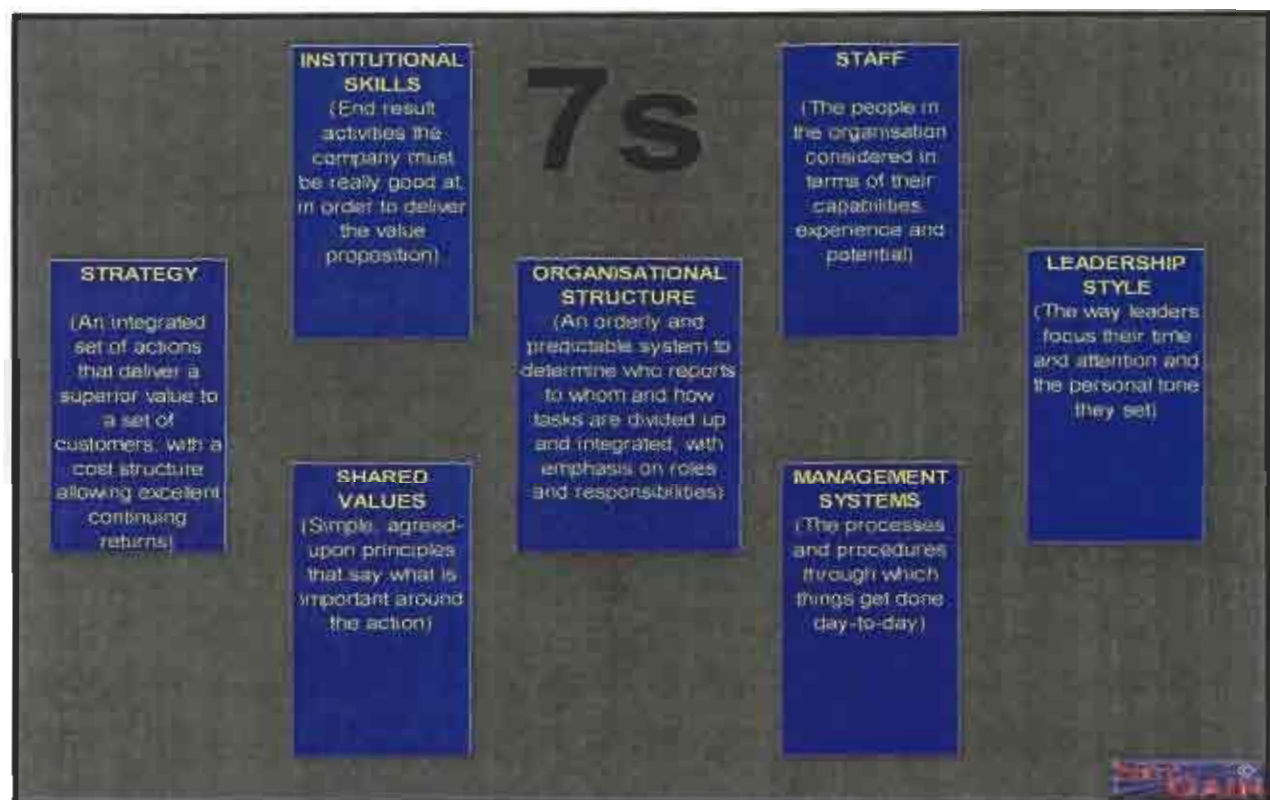
Source: (McKinscy, 2005)

In collecting data for these types of questionnaires it can be classified as either attributes or variables. Attributes are characterized by either a conformance or non-conformance to a specification. Variables are those characteristics which are measured with regard to specific services, e.g. expenditure on IT activities per annum (Wisniewski, 1997:15). By looking at the objectives of the research that was proposed, it identifies the input variables, and based on the objectives in Chapter 1 the input variables were then selected. Criteria such as the under mentioned were used:

- International studies conducted to determine the same ratios
- Criteria to meet the objectives in Chapter 1

The intent of using input variables from past studies is to conduct a benchmark of how South African perceptions compare with the IT environment. As part of the criteria the research also investigated the South African situation to reference the results to the findings in the questionnaire; this can also assist in the design of a management model for the industry.

3.5. Sizing the population

In order to conduct a statistical analysis of the results of a questionnaire one must first develop an understanding of the theory of statistical techniques. This section details those techniques used for this research. The population should represent all management levels that have vision into the total IT cost and delivery picture including the expected service levels and types of IT services required.

3.5.1. Definition of statistics

According to Wisniewski (1997:91) statistics reveal: a collection of quantitative data pertaining to any subject or group, especially when the data are systematically gathered and collated. The science that deals with the collection, tabulation, analysis, interpretation, and presentation of quantitative data, Wisniewski (1997:91) states that statistics has two phases: Descriptive or deductive statistics, which endeavours to describe and analyse a subject or group, and to determine some measure of an average and some measure of variability around the average. Inductive statistics endeavours to determine, from a limited amount of data (sample), an important conclusion about a much larger amount of data (universe or population). Wisniewski (1997:92) tells us that there are two measures of average:

- The arithmetic mean, which is a sum of the total values divided by the number of values measured.

- The median, which is the middle value from the total values recorded.

The measure of variability used in this study is that of standard deviation. Its intent is to demonstrate the measure of variability around the average value (Wisniewski, 1997:94), and is calculated with the formula:

Standard deviation $= \sqrt{\sum (x-X)^2/n}$

Where: x = Value

          X = Sample mean

          n = Number of values recorded in the sample

Due to the nature and limited period available for this research, it is the second option - that of inductive statistics, which will be used to develop a solution to the problems identified in Chapter 1. The size of the population usually makes it impractical and uneconomical to involve all members of the population in a research project (Welman & Kruger, 1999:47). Consequently, a sample will be taken of the population and this will be assumed to be representative of the population. Wisniewski (1997:99) describes the population as the entire set of data that is of interest to us and a sample as a representative part of that population that we can economically and practically use to reflect a meaningful result for the entire population.

3.5.2. Members of the sample

Studies in the USA have mainly focused on the inputs from the Fortune 500 companies (Lieb & Muller, 2002:1-10). The intent of this study is to focus on how South African companies perceive their use of second and third party partnerships and the extent to which they make use of these IT services. In line with this, the initial population chosen for this study was selected from the Top 300 companies' website (www.top300.co.za refers). Responses from these participants were particularly slow at first, and it was decided to include those companies that are listed on the Johannesburg Stock Exchange (www.jse.co.za/listed/companies.html refers). As the purpose of this study is to understand how all sizes of company perceive and use outsourced logistics services, a number of smaller companies were also approached to take part in the study. These

companies were selected based on the author's past contacts with these companies, and they were requested to complete the same questionnaire as all other companies taking part in the field study.

3.6. Designing the questionnaire to develop a management model

The process followed with the questionnaire had to make use of a trial questionnaire. The trial questionnaire was discussed with different business unit managers in order to confirm that the focus was correct in addressing the issues and objectives of Chapter 1. The inputs from the business unit managers were then incorporated to create the final questionnaire that was e-mailed to all the participants and any explanations were handled telephonically.

3.7. Structuring the questionnaire

To save time for the participant in the process of completing the questionnaire it was essential to make the process as simple as possible. The questionnaire was designed with tick-dots to confirm statements and guide the participant to effective information sharing. At the end of completing the questionnaire it could be e-mailed with a push button which would direct the results to the evaluator automatically (Appendix 2). As previously mentioned the structure was based on the 7S-model, the model made the interpretation of the questions easier because of the knowledge that the industry has on this topic (7S-model), which is generally used in strategic debates. The language in the questionnaire focused on general business terms and not IT jargon; this simplified the explanation and interpretation of the questions.

3.7.1. Data demographics

The questionnaire based on the 7S-model was sent out to different companies within Sasol Limited (internationally, including the USA and Europe), as well as to external companies. The external companies that took part in the questionnaire were all members of the Chief Information Officer (CIO) Forum that Sasol created in South Africa. This forum consisted of different companies with the same IT focus.

3.7.2. Strategy (The way leaders focus their time and attention and the personal tone they set)

3.7.3. Skills (End result activities the company must be really good at, in order to deliver the value proposition)

3.7.4. Structure (An orderly and predictable structure to determine who reports to whom and how tasks are divided up and integrated, with emphasis on roles and responsibilities)

3.7.5. Staff (The people in the organisation considered in terms of their capabilities, experience and potential)

3.7.6. Systems (The process and procedures through which things get done day to day)

3.7.7. Style (The way leaders focus their time and the personal tone they set)

3.7.8. Shared values (Simple, agreed-upon principles that say what is important around the action)

(Coetsee, 2005)

3.8. Questionnaire analysis

The intent of this section is to summarize the results of the empirical research, based on the replies to the questionnaires that were distributed.

A total of 80 questionnaires were distributed. A total of 56 completed questionnaires were received back (a response rate of 70%) and used for the purpose of the analysis, 11 were incomplete due to unavailability of the resource at the time. The rest of the questionnaires did not receive reply at all within the recommended due date. In order to represent the data in easy terms, the results of the questionnaires will be presented using frequency distributions. These results will show the number of times each characteristic was observed by the respondents in their replies. They advise that a frequency distribution can take the form of a figure (e.g. a histogram or a frequency polygon), or a table.

3.9. Summary of Empirical Study

Table 3.1 and figure 3.2 show the geographic distribution of the respondents to the questionnaire.

