Reengineering a branch to create the Branch of the Future at the First National Bank of Southern Africa

William Gerard Cinnamond

A research report submitted to the Faculty of Commerce, University of the Witwatersrand, Johannesburg, in partial fulfilment of the requirements for the requirements for the degree of Master of Commerce.

November, 1996

Declaration

I declare that this research project is my own unaided work. It is being submitted to the Faculty of Commerce at the University of the Witwatersrand, Johannesburg for a Master of Commerce degree specialising in Information Systems. It has not been submitted for any degree or examination at any other university.

William Gerard Cinnamond.

Signed this ....26th............... day of ....November............./1996 in Johannesburg.

Acknowledgements

Abstract

Increased competition from globalisation is having an increasing impact on competition within the South African market. This coupled with the external pressures from international banks (globalisation), the emergence of non traditional players, higher demands from customers for a better deal is placing pressure on the bank's traditional means of earning income.

In an effort to address this issue, in the medium term, FNB embarked upon a novel approach to solving problems of profitability, space utilisation and customer satisfaction, by focusing on leadership, by reorganising the layout and structure of a branch and by applying creative information technology solutions.

FNB applied well trusted information technology in an innovative way to improve client throughput, increase turnover and raise staff productivity. The branch of the future project showed how reengineering could be used to substantially improve a branch's performance while increasing its attractiveness to the bank's clients. The initiative was also used to show the way to the rest of the organisation as to how retail banking should be conducted in the twenty first century.

In terms of the technology available in the mid 1990s, and bearing in mind the average bank's personal or corporate client's needs, to have access to coins and notes, this type of project, which firmly retains a bank network, may well be a forerunner of how banks will operate in the future, not only in South Africa, but around the world.

The initial indications are that this branch of FNB has achieved a substantial improvement in financial returns, as well as repositioning themselves in the market.

Table of Contents

List of Figures

List of Tables

1.   Introduction

The retail banking industry in South Africa is very competitive. There are approximately 60 banks in the country, all of which have commercial banking operations. Only the larger banks offer a full range of modern financial services which include corporate electronic delivery mechanisms.

There are four big players which constitute more than 90% of the market, these are, in alphabetical order, Associated Banks of South Africa (ABSA), First National Bank of Southern Africa (FNB), Nedbank and Standard Bank of South Africa.

ABSA, which is the largest banking group, is the end product of a large number of banking mergers over the years bringing together some medium sized and relatively small banks, some of which had specialised in the Afrikaans speaking market over the years. These mergers were concluded in 1992. A number of members of the ABSA group have been in existence for quite some time, with Allied Building Society dating back to 1880, United Building Society to 1889 and Volkskas was established in 1934.

First National Bank, which is similar in size to the Standard Bank, may be regarded as a comparatively new bank in the sense that it has only operated under this name since 1987. First National Bank was created as a result of the disinvestment policies of the British bank, Barclays Bank plc. However Barclays Bank DCO had roots in South Africa dating back to 1838 and as such First National Bank sees itself as the inheritor of this tradition.

FNB has 471 branches, 77 service branches and 221 agencies and employs approximately 34,083 staff members. In addition, FNB has 4 in-store representation points, over 1250 ATMs and some 25 000 point of sale merchant terminals. FNB's furniture finance operation boasts 456 stores and Cash Paymaster Services has over 1400 paypoints. (FNB Annual Report 1995). First National Bank's declared strategy is to be a bank for all the people of Southern Africa and to supply a full range of banking services.

Nedbank, which is the smallest of the big four, has its roots in the Nederlandsche Bank en Creditvereening which was established in Amsterdam 1888 by a Dutch group of financiers. The bank changed its name to the Nederlandsche Bank Creditvereening voor Zuid-Afrika in 1903. The bank remained in Dutch hands until 1969 when it became a public company and was listed on the Johannesburg Stock Exchange. The name of the bank was changed to Nedbank Limited in 1971. As it was South African owned it did not change hands in the 1980s in the same way as Barclays or Standard Bank. Nedbank Limited merged with the South African Permanent Building Society in 1988.

The Standard Bank of South Africa, which is one of the oldest banks in the country dating back to the 1860s, has been through a similar process to First National Bank, having been originally owned by the Standard Chartered Bank of the United Kingdom.

Although the banking industry in South Africa is not as deregulated as it is in some parts of the world, all four of these banks offer a wide range of financial services to corporate, small business and individuals. These services range from money market dealings to home loans, from share issues to forward buying of foreign currencies for clients.

1.1. Banking in South Africa

South African banks operated in a very strict command and control environment in which functional silos or stovepipes ensure all the rules are obeyed by their staff. However, changing circumstances in South Africa, partly due to rapid urbanisation during the past two decades and also due to the crumbling and final collapse of apartheid, have resulted in an increased number of customers and therefore, transaction volumes. Furthermore the world-wide increase in customer demands for a higher level of service and lower banking costs, from which South African was not immune, severely impacted FNB's profitability. This occurred by the start of the 1990s to such an extent that some of the bank's seven regions were no longer earning the required corporate return on the funds invested in them.

Furthermore, the retail banking experience in South Africa had become a fairly dismal affair for the individual bank client. This was primarily due to the very high level of urban crime

which has become a regular feature of South African life. Criminal activity included a strong interest in the banks and their cash and for some years banks were a prime target for armed raiders. As a result banks installed heavy duty bullet-proof glass in front of their tellers which immediately distanced the teller from the client and removed an important element of intimacy between the bank employee and their customers. In addition, many of the banks installed metal detecting double doored cubicles at the front entrances through which all members of the public have to pass before gaining access to the bank's premises. These cubicles are expensive to install and to operate and they are not popular with the bank's clients.

Like their counterparts in many other parts of the world, South African banks are past masters at minimising their risk by filtering out any financially questionable prospective clients. This is, of course not to say that the South African banks, like their international counterparts have not had an increasing share of bad debts over