Table 3.1: Distribution of respondents

Industry Type	Number of Respondents	Percentage of Total Respondents
Sasol RSA	5	8.93
Sasol USA	3	5.36
Sasol Europe	2	3.57
Mittal Steel RSA	7	12.50
ESKOM	0	0.00
Telkom	5	8.93
ABSA	8	14.29
BCX	2	3.57
AST	5	8.93
Natref	7	12.50
Mosgas	4	7.14
IBM	2	3.57
Nedbank	3	5.36
Dow	1	1.79
Other	2	3.57

Figure 3.2: Distribution of Respondents' Origin
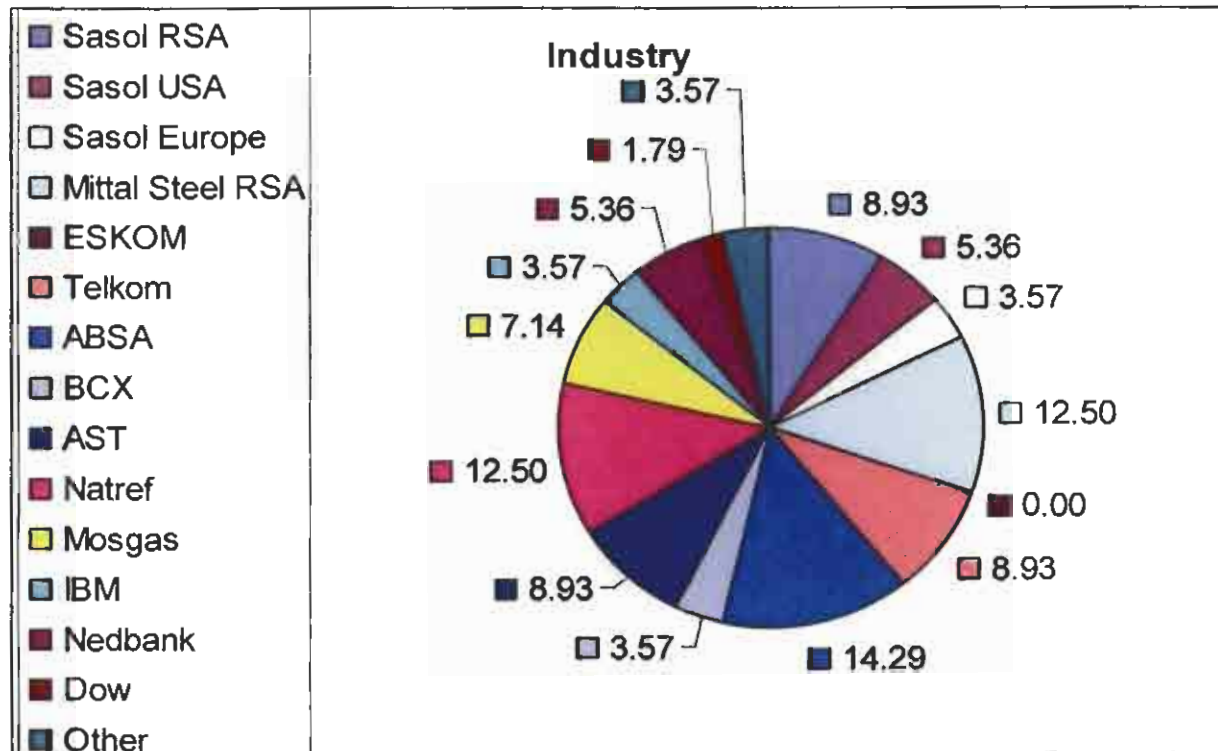
From Table 3.1 and Figure 3.2 it is clear that the highest responses came from the banking industry and shortly behind them the petrochemical, as well as the steel sectors. All these industries have corporate offices based in the Gauteng (Johannesburg) area and this aligns them with outsourcing deals with the big five IT strategic suppliers in South Africa. The big five as per La Grange (2005) being:

- Price Waterhouse Coopers
- Advanced System Technologies (AST)
- Business Connexion (BCX)
- Arivia.com
- Accenture

Out of these five the only two that can claim that they will supply a wall-to-wall call centre support function are AST and BCX. The rest of the industry supplies various elements such as

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ERP, application and general IM support. The concentration of businesses in the Gauteng area makes the supply of these services almost a monopoly for the two suppliers BCX and AST. The category "other" was senior individuals known to the author.

The results from the questionnaire shown in Table 3.2 indicate the following: from the 11 questions asked (left vertical column) to the participants, not one company indicated that they did not know or that it was always true: in line with this result. None of them replied that the questions were of low importance.

Table 3.2: Strategy importance

Quest	D/Know	FALSE	S/True	O/True	TRUE		Quest	Low	Medium	High	
1	0	3	0	0	1		1	0	2	1	
2	0	4	0	0	0		2	0	4	2	
3	0	5	2	0	0		3	0	3	1	
4	0	4	0	0	0		4	0	2	2	
5	0	3	0	0	0		5	0	1	1	
6	0	6	0	0	0		6	0	4	2	
7	0	6	1	0	2		7	0	3	3	
8	0	5	1	0	0		8	0	7	2	
9	0	5	0	0	0		9	0	5	1	
10	0	6	0	0	0		10	0	4	1	
11	0	4	0	0	0		11	0	3	2	
Total	0	51	4	0	1	56	**Total**	0	38	18	56

This shows that the industry sees IT services as medium to high important, medium being the highest ranked (38 versus 18). When you read the questions it is catastrophic to see that the highest score for the category (strategy) was marked false! In many of these cases the corresponding importance was marked high! Question 11, indicating the existence of sourcing strategies received zero for the questionnaire, which should have been in place. Question 10, allowing the IT supplier first right of refusal on all IT related work, was also marked false, which gives an indication of the trust between the customer and the supplier, when in line the importance is marked medium. In other words, business want to give strategic suppliers the first right but does not see it as being important. From a research point of view the indication was to exclude this option in future contract, which perhaps answers the importance being marked medium.

Table 3.3 Skills importance

Quest	D/Know	FALSE	S/True	O/True	TRUE		Quest	Low	Medium	High	
1	0	1	1	4	1		1	0	1	4	
2	0	0	1	6	0		2	0	0	5	
3	0	0	1	5	0		3	0	0	3	
4	0	1	1	3	0		4	0	0	4	
5	0	1	3	2	0		5	0	0	3	
6	0	1	4	4	0		6	0	0	4	
7	0	2	2	5	2		7	0	1	3	
8	0	0	3	4	0		8	0	1	4	
9	0	0	2	4	0		9	0	1	4	
10	0	0	2	0	2			0	1	5	
11	0	0	0	0	1			0	1	4	
12	0	3	0	0	0		10	0	1	6	
Total	0	9	4	37	8	56	**Total**	0	7	49	56

Table 3.3 gets the focus immediately on the high importance on almost all the questions. Question 12, inquiring about the importance of KPIs, was marked often true but with high importance. The perception (or fact) may be that the IT managers do not have key performance indicators for the personal performance or the IT service does not have proper KPIs that are managed. In both cases it is catastrophic that the business perception shows that they believe this!

Question two and ten also marked with high importance, relates to strategic alignment and customer needs. These two aspects must form part of any outsource deal main negotiation strategy and will definitely effect the industry negatively if it is not in place. This category received four scores for being true (question one, seven, ten and eleven) with high importance, the focus for these questions are mainly continuous and proactive management, leading edge technology approach, customer needs and user feedback. In general the feedback for this category was positive.

Table 3.4: Structure importance

Quest	D/Know	FALSE	S/True	O/True	TRUE		Quest	Low	Medium	High	
1	0	0	0	1	2		1	0	1	4	
2	0	0	0	1	3		2	0	0	5	
3	0	0	0	2	3		3	0	0	5	
4	0	0	2	1	1		4	0	0	4	
5	0	0	3	2	2		5	0	0	6	
6	0	0	2	3	3		6	0	0	4	
7	0	2	0	1	3		7	0	1	8	
8	0	0	0	1	4		8	0	1	4	
9	0	0	1	2	4		9	0	1	6	
10	0	0	1	3	3			0	1	5	
Total	0			17		56	Total	0			56

In Table 3.4 the feedback gives immediate related feedback to the importance of structure. The score for the questions featured in the often and true categories, given the impression that the business feels that the structure is important and in place. The interviews conducted to verify this result resulted in a discussion that took us to the fact that the structures are in place and very important but it is extremely expensive to manage, from an internal and external point of view. Business feels that the structure needed to manage these investments are more than anticipated and when they start cutting the cost you lose IT service quality. This again boils down to a management and comparison model that can highlight this for the CIO.

Table 3.5: Staff importance

Quest	D/Know	FALSE	S/True	O/True	TRUE		Quest	Low	Medium	High	
1	0	1	0	1	5		1	0	1	4	
2	0	0	0	1	3		2	0	2	6	
3	0	2	0	2	3		3	0	2	9	
4	0	0	2	1	5		4	0	1	10	
5	0	1	3	2	7		5	0	0	6	
6	0	0	2	3	5		6	0	0	6	
7	0	2	0	1	4		7	0	1	8	
Total	0		7			56	Total	0			56

Table 3.5 gives question four (mix between operation and technical background) extra focus. Again in the interviews it came out clearly that top management want IT managers and CIOs to be experienced business resources to run IT as a business. Question seven again counters this for the IT manager, where a career needs to be attractive for any business resource to make IT his

future in any corporate company. The fact of the matter is the IT manager's post is used as a stepping stone to a higher position. One more important matter from the interviews is the fact that IT people feel that they run the risk to be outsourced at any time or even lose their jobs as technology improves and replaces normal resources.

Table 3.6: System importance

Quest	D/Know	FALSE	S/True	O/True	TRUE		Quest	Low	Medium	High	
1	2	0	0	1	1		1	1	1	2	
2	2	0	0	1	1		2	1	2	1	
3	0	0	0	0	2		3	3	2	2	
4	1	0	2	1	1		4	0	1	1	
5	0	0	1	2	3		5	0	3	1	
6	0	0	2	0	1		6	0	4	1	
7	1	1	0	1	1		7	1	3	3	
8	1	0	1	1	1		8	1	1	3	
9	2	0	3	2	3		9	2	5	3	
10	0	3	0	1	1		10	1	4	0	
11	1	1	1	0	2		11	0	5	0	
12	0	2	0	1	1		12	0	7	1	
Total	10	7	10	11	18	56	Total	10	38	18	56

Table 3.6 drops the score to "don't know". The system importance is many times a big unknown when we conducted interviews. The business (from the interviews) feels that many of the old hand and paper systems were good enough; this is why top management must form part of the strategy to make sure this perception is managed. The biggest factors countering the implementation of systems are change management and capital. The Baby Boomer generation are convinced that these old systems were better and less complex to use, even cheaper.

This is true in many cases but the globalisation and technology growth do not allow you to fall behind when it comes to the basics of IT. One senior executive said it is like electronic banking: you must use it to survive. In general this category was vague for the participants because of the knowledge of systems. The questionnaire uses IT jargon in this category, which is difficult to understand if it is not explained to the participant. The interviews indicated that systems are needed and very important, but why the high cost and difficulty to implement and support? Business needs some way of comparing cost between businesses and better management models (La Grange, 2005).

Table 3.7: Style importance

Quest	D/Know	FALSE	S/True	O/True	TRUE		Quest	Low	Medium	High	
1	2	0	0	1	1		1	1	1	2	
2	2	0	0	1	1		2	1	2	1	
3	0	0	0	3	2		3	3	2	2	
4	0	0	2	1	1		4	0	1	1	
5	0	0	1	2	3		5	0	3	1	
6	0	0	0	0	1		6	0	4	1	
7	0	1	2	1	2		7	1	3	2	
8	0	0	1	1	1		8	1	1	2	
9	0	0	0	2	3		9	2	5	3	
10	0	0	0	1	1		10	1	4	1	
11	1	1	1	0	2		11	0	5	0	
12	0	0	0	1	1		12	0	7	2	
Total	10	3	10	14	19	56	**Total**	10	38	8	56

The results from question six are listed in Table 3.7, with a good balance between "don't know" and "often true". Style is seen as the charisma of IT (quoted from interviews). The style in the questions uses words such as proactive, plan, focus, bottom line, communication, just to mention a few. The importance scale tipped to "medium" for this category: why so? Only after the interviews it were discovered that question nine and eleven (partnerships and sourcing strategies) had a huge impact on the results. The same concern came in the first question around sourcing strategies. Business feels strongly that the procurement of IT is not aligned with the normal business governance and that this creates a flaw in the integrity for purchasing IT systems and technology. Top management feels that procurement does not belong in the IT departments and that strategic sourcing teams should have this responsibility.

Table 3.8: Shared Values importance

Quest	D/Know	FALSE	S/True	O/True	TRUE		Quest	Low	Medium	High	
1	0	0	1	9	1		1	1	10	2	
2	0	0	0	5	1		2	1	5	3	
3	0	0	0	7	2		3	3	8	4	
4	0	0	2	3	1		4	3	6	3	
5	0	0	1	6	3		5	0	3	1	
6	0	0	0	13	1		6	1	4	7	
Total	0	0	4	43	9	56	**Total**	9	36	20	56

Question seven relating to values resulted in many questions being misunderstood. Table 3.8 gives the results of the survey and this category required interpretation of the questions for the participants from an author's point of view. The businesses do not see the importance of values when it comes to costs; they strongly feel that it must be handled as a business deal with a supplier. The rewards for the service is seen as part of the tariff paid to the supplier and according to delivery experienced it is too general. That is why "often true" is so high in question one with a medium importance. Question six again on the other hand is seen as "often true" that IT personnel are committed and supply best practices, but the business asks the question why we need so many internal IT resources when we are outsourced. This is the reason for the high true value and high importance value supporting the statement made in the interviews "the IT people have a lot to learn when it comes to customer relations technical people does not receive formal training as part of their education to focus on people but rather on thechnology."

3.10. Building a model for the industry to outsource IT

How does the ideal model look like? Using the questionnaire feedback, as well as the literature study in Chapter 2, it is evident that a customized model is the answer. The companies that use outsourcing for IT are unique and need unique solutions for their business requirements. The best method to follow would be to build a template to use as a guideline to outsource the correct functions of IT for the correct reasons and time periods. The following questions must be answered in the model:

- Why outsource?
- How long?
- Which supplier?
- Is our company growing, stabilizing or declining?
- What are the strategic goals for business success?

Making clinical calculations and benchmarking your IT function creates a problem when the alignment between the two parties does not compare "apples with apples". The ideal model

should provide the opportunity to make a comparison between the compared business and companies without too much detail, a type of index such as inflation.

Table 3.9: The new model criteria can be:

Criteria	Description
1. Users (n)	Amount of desktop users in the company
2. IM internal personnel (n)	Amount of internal employees in company
3. Desktops (n)	Amount of desktops used in the company
1. Revenue (R)	Company revenue
2. IM cost (R)	IM cost excluding capital
3. Depreciation (R)	IM depreciation per year
1. Desktops (n)	Amount of desktops in company
2. Servers (n)	Amount of servers in use (not production)
3. Applications (n)	Amount of standard applications in use

With reference to Table 3.9, the left column indicates the calculation criteria that can be used to design an index for IT to measure them against. The figures will be easy to obtain and then filled into the formula to result in an index for benchmarking as well as decision-making purposes. The model will allow the company to design a KPI for the CIO to meet as a definition of victory; empowering him to any initiative to meet the requirements. The golden rule will be risk and reward, the minimum risk to the company and reward spread to all role players in the outsourced deal. Applying the model to a company or even a subsidiary of a company will allow you to make an informed decision for deciding on outsourcing areas of your business. The pilot project for this study is used as an example. The model can be called the **"Technical Diversity Indicator Model" (TDi - Model).** The diversity comes with the different environments that must be technically supported by a form of technology.

Table 3.10: Model calculation (TDi - Model)

Criteria	Amounts	Calculation	Result
1. Users	1300		
2. IM internal personnel	32		
3. Desktops	1200		
Result	**3.39**	1300/(32*1200)*100	**3.4**
1. Revenue	2 000 000 000		
2. IM cost	1 00 000 000		
3. Depreciation	12 000 000		
Result	**1.67**	2 000 000/(1 00 000*12 000)*1000	**1.67**
1. Desktops	1200		
2. Servers	25		
3. Applications	60		
Result	**8**	1200/(25*60)*10	**8**
		Index for KPI >	**13.06**

What is important about this model is that your interpretation on how to use it determines the results you will get. The flexibility in the model allows any number of departments or companies to compare their IT function without a detailed investigation or figures. It even allows for in sourced as well as outsourced IT functions to be compared. The organisation structure does not play a role in regard to the way it is structured, but more in the amount of resources used to execute the function. In the example in table 3.10 it is clear that you can come out with any final index figure. The advantage is that if you have a business in the growing, stable and declining phase, you still meet the required comparison between the different companies by focusing on the area that you see fit. This will enable you to still benchmark in the range for competitive IT function, disregarding the fact that you are focusing on a different area.

The TDi – Model can very easily drive the definition of victory in any key performance area, allowing the management team to set certain goals to the CIO. The CIO can use the model to an index best suited for him and then benchmark with the different companies to see if his company is competitive or not. The mistake that makes benchmarking difficult in the current situation is that the comparison is not aligned among the relevant participants. The model will allow you to adjust in certain areas where your company needs focus and then still meet the required index.

The key success factor of the model is the measurement that must take place in short frequencies, as determined by the participants. The deviation from the set index can be (example) 0.5 smaller and 0.5 larger than the index or even smaller with a lower index and larger with a larger index. In the test case for the pilot project the frequency for the measurement was quarterly, to adapt to the changes needed for implementation purposes. The model will allow your IT function to manage the service levels between parties, because the service delivered will determine the cost and resources needed to keep the index stable. The most important success factor of this model is that the stability allows you to benchmark for a period determined by the relevant company.

Table 3.11: Advantages

Advantages
• Flexibility
• Easy to use
• Easy to understand
• Easy to interpret
• No detail figures needed
• Not only for IT usage
• Simplicity in benchmarking
• Real time model
• Stimulate stability in IT

3.11. Conclusion

To conclude the questionnaire feedback process the following remarks can be made in order to address the objectives and problem statements in this study. Does the current IT environment with the models in place really support the business with their strategic goals and also transitions the modular business approach to a process driven enterprise? The answer to this is that in some cases it does, but it depends on the maturity and also the funds needed to address the problems in

regard to the IT delivery. When companies are growing they tend to be less focused on cost and more focused on the delivery, no matter the costs. Just getting the business working effectively and delivering to client in order to make profits, are key. The downside is also very true and it is seen in companies where cost is a concern. These companies are focusing on the issues that drive down costs and will live with the minimum requirements to run and survive the economic down cycle. Top and senior management are more aware of the facts around IT today than they were five to ten years ago, making the decision in IM, when it comes to IT, more difficult than in the past. The fact of the matter is that if IM wants to be a real business partner they will have to accept the fact that it will have to be treated the same as all the other business departments. This is especially true when it comes to adding value and meeting definitions of victory in order to make the business grow in a stable and effective way.

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Chapter 4
Recommendations and conclusions

4.1. Introduction

With reference to Chapter 3 and the results of the questionnaire, it has opened an opportunity for the development of a management model to guide the Chief Information Officer in its strategy to support the business. Chapter 4 illustrates what a practical management model could look like for use in the industry.

4.2. IT and the Pareto Principle

The findings in Chapter 1 clearly indicate that the Pareto Principal is not valid in the IT environment. This leaves the window of further research open to determine what the financial principle ratio is for a typical IT department. In 1906, Italian economist Vilfredo Pareto created a mathematical formula to describe the unequal distribution of wealth in his country, observing that twenty percent of the people owned eighty percent of the wealth. In the late 1940s, Dr. Joseph M. Juran inaccurately attributed the 80/20 Rule to Pareto, calling it Pareto's Principle. While it may be misnamed, Pareto's Principle or Pareto's Law as it is sometimes called can be a very effective tool to help you manage effectively. After Pareto made his observation and created his formula, many others observed similar phenomena in their own areas of expertise.

Quality Management pioneer, Dr. Joseph Juran, working in the US in the 1930s and 40s recognized a universal principle he called the "vital few and trivial many" and reduced it to writing. In an early work, a lack of precision on Juran's part made it appear that he was applying Pareto's observations about economics to a broader body of work. The name Pareto's Principle stuck, probably because it sounded better than Juran's Principle. As a result, Dr. Juran's observation of the "vital few and trivial many", the principle that 20 percent of something always are responsible for 80 percent of the results, became known as Pareto's Principle or the 80/20 Rule.

4.3. Management Model

4.3.1. Organisational structure

Figure 4.1: Design Process
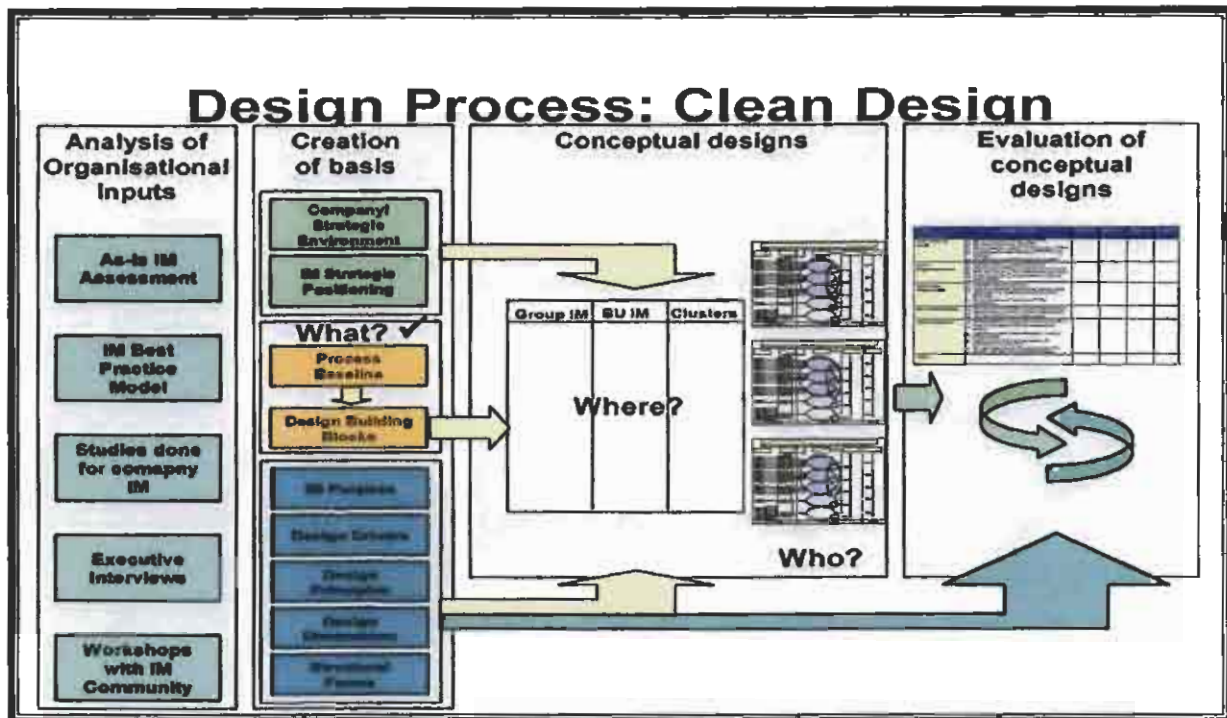
Source: (La Grange, 2005)

With reference to Figure 4.1 the design methodology are illustrated by means of flow diagrams. From left to right the analysis of the organisational inputs are based on the principles of an "as-is" assessment, best practices models, studies and research, interviews with top executives in the business and finally, communication to the affected people in the organisation. The design process then waterfalls into a creation of the base model for design purposes. This leads the way for the purpose of the design, design drivers, design principles and a rough organisational design. The final two steps for the design are based on the conceptual design and also the evaluation and buy-in by all stakeholders for implementation purposes. There are three basic principles that support the clean design, analysis of organisational inputs, the basic creation of the design, the conceptual design and finally the detail evaluation of the conceptual design with proper business input. The process follows the logical steps of what, where and who and the importance of purpose, principles, dimensions and structural forms are critical success factors. Important to

remember design is based on a hub and spoke governance and principle methodology approach, with centralised decision-making and decentralised implementation.

Figure 4.2: Organisational structure
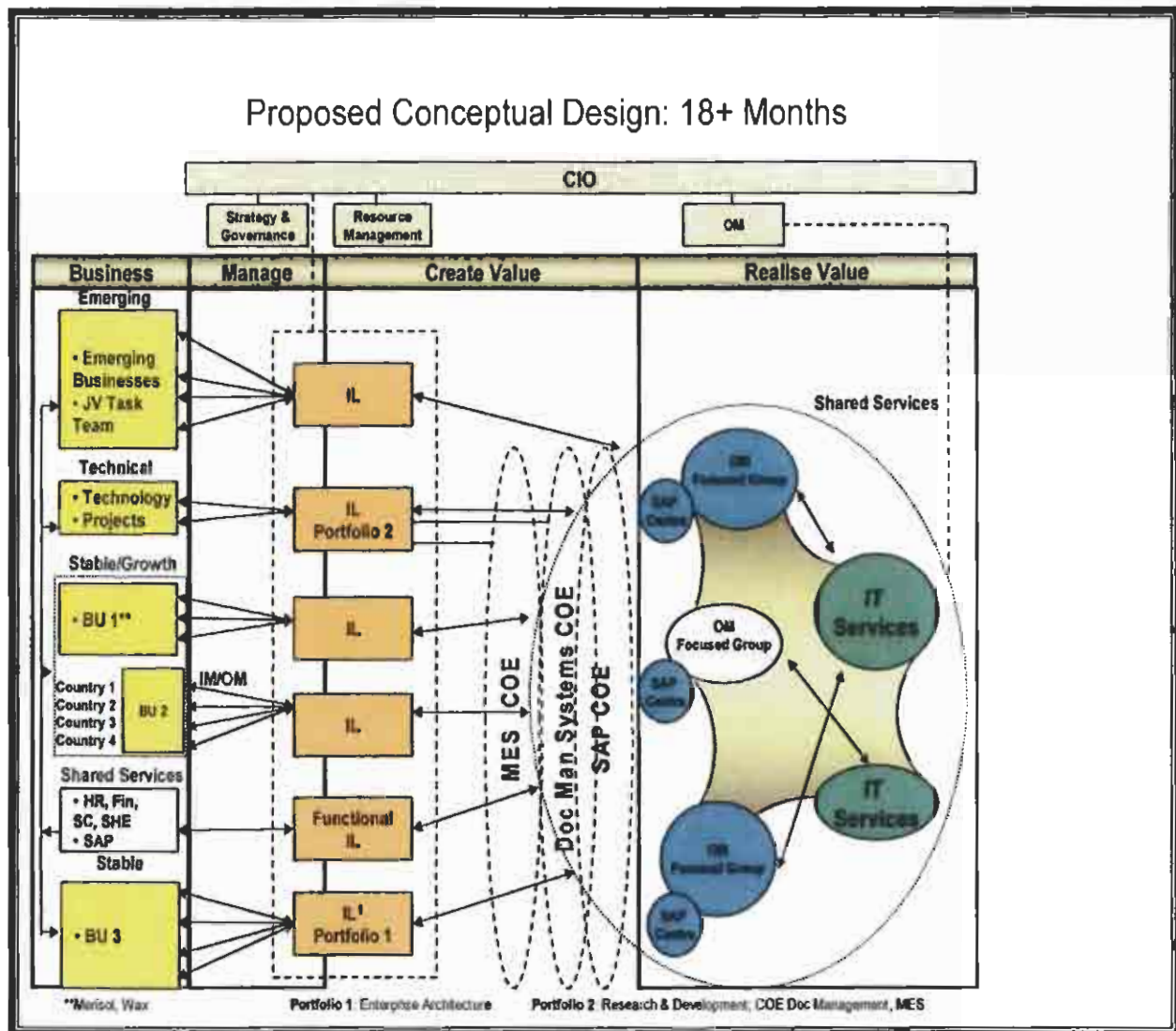
Source: (La Grange, 2005)

With reference to figure 4.2 the 18 month process that follows the figure 4.1 approach, results in the dynamic organisational structure with flexibility that can adapt to any disruptive innovation or structures in the market. The CIO takes the responsibility for the strategy, governance, resource management and technical operations. The business units are structured in such a way that each grouping is based on the similarities in the companies. The CIO has direct reports by

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means of Chief Information Managers taking the responsibility for all the business's unique requirements. The back office technology (mail, internet, shared applications) are managed from a central point of view, but when it comes to possible CoEs (ERP, MES, PMO and PAS) it is centralised in the business units with the best skills to lead the enterprise. The process follows the four steps: management of business, management, create value and realisation of value. The reporting lines to the CIO become a critical success factor, which includes strategy and governance, resource management and operational management. The design principles are based on leadership to transform IT to a respected business partner.

4.3.2. Key performance areas

The key performance area is derived from the business charters in the company. These indicators must align itself with the different business units' definitions of victory (DOVs). The performance contracts measuring performance are based on a 60% business input and a 40% CIO input, leaving no room for error in supporting the implementation of the specific business charters. Giving the business managers input into the performance agreements of all Information Leaders (60/40), creates ease in their minds because of the input that they gain to influence the IT service process.

4.4. Testing the model

When a new model is designed, the business partners should have input to the detail and also be tested for additional changes to suit their requirements and then test it by means of interviews and discussion..

4.4.1. Interviews

In order to test the model, interviews were conducted with five different business managers (not IT managers). These interviews were based on questions that align the reasons for the study with the objectives and results required to implement the model effectively. The results from the

survey were part of the discussion to ensure that the alignment is maintained between the two separate actions taken to build the model.

4.4.2. Questions

The questions were derived from the survey's results that did not make them self's clear for interpretation.

- How, in your opinion, does this model support a company strategy?
- Does this model allow for skills development in IT with a sound value proposition?
- Does the structure imply that IT can be managed as a business unit?
- Is the structure supportive of the company's staff requirements?
- How does this structure and model support the systems that run the businesses?
- Is this model based on a value system supportive of a company's vision and mission?

These questions were asked by means of personal interviews with management of the following companies. The interviews were recorded for designing the feedback:

- DOW Chemicals
- MOSGAS
- Sasol Limited
- AECI
- ENGEN

4.4.3. Questionnaire feedback (all five participants)

To do final adjustments to the model the inputs from the interviews are crucial.

4.4.3.1. How in your opinion does this model support the company strategy?

Information Management is seen as a major player in the execution of any company strategy. The information provided by IT is seen as the nerve system that feeds the business to make strategic decisions on a day-to-day and future basis. Sometimes, IT loses track of the strategy and directs

itself to technology in a new and better arena. This causes costs to increase and too many initiatives being driven by IM. IM plays a prominent role in most of the corporate management committees. This allows for alignment between technology and also playing a business partner role like any other department. The process that was followed to outsource the IT function years ago might have been wrong in the sense of contract periods and outsourced components. The relationship with the outsource provider was supposed to give the business a competitive advantage which did not realise the way it was intended. The IT function was seen as a "holy cow" in the past with an easy supply of funds to drive initiatives when it comes to technology. The ideal is that all IT costs, including capital, must be handled the way business handles the rest of the company's costs. Business must drive the initiatives and IT (IM) must only act as an enabler to supply to the demand from the business. The decision to make strategic vendors partners with first right of refusal clauses was not a good one, leaving an open door for them to manage their costs differently than the normal vendor. The cause of this action is that it narrows down the opportunity for competitive bidding. The one thing that IT has missed is the approval of sourcing strategies. The setting up or design process for sourcing strategies would have guided you to make the correct decisions when it comes to contract periods and other clauses that have a negative effect on the business.

4.4.3.2. Does this model allow for skills development in IT with a sound value proposition?

Information services are not always managed effectively. The trend is that networks fall over during board meetings and planning the downtime lacks focus. The strategic partners are not always aligned with the different levels of the strategies in corporate companies (McKinsey, 2006). The focus area for the vendor, most of the time, is too high to execute effectively. IM is quick to react to possible risks when it comes to technology and response with good plans to limit risk, usually at a price. The documentation in IT and IM are not always updated and aligned with what one sees on the systems. A huge opportunity is to optimise suppliers that sell their systems and business to the company. In many cases this is not happening.

Negotiation skills are one part of IT in business that is lagging. The deals are made on technical grounds and not really on commercial terms. This generally puts the business at risk when

arbitration, exit or mitigation is required with vendors not supplying what was contracted. The moment the technology works, the contract is forgotten until the system fales. IT does not always involve the necessary users to help with the continuous improvements of all processes and systems. The strategic vendor is usually far removed from reality and the users' then battle to get the required support. The one way to correct this might be to have a Key Performance Indicator that gives business the opportunity to evaluate the performance received from IM.

4.4.3.3. Does the structure imply that IT can be managed as a business unit?

The way that outsourcing was done should actually allow the business to manage the complete IT (IM) function as a business unit. The problem is that this was never done, creating the opportunity for mismanagement with regard to costs and employment of resources. The structure needed to handle decision-making for initiatives at the correct level is not in place in most companies. The role player (CIO or CIM) is not always the ideal candidate for the job, due to the technical background and not a business leader. Comments such as this one: "A CIO without an MBA - never again". The indices used for escalation of tariffs are not aligned with best practices. Using only one index such as CPI across the board is not acceptable. The same way that cost containment is done with indices must and can be used for IT as well. It is not clear in the business unit manager's mind as to what kind of skills is needed for running an IM department. The outsourcing model must indicate the required skills for management in the company's IT function. The recruitment process can assist in effective selection of resources that can make a difference in a strategic management structure.

4.4.3.4. Is the structure supportive of the company's staff requirements?

This is a divided area of response. What comes out clearly is the fact that the involvement of top management is crucial when it comes to staffing the IT management structure. The feeling is that the technical part should only be managed within and the real skills set must be sourced from outside as a partner, not an employee. The performance indicators must be aligned with business strategies and objectives as far down in the structure as possible. This will allow for the commitment to help business deliver the victories needed to grow the business. The IM

department must create platforms for career development and opportunities for employees to become managers or specialists in their specific domains.

4.4.3.5. How does this structure and model support the systems that run the businesses?

"A system is a system is a system.... (La Grange2005)" Top management does not have the knowledge to differentiate between systems the way IM does. The trust needed in IM to direct top management in making the correct decisions when it comes to systems is crucial for success. The commercial process must be followed to ensure all aspects are looked at and even that informed decisions are made. The systems and processes needed to run the business model must be in the hands of the business owners, not that of IM. The systems are owned by business, including the capital needed to purchase them and improve IT. The message of IM as a business enabler came out very strong in the results.

4.4.3.6. Is this model based on a value system supportive of the company's vision and mission?

The general feeling is that systems are purchased for periods between ten to fifteen years (Gartner, 2005); while the vision and mission are never kept that long. There should be alignment with the general business needs rather than the vision of the company. It is interesting that the responses to the questionnaire indicated a gap between systems and company visions.

4.5. Recommendations

The recommendations that are based on the findings of this dissertation indicate a huge gap in the management of the outsourced IT function for the industry. The recommendations are purely indicators for a different management model to assist the CIO or senior business management in making outsourcing in IT more effective.

These recommendations are:
- Make IT a strategic focus for the business internally and externally.

- Attempt to employ the skills needed to run the outsourced deal optimally and focused.
- Make sure the structures in IT (IM) are supportive of the business objectives and goals with the correct contract periods.
- Staff the IM structure as a business unit with enablement capabilities.
- Use and implement systems that support the company's future long term objectives.
- Shared values from all the involved parties in outsourcing are extremely important for success.

4.6. Conclusions

In the industry, IT makes up between 0.5 and 5% of the company's total cost as proven in the literature study in Chapter 2. Top management will not ignore this as compared to company growth of the same percentage. Information Technology costs are getting cheaper by the day; disruptive innovations are part of the technology trend, making IT very competitive. The expectation from top management towards IM (IT) to run with the business in executing the strategy will become increasingly important. The future of IT as an enabler (Shared Service) to business will become more prominent than in the past. Make sure when you outsource IT that you use a management model that supports the initiative in an effective manner. The quick decisions that were taken in the past to outsource the IT function, do not allow for the business case to be proven today. The problem is that the decisions were based on the current situations that, according to the results of the questionnaire, were not well thought through. In many cases the tools or models that they based their decisions on, were not in place to ensure informed decision-making. The lessons learned from past experiences of outsourced companies are used and interpreted in this study as well as through the questionnaire to assist in building an evaluation methodology (**TDi-Model**) as well as a Management Model. These instruments can assist in developing a better managed outsourced model as well as the continuous improvement thereof.

The historic Federal Model methodology can be replaced with this process of evaluating the outsourcing decisions, as well as ensuring the correct informed decisions are taken to whom and what should be outsourced. The speed at which technology in the IT arena improves will make

the effect of uninformed decisions to outsourcing more severe in the next five or ten years than the current one. The price at which you can purchase technology reduces rapidly and it also becomes more accessible to the general user outside big corporate companies. The future decisions affecting outsourcing or in sourcing that was outsourced will be made by different individuals than in the last ten years. These individuals will be from top management and only guidance from IT specialists will be taken into account in the business deal and will not be a technology deal as in the past. The reality is that IT departments will be managed in the same manner as the normal business units in order to improve profitability and continuous improvement. The **TDi-Model** that focuses on the comparison of unique functions in the IT department can be a very handy tool in the final evaluation for decisions on outsourcing the IT department. It is also important that the strategic business deal is done as an alliance and as a trustworthy relationship between the parties to ensure future best practices with continuous improvement.

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Appendixes

Appendix 1

sasol

reaching new frontiers
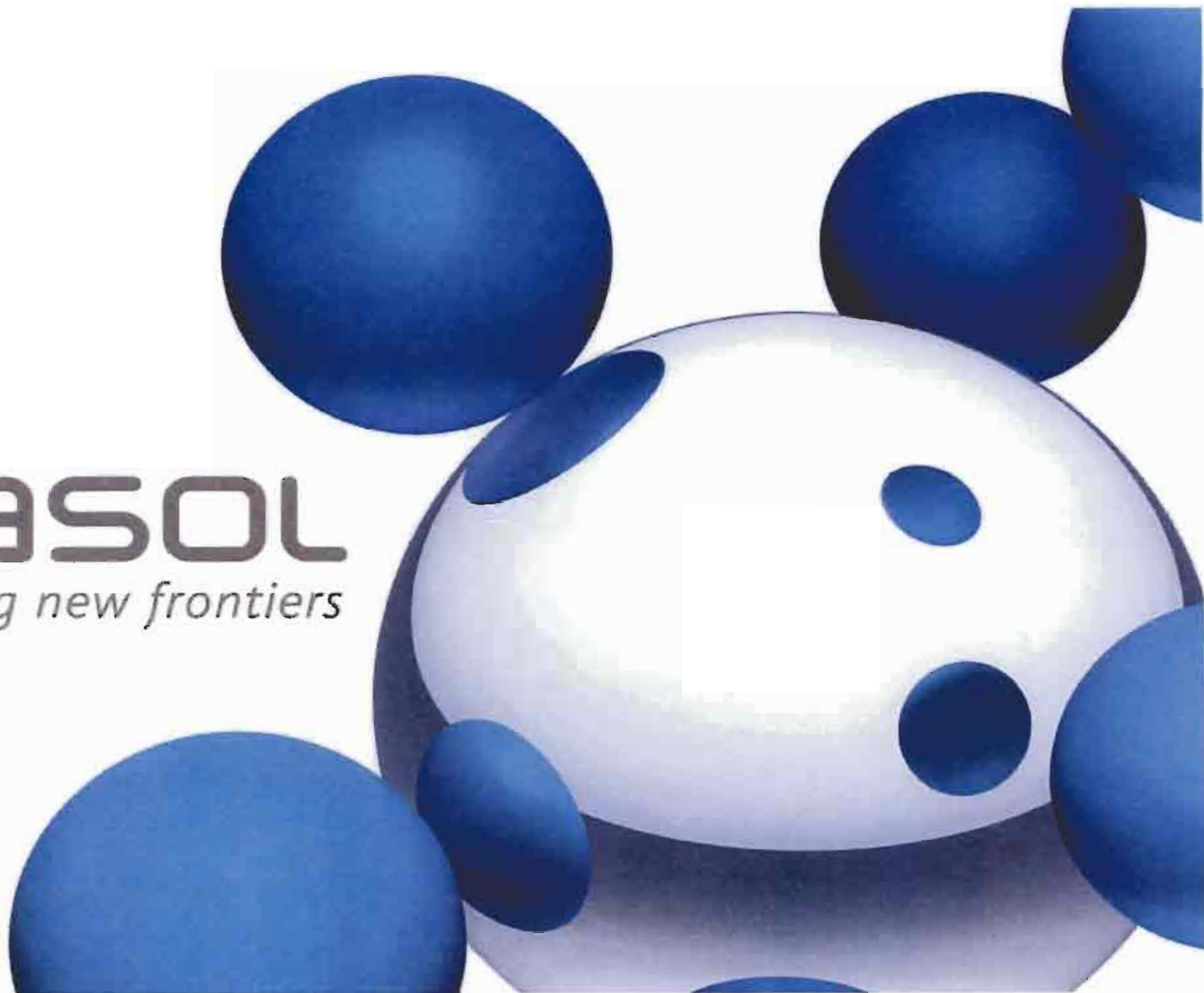
IM MANAGER

IM Manager

- Project NOVARé (IM refocusing)
- Appointment of Management Team
- KPA (Performance Appraisals)
- Geographical Location of Groups
- IM Road Show (WAM festival)
- Information Management Day
- Training and Development (New Organisation Strategy)

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PROGRAM MANAGEMENT OFFICE

(PMO)

- Establishment of EPMO / PMO
- Kabili closure
- Transformation period (old org – new org)
- Portfolio management
- Project initiation

INFORMATION LEADERSHIP & ORGANISATIONAL STRATEGY

(ILOS)

Strategy
- Technology
- People
- Processes/Systems
- Other
- R&D, Needs Assessments
- Innovation
- Pre-project work

Knowledge Optimisation
- Knowledge Management

Establishment of ILOS

Up to date & dynamic Business Strategy that incorporates IM perspectives:
- Interpreted Business vision and strategies
- Interpreted IM Trends (internal and external)
- Defined and agreed business strategy
- IM roadmap that enables business strategy
- Business acceptance & ownership of strategy

INFORMATION RESULTS MANAGEMENT

(IRM)

- Establishment
- Optimal
- Sascon SAP
- DMS (Document Management System)
- AIP (Ammonia, Infrachem & Polymers) Cluster cost optimisation (R19.5 mil)
- Resource & succession planning
- Training & development

INFORMATION TECHNOLOGY SERVICE MANAGEMENT

(ITSM)

- Transformation period
- Network upgrade
- SLA (Comparex) interpretation
- Density

PROCESS INFORMATION MANAGEMENT

(PIM)

- Business focus
- Key focus areas
- Roles + Responsibilities
- Comparex involvement

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sasol
reaching new frontiers

Program Management Office

● PMO	**Establishment of PMO**	● PMO function / services ●Group Inputs (EPMO) ● Infrachem / Sastech community of practice ● BD&I Model for Infrachem ●Training and development ●Change Management
	Kabili closure	●Envisaged completion ●Applications / server consolidation ●Budget ●Next steps
	Transformation	● User support (calls, purchasing, support)
	Portfolio management (applications)	●Data basis for all applications outside of SAP ●Licensing, quality surveys and WAM management ●Management of applications outside of SAP
● Project Initiation		● Project Optimal ●Cluster projects

Information Leadership & Org Strategy

Strategy		
Technology	• Bluetooth applications • Tagging – Coal, PC's • BioLogon – Thumb & Iris scanning • Peripherals – Edge Technology • Digital Overhead Projectors • Kiosking – Info sharing • Office of the Future	
People **Knowledge Optimisation**	• IM Training & Development Strategy + IM Group (PIM) • Line of sight – EIP, ODS, LIMS • IT/IM Training – OD/Skilltec • IT End user literacy – Gap Analysis, Needs Analysis - Improve • eLearning pilots – Know How (SAP) & other • IM Induction Training – Governance, Policies & Procedures	
Processes/Systems	• Enterprise Information Portal – ODS, LIS, ISO ect • Environmental Modeling • InfraChem BDI Model – Strategy - PMO • SAP HR ESS/MSS • Laduma index (Excel vs Application)	
Other	• Natural Gas Impact Assessment & Next steps • R& D, Benchmarking • Road show org • IM/IT Day – Speakers, Suppliers, Show • Establishment of ILOS- PA,PD – KM	

• **Knowledge Management**

• KM Strategy for Infrachem – Training, Change management
• MD – 5 Priorities
• Plan - COP's identify & establish

Information Results Management

IRM	Establishment	• IRM function • Training and development (Know How) • Change Management • Additional PP position advertised
	Optimal	• Project Kickoff on 7/5/2003 • Project Office – Sastech SAP training venue • Detail Planning to be done
	Sascon SAP	• Present support scenario • Blue print phase to start 7/5/2003
	Document Management System	• DMS project was not approved in current financial year • Need exist for Design Office, busy with proposal • Need exist for Inspection due to Project Turbo
	Ammonia, Infrachem & Polymers cost optimization	• Trying to bring the cost down from R 19.5 mil • J Pieterse to provide detail on changed budget • Remove inactive users
	Resource & succession planning	• PP in place – new position
	Resource & succession planning	• The ideal person will be the Assistant to the Business Information Architect • Resource to Product (PP) in place due to new position • Procure to Pay and Financial positions are currently still within relevant Departments • Manage Operational Reliability (PM) most of the Super Users are in Planning and Scheduling Section. • I will be able to identify ideal candidates in project Optimal

IT Service Management

ITSM	ITSM Implementation	• Sasol Infrachem users interface to Comparex • Project to implement 18 months • Addressing current issues • Creating awareness – daily 15 minute meetings • Configuration Management
	Campus Network Upgrade (Natref)	• Technology for the future • Redundancy • Cabling Synergy • Office/Production
	Output Device Convergence	• Current Printer Density approx 1 person/printer • Desktop Printers are expensive • Projected density 20-25 persons/printer • 144000p/month @ R4,50 pp = R648 000/month – possibly halved
	Optimising the server environment	• Switch to Sasol Governance equipment • During transition number of servers to be scaled down
	Managing the IT Budget	• Allocate a CC to each IM Department • Manage spend to Comparex • Evaluate new projects
ITA		• Optimise Infrastructure • Align Infrachem with group • Manage IT Life cycle • Collaborate with Group IM

Process Information Management (PIM)

Business Focus	**Manufacturing Execution System (MES) solutions within Infrachem and the rest of the Sasolburg campus, excluding Natref**	Within Sasol, MES would include: ● Operational Data Store (ODS) ● Supervisory Control and Data Acquisition (SCADA) ● Process Control Monitoring (APC, SPC) ● Telemetry Systems ● Laboratory Information Management Systems (LIMS) ● Energy Measurement Systems ● Environmental Monitoring Systems
● **Key Focus Areas**		● ODS: Consolidation of process data via ODS systems per site ● Laboratory: LIMS and web-based ISO 9001 ● Energy Palace: Energy data to ODS and fiber optic networks ● Environmental: Advise on data acquisition and integrity ● Telemetry: GSM modems for remote site data acquisition ● Process Control: Performance monitoring via ODS systems

● **Roles and Responsibilities**		● Project Management (Standard methodology for Sasol IM)
		● Process Information alignment on Sasolburg campus
		    ● *Infrastructure (hardware)*
		    ● *Process Information Systems (software)*
		● Sasol IM procedures and governances related to Process Information Systems
		    ● *Update*
		    ● *Manage*

● **Comparex Involvement**		● Close collaboration between PIM and Comparex technical group ● Knowledge sharing and training on different systems

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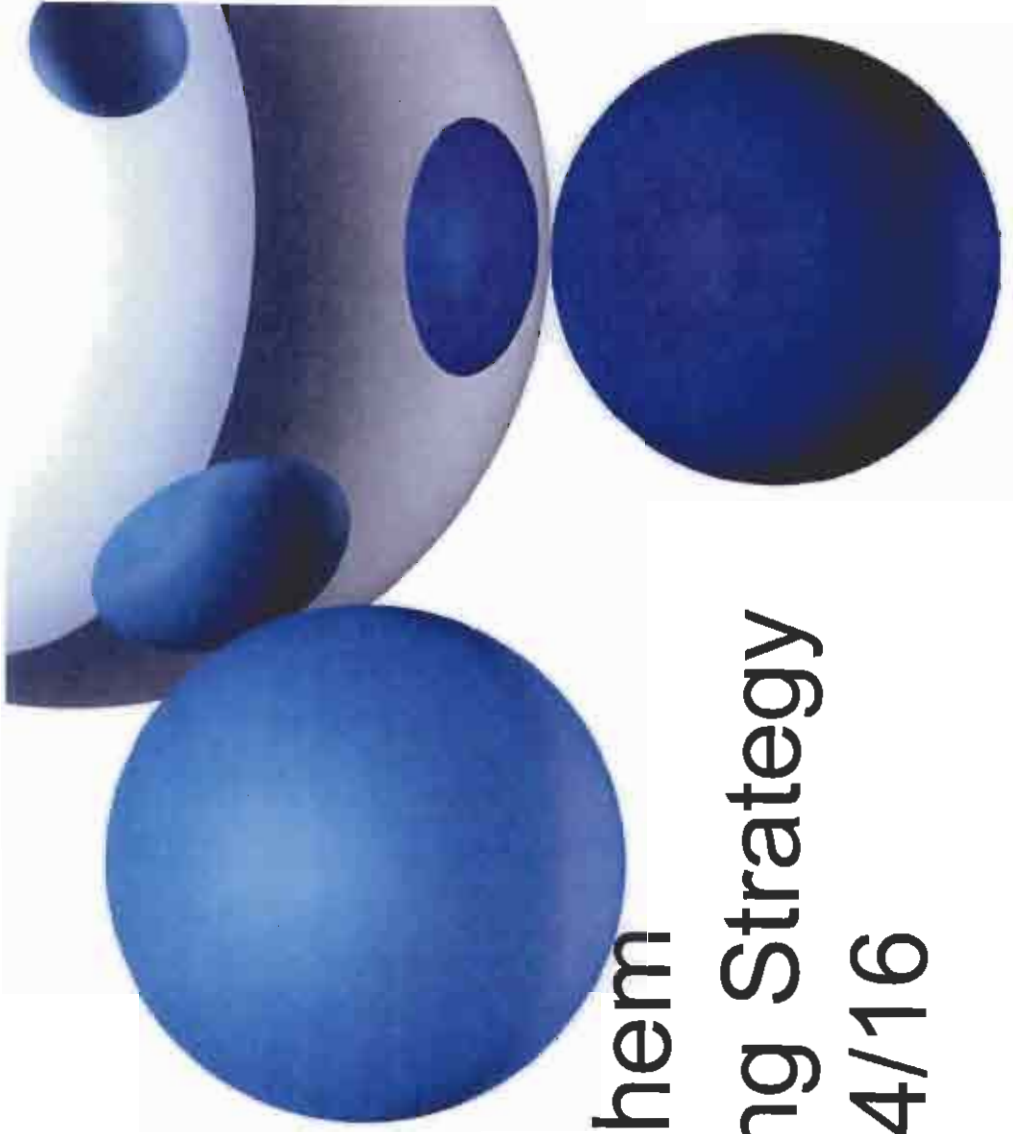
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sasol
reaching new frontiers

Infrachem
IM Refocusing Strategy
2003/4/16

Role definitions for PMO office:

Role	Function
PMO Manager:	- Project portfolio management - Strategic alignment of projects Set standards, principles, etc. of programme Office as aligned with Group (establish & manage the PM culture tools, mechanisms & best practice within Sasol Infrachem IM) - Report on overall Infrachem project portfolio progress (cost, time, impacts, risks) - Manage external project managers - Feedback and project tracking - To act as the link to Group IM Enterprise Project Management Office Act as project / programme manager for large, strategic projects from Group or internal to Infrachem Mentoring role (PMO, IM)

Role definitions for PMO office:

Role	Function
Portfolio manager: Applications:	•DSL for Infracgem •Functional quality survey •Technical quality survey •Financial Info – costs, maintenance, support •Application effect, eg. Infrastructure •Business processes supported by application •WAM management •DRP (business continuity)

Role definitions for PMO office:

Role	Function
Administration: **PMO**	• Scheduling of time / resources on IM projects • Projects tracking (admin) • Coordinate training, liaison with HR. • Coordinate change management • Governance training

Role definitions for PMO office:

Role	Function
Portfolio Manager: **Projects/programme**	•Working intensively on Ms Projects •Project administration for programme office •Assisting with analysis of projects portfolio's •Liaison with project managers, and clients •Tracking of budgets •Preparation of reports for presentations. •Programme management

Role definitions for PMO office:

Role	Function
Business Analyst programme office **(EE)**	•Perform Business analysis for BU's within Infrachem as required per project. (process flows, DFD, MI, etc.) •Assist other roles within PMO as and when required, for example scheduling, project management.

Roles and responsibilities
Strategic initiatives, Group alignment and Information Leadership

Role	Function
Infrachem Knowledge Management Manager *Coordinates and Manages Infrachem KM initiatives*	Leads and coordinates the knowledge management activities in a specific knowledge area (e.g. CoP leader) or a specific business area (e.g. functional knowledge manager) ●Gives direction and focus to knowledge management in terms of strategy and roadmaps ●Assist knowledge workers to effectively and efficiently access, filter, apply, create, capture and share knowledge ●Manage KM initiatives in terms of cost, schedule, resources and quality of deliverables ●Optimise and coordinate the portfolio of KM projects within the consolidated roadmap

Roles and responsibilities
Information Results Management

Role	Function
Information Results Manager *Ensures delivery of IM business results within Infrachem*	• Co-creates IM strategy by coordinating individual SBU inputs and participating in strategic business and IM forums • Drives IM strategy integration • Manages overall IRM in Infrachem and ensures integration between process / functional BICs (solutions) • Integrates with BPO, BPS and super-users at a strategic level • Aligns with Group IRM initiatives and ensures Infrachem IM delivers business results (ROI) • Tracks and manages IRM projects and scope of activities Prioritisation of business needs and allocate projects accordingly • Coordinates resource planning for projects • Responsible for people management processes within IRM area – Identification of training and development needs – Mentorship • Manages IM transition to ensure customer satisfaction and least disruption to business • Manages overall IRM budget

Roles and responsibilities
Information Results Management (cont.)

Role	Function
Business Information Consultant (BIC)* *Align IT / IM to business and deliver business results through effective information management*	• Align SBU / functional area strategy with IM and IT strategy • Provide SBU input to Infrachem IM strategy • Constantly communicate and drive IM marketing and educational processes • Facilitate SBU results and benefits from IM: – Through performance tracking (post implementation reviews, application of IM, value of IM, etc) – Pro-actively communicate IM impacts with regard to any business initiative – Pro-actively identify IM value and market this to business • Solutions planning and design – Pro-actively identify business needs that could be facilitated via IM – Identify and map business requirements and translate into IT requirements and specifications (business analysis) – Liaison with BPO, BPS, super-users, BAs and business to facilitate requirements definition – Interaction with vendors and technical specialists to obtain cost estimates and ensure optimal solution – Develop business case – Facilitate vendor evaluation and selection process

* Final title to be agreed

Roles and responsibilities
Information Results Management (cont.)

Role	Function
Business Information Consultant (BIC)* **(cont)** *Align IT / IM to business and deliver business results through effective information management*	• Project manages IM initiatives as required • Provides IM and SBU leadership, business and process knowledge to IM projects • Ensures SBU understands, buys-in and adheres to IM governance • Facilitate SBU to resolve SLA non-performance via ITSM • Responsible for change management with regards to IM projects (coordination and driving) • User education (general IM)

* Final title to be agreed

Roles and responsibilities
IT Services Management

Role	Function
IT Services Management (ITSM) Manager *Manages IT service delivery within Infrachem*	• Manages overall IT infrastructure services to ensure business momentum is maintained – Management of strategic partner – Ensure appropriate processes and procedures are in place for ITSM services, such as incident and problem management, change and release management – Managing availability – Managing capacity – Business continuity – Managing campus infrastructure – Managing Infrachem procurement processes – Ensure Infrachem IM governance implemented and managed • SLA management – Negotiation of SLAs and contracts with strategic service provider / other vendors in conjunction with IM Manager – Ensure appropriate SLAs are in place for Infrachem – Monitor SLA performance and take corrective action • Communicate with all stakeholders, e.g. ITSM issues that impact business, governance, processes and procedures

Roles and responsibilities
IT Services Management (cont)

Role	Function
IT Services Management (ITSM) Manager (cont) *Manages IT service delivery within Infrachem*	• Manages overall ITSM budget and charging – Overall IT TCO for Infrachem – ITSM budgets – Authorises invoices – Facilitates charging (including visibility of IT costs to business to manage TCO) • Continuously benchmark Infrachem to ITSM operations within Group and best practice to ensure Infrachem maintains optimum efficiency and effectiveness • Co-creates IM strategy by coordinating ITSM inputs and participating in strategic business and IM forums • Drives IT strategy implementation and ensures integration with IRM, Group IM and IL • Responsible for people management processes within ITSM area – Identification of training and development needs – Mentorship • Manages IM transition to ensure customer satisfaction and least disruption to business

Roles and responsibilities
IT Service Support Manager

Role	Function
ITSM Assistant *Provides IT service management administrative function*	• Manages overall administration of ITSM processes – Updates and maintains all user databases and files – Notify Comparex of new users, transfers or resignations • Collates service desk and other SLA statistics from vendors for ITSM Manager and highlight areas of concern for action • Assists ITSM Manager to document and establish appropriate, ITIL compliant processes with Comparex for incident, problem, change and release management • Manages ITSM administration for the following processes – Incident management (escalation procedures) – Capacity Management (Monitor and initiate action) – Change management (maintain database) – Release management (maintain database) – Governance (communication, governance compliance register) – User communication • Secretary to CAB, vendor / SLA meetings • SAP upload of PRs • Acts as IM liaison for Site Services & Syngas & Utilities

Roles and responsibilities
IT Service Delivery Manager

Role	Function
	• Manages overall administration of ITSM processes
	– Updates and maintains all user databases and files
	– Notify Comparex of new users, transfers or resignations
	• Collates service desk and other SLA statistics from vendors for ITSM Manager and highlight areas of concern for action
	• Monitors and administer Infrachem availability in conjunction with Comparex
	– Acts as liaison and expeditor between business and vendors where service levels are not met or priorities have changed
	– Pro-actively manages service issues upwards to ITSM Manager for action
ITSM Assistant	• Manages ITSM administration for the following processes
Provides IT service management administrative function	– Configuration Management (Asset Register, DSL, procedures)
	– Financial Management (Invoices, tariffs)
	– Continuity management (Plan, test, audit)
	– Problem management
	– Governance (communication, governance compliance register)
	– User communication
	• Secretary to CAB, vendor / SLA meetings
	• SAP upload of PRs
	• Acts as IM liaison for Financial, PSM & Other

CAB = Change Advisory Board

Roles and responsibilities
IT Services Management

Role	Function
Infrastructure Manager and Technical Architect *Optimises Infrachem infrastructure and develops technology architecture strategy in conjunction with Group IM*	• Manages Infrachem infrastructure through: – Optimising and planning capacity for network and servers based on business requirements, the organisation's operation and the IT Infrastructure – Ensure that all the current and future capacity and performance aspects of the business requirements are provided cost-effectively • Campus Infrastructure – Represents Infrachem on the campus infrastructure management forum – Ensures Infrachem complies with campus governance and architecture • Develop Infrachem technology strategy in accordance with Group directives and business (ensures compliance to group architectural strategy and intent) • Participates in the development / review of Group IM technology architecture principles and framework • Collaborates with Group IM on determining technology policies, principles and standards • Manages Infrachem technology cycle in line with Group IM directives and business requirements • Aligns technical architecture with application and business architecture • Liaison with other architecture domains, networking within the broader Sasol community and close interaction with IRM and IL • Ensures appropriate business continuity strategies are developed in conjunction with business and IRM so that critical business services can be recovered

Roles and responsibilities
Strategic initiatives, Group alignment and Information Leadership

Role	Function
ILOS: **Manager: Information Leadership & Org Support (Infrachem)** *Ensures strategic alignment and IM Leadership within Infrachem*	• Support Business direction and strategy • Assess IM training needs and develop and implement solution • Develop, maintain & optimize IM strategies – (Organization, Technology & People) • Develop, maintain & optimize IM Training & Development strategies – (People) • Alignment of IM strategy with business needs • Alignment of IM/IT training strategy with business needs. • Coordinate and align external and internal IM training with HR &other suppliers • Feedback to business on IT/IM training statistics and evaluations • Conduct customer satisfaction surveys, analyse and propose remedies. • Knowledge Optimizing – End user PC literacy • Support OD & Learning – needs, evaluation of elearning models and software • Perform Gap Analysis • Add value to Business – Best Practises, Trends (Technology & Practices) • Strategic input in PMO, ITSM & Business strategy • Do R & D to optimize business performance/outputs • Customer Alignment with Suppliers & IM strategies • Determine impact of new IT/IM initiatives (Process, Technology & People)

Roles and responsibilities
Strategic initiatives, Group alignment and Information Leadership

Role	Function
Infrachem Knowledge Management Manager *Coordinates and Manages Infrachem KM initiatives*	Leads and coordinates the knowledge management activities in a specific knowledge area (e.g. CoP leader) or a specific business area (e.g. functional knowledge manager) ●Gives direction and focus to knowledge management in terms of strategy and roadmaps ●Assist knowledge workers to effectively and efficiently access, filter, apply, create, capture and share knowledge ●Manage KM initiatives in terms of cost, schedule, resources and quality of deliverables ●Optimise and coordinate the portfolio of KM projects within the consolidated roadmap

PIM Draft Business Plan
Business Focus

- PIM (Process Information Management) will focus on MES (Manufacturing Execution System) solutions within Infrachem and the rest of the Sasolburg Campus, excluding Natref.
- Referred to the basic structure of a company, MES can be defined as: Any solution that facilitates and improves a production company's wealth creation process. Within Sasol, MES would include the following:
    - Operational Data Store (ODS)
    - Batching systems
    - Supervisory Control And Data Acquisition (SCADA)
    - Human Machine Interface (HMI)
    - Statistical Process Control (SPC)
    - Advance Process Control (APC)
    - Telemetry Systems
    - Laboratory Information Management Systems (LIMS)
    - Energy Measurement Systems (EMS)

Roles and responsibilities
IT Services/Results Management

Role	Function

IM Finance and Procurement
 	
 Manages financial and procurement administrative process
	• Manages overall administration of Infrachem procurement process
	   – Obtaining quotations for authorised requests
	   – Tracking of quotation status
	   – Placement of orders
	   – Obtain input from stores regarding availability of stocks
	   – Order tracking and follow-up
	   – Maintaining new asset register database
	   – Validate invoices against original quotations
	• Manages overall administration of Infrachem financial processes
	   – Collating all invoices from vendors (Comparex, HP, etc)
	   – Perform account reconciliations (actual vs budget or quotation)
	   – Identify potential disputes and notify ITSM Manager
	   – Ensure all supporting documentation / authorisations are provided for purchases
	   – Ensure all authorisations are completed timeously and distribute to Financial Department for payment

Process Specialists

- Specialist in SAP functional module and integration with other modules.
- Explore opportunities for business process improvements, especially from SAP perspective.
- SAP Project management systems technical design, development and testing.
- Manage integration and acceptance test plans and testing.
- Prepare and present end-user training - per SAP module and integration areas.
- Manage business transformation during new implementations (Change Management).
- Communicate change.
- Coordinate cross-functional maintenance and development requests.
- Responsible for user profiles.
- Participation in archiving initiatives.
- Responsible for non SAP applications (Process specific) which integrates with SAP.
- Pro-actively identify business needs that could be facilitated in SAP.
- Liaison with BPO, BPS, super-users, BAs and business to facilitate requirements definition.
- Participate in Super User forums and BPO meetings.
- Develop business case. Identify and map business requirements and translate it into SAP requirements and specifications.
- Reduction and alignment of ABAP's to reduce maintenance.
- Identification of problem areas in Infrachem.

Group CIO interview guideline

NAME OF INTERVIEWEE:

CURRENT POSITION:

DEPARTMENT:

DATE:

1. Please provide us with an overview of the Group IM function with its roles and responsibilities, governance and relational position to BU IM organizations.

Appendix 1.3 INFRACHEM IM
CIO interview guideline
v0.1.doc

Proposal No PA2082

BENTLEY WEST
Management Consultants
An AST Group Company

Bentley West Management Consultants (Pty) Ltd
Confidential

2. What are your expectations of Infrachem IM in respect of alignment with Group CIO? i.e. standards, rules, specific structures, governance or roles and responsibilities? *Request documented guidelines or reference material*

3. Are there any specific strategic considerations that must be taken into account during the design of the new IM organization?

4. What (if any) are your biggest (historical) frustrations regarding the Infrachem IM organization?

5. What do you believe are the biggest challenges that must be overcome by the Infrachem IM organization to successfully support the business?

6. Are there any specific preferences / directives you have in terms of organizational structure, roles or even geographical execution for the new IM organization?

7. Closing comments:

Appendix 2

ASSESSMENT OF OUTSOURCING ISSUES FOR IM IN THE PETRO CHEMICAL INDUSTRY

7 S (ELEMENTS)			SCORE					IMPORTANCE		
			Don't know	False	Sometimes true	Often true	True	Low	Medium	High
1. Strategy	1.01	Information Management is viewed as playing a vital part in company's strategy to reduce costs in real terms	◉	○	○	○	○	◉	○	●
	1.02	Information Management is recognised as a source of distinctive competitive advantage for Company's	◉	○	○	○	○	◉	◉	●
	1.03	Information Management plays a strategic/central role in enhancing total life cycle value of services they purchase	◉	○	○	○	○	◉	◉	●
	1.04	Information Management is a full member of important operating committees and integrally involved in important strategic decision processes (e.g. new projects)	◉	○	○	○	○	◉	◉	●
	1.05	Selective component out sourcing are part of the strategy	○	○	◉	○	○	◉	◉	●
	1.06	Out sourcing contracts are signed for less than five years at a time	◉	○	○	○	○	◉	◉	●
	1.07	The relationship with its service providers enable Company's to be more competitive	◉	○	○	○	○	◉	◉	●
	1.08	Information services and indirect costs are viewed as having the same level of importance to continuous improvement as labour and capital expenditure	◉	○	○	○	○	◉	◉	●
	1.09	Business and site managers take a close interest in the financial impact of Information Management decisions	○	○	◉	○	○	◉	◉	●
	1.10	Out sourcing suppliers has the first right of refusal when quoting for new business	◉	○	○	○	○	◉	◉	●
	1.11	Sourcing strategies exist for all large Information spend items and based on utility computing strategies	◉	○	○	○	○	◉	◉	●
2. Skills	2.01	Information services are continuously and proactively managed	◉	○	○	○	○	◉	◉	●

			Don't know	False	Sometimes true	Often true	True		Low	Medium	High
	2.02	Service providers are actively aligned and managed with respect to Company's strategy	◉	○	○	○	○		◉	○	●
	2.03	Important Information issues/opportunities are pro-actively addressed/seized	◉	○	○	○	○		◉	○	●
	2.04	Administrative processes are efficient and reliable, enabling end users to spend very little time on administration	◉	○	○	○	○		◉	○	●
	2.05	Global markets and forces/factors influencing or driving these markets are understood and followed with keen interest. (Can accurately predict/anticipate marketplace events and trends)	◉	○	○	○	○		◉	○	●
	2.06	Sourcing strategies, used to extract maximum value from the current and potential supply base, are developed and updated	◉	○	○	○	○		◉	○	●
	2.07	The Information Management organisation uses leading-edge approaches (e.g. strategic gaming of options) to prepare for negotiations	◉	○	○	○	○		◉	○	●
	2.08	Cross-functional teams (e.g. composed of procurers, end users and employees from other disciplines) are used to attain outstanding levels of performance	◉	○	○	○	○		◉	○	●
	2.09	The Information management organisation is exceptionally creative and effective in finding new/original data sources(Market intellegence)	◉	○	○	○	○		◉	○	●
	2.10	Information Management is very responsive to client needs	◉	○	○	○	○		◉	○	●
	2.11	End-users have frequent opportunities to provide feedback to the Information Management organisation in terms of performance and/or requirements	◉	○	○	○	○		◉	○	●
	2.12	Key performance indicators and targets exist	◉	○	○	○	○		◉	○	●
3. Structure	3.01	Cross-functional Strategic sourcing teams (e.g. composed of procurers, Informationians, and representatives from other disciplines) exist whenever appropriate	◉	○	○	○	○		◉	○	●
	3.02	Activities are handled at the level with highest strategic leverage (e.g. at site, Company's business unit, or corporate-wide)	◉	○	○	○	○		◉	○	●
	3.03	The leader of the Information Management organisation is at the same level of other senior managers	◉	○	○	○	○		◉	○	●
	3.04	Information Management is aligned both with business units and critical supply markets (matrix organisation with clearly defined interfacing roles)	◉	○	○	○	○		◉	○	●

7 S (ELEMENTS)		Statement	True	Often true	Sometimes true	False	Don't know	Low	Medium	High
	3.05	Information Management strategies are developed centrally for commodities common across all operating units	○	○	○	○	●	◉	○	●
	3.06	Cross-business Information Management professionals work together in meeting corporate and business unit needs	○	○	○	○	●	◉	○	●
	3.07	Information best practices are shared seamlessly across all business units and locations	○	○	○	○	●	◉	○	●
	3.08	Information Management has an equal or dominant role in deciding which service suppliers will be contracted	○	○	○	○	●	◉	○	●
	3.09	The Information Management talent pool is the envy of other organisations	○	○	○	○	●	◉	○	●
	3.10	Structures promoting communication across businesses at all levels are in place and functional	○	○	○	○	●	◉	○	●
4. Staff (in IM)	4.01	Rotation between Information Management and other functional areas (e.g. Procurement & Supply, Production and Sales) is commonplace	○	○	●	○	○	◉	○	●
	4.02	Senior Management is involved in people development in the Information Management organisation	○	○	○	○	●	◉	○	●
	4.03	Salary increases/additional compensation are based on performance against key performance indicators, such as cost reductions	○	○	○	○	●	◉	○	●
	4.04	Operations or engineering experience is common in the Information Management organisation, with a mix of business and technical backgrounds	○	○	○	○	●	◉	○	●
	4.05	People in the Information Management function have comparable salaries and career opportunities as people form other strategic functions (e.g. Technology)	○	○	○	○	●	◉	○	●
	4.06	The Information Management function is viewed as a training ground for the next generation of general managers	○	○	○	○	●	◉	○	●
	4.07	The career development process for high performers includes an assignment in Information Management as a regular practice	○	○	○	○	●	◉	○	●
5. Systems	5.01	Real time market intelligence is available at both a high and detailed level	○	○	○	○	●	◉	○	●
	5.02	Information Management has simple core processes	○	○	○	○	●	◉	○	●
	5.03	The Information Management department has easy to use and responsive information systems that support core processes	○	○	○	○	●	◉	○	●

7 S (ELEMENTS)		SCORE					IMPORTANCE		
		True	Often true	Sometimes true	False	Don't know	Low	Medium	High
5.04	There are consistent and meaningful key performance indicators at an individual and organisational level that drive performance improvement	○	○	○	○	◉	◉	◑	●
5.05	Information systems support critical Information Management decisions	○	○	○	○	◉	◉	◑	●
5.06	Fully integrated systems are used (e.g. one system tracking orders, sales, inventory, quality status, delivery, billing, client satisfaction etc.)	○	○	○	○	◉	◉	◑	●
5.07	I have direct access to the internet at my workplace	○	○	○	○	◉	◉	◑	●
5.08	Systems are user friendly and contributes to the reduction of Total Cost of Ownership Reduction	○	○	○	○	◉	◉	◑	●
5.9	There is a seamless connection between eSales and ERP (enterprise resource planning) systems	○	○	○	○	◉	◉	◑	●
5.10	Operating and administrative processes are fully automated and integrated internally (e.g. EDI or web-based interchange with customers)	○	○	○	○	◉	◉	◑	●
5.11	Information Management procedures are well communicated and understood	○	○	○	○	◉	◉	◑	●
5.12	Annual total cost of ownership reduction targets are set at the Corporate, Business Unit, and individual level	○	○	○	○	◉	◉	◑	●
6.01	The Information Management organisation is characterised by pro-active team Management	○	○	○	○	◉	◉	◑	●
6.02	The Information Management organisation is characterised by open plan, free communication	○	○	○	○	◉	◉	◑	●
6.03	The Information Management organisation is characterised by rapid decision making	○	○	○	○	◉	◉	◑	●
6.04	The Information Management organisation is characterised by externally focused, pro-active, action-oriented leaders of Information Management strategy development and execution	○	○	○	○	◉	◉	◑	●
6.05	Cross-functional efforts to reduce total system costs (including service provider costs, process support costs, quality) are common	○	○	○	○	◉	◉	◑	●
6.06	The Information Management organisation is characterised by a continuous improvement mind-set	○	○	○	○	◉	◉	◑	●

6, Style

7 S (ELEMENTS)			SCORE					IMPORTANCE		
			Don't know	False	Sometimes true	Often true	True	Low	Medium	High
	6.07	The Information Management organisation is characterised by open/frequent communication with customers and service providers	◉	○	○	○	○	◉	○	○
	6.08	Information Management is consistently focused on the bottom line	◉	○	○	○	○	◉	○	○
	6.09	Integration and/or partnerships exist with other functions and key service providers	◉	○	○	○	○	◉	○	○
	6.10	Procurers of Information services spend more than 40% of available time on supplier analysis and evaluation/negotiation	◉	○	○	○	○	◉	○	○
	6.11	Procurers of Information services spend more than 35% of available time working with cross- functional teams in developing sourcing strategies	◉	○	○	○	○	◉	○	○
	6.12	Procurers of Information services spend less than 15% of available time on order processing	◉	○	○	○	○	◉	○	○
7. Shared Values	7.01	Individual/team performance is valued and rewarded	◉	○	○	○	○	◉	○	○
	7.02	Information Management contributes to bottom line results	◉	○	○	○	○	◉	○	○
	7.03	There is a clear sense of urgency and focus in what is done	◉	○	○	○	○	◉	○	○
	7.04	People are empowered to make decisions and these decisions are accepted by the organisations	◉	○	○	○	○	◉	○	○
	7.05	Information Management is a highly professional and respected function that delivers tremendous value to shareholders through functional excellence	◉	○	○	○	○	◉	○	○
	7.06	All members of Information Management are committed to apply best practices in the interest of excellent customer service	◉	○	○	○	○	◉	○	○

Appendix 3

Sasol IM Project Execution Model

Phases: IDEA GENERATION | FRONT END LOADING | IMPLEMENTATION

Idea Generation inputs: Business Needs · Best Practice Research · R&D · IM Intelligence

Track Deliverables	0 Idea Generation	1 Pre-feasibility	2	3 Feasibility	4 Basic	5	6 Start-up	7 Evaluation & Operation
Business		Accepted Responsibilities; Project Scorecard	Business Case; BRS; Risk Register; Benefits List	RFP, RFQ; Proposals; Recommendation	Request for Project	Contract Management and Project Monitoring; UAT	IAT; Operating Manual / SLA	Usage Report / SLA
PM Process		N/A	Business Assistance	Preliminary Project Plan	Project Charter, Project Plan	Project Execution and Control	Project Execution and Control; Contract Closure	N/A
Sponsor		IM Strategic Alignment	Needs Assessment; IM Governance Support	Communication Strategy	Supplier Selection	Communication and Marketing / Ongoing Support	Guidance; Leadership; Business Blueprint; Close Out	N/A
PMO		Registration Facilitation	Governance Entrenchment	Governance Entrenchment	Quality Assurance	Quality Assurance	Governance / Leadership	Benefits Tracking; Administrative Closure

DECISION GATES

- **Gate 0:** Viable; Not Viable; No cost estimations
- **Gate 1:** IM Sub function capacity; Strategic Fit; Business and IM Value; Cost accuracy range (1-5%)
- **Gate 2:** STIM capacity; Strategic Fit; Business Value; Cost accuracy range (5-20%)
- **Gate 3:** STIM capacity; Strategic Fit; Business Value; Solution/Tech; Mandate; Cost accuracy range (20-30%)
- **Gate 4:** STIM capacity; Strategic Fit; Business Value; Solution; Mandate; Cost accuracy range (30-35%)
- **Gate 5:** Successful UAT; Review POC success; Approve start-up; Cost accuracy range (100%)
- **Gate 6:** Successful IAT; Stable working system, run by service supplier, ready to commence SLA leasing
- **Gate 7:** Project success; Acceptance of post audit report & close-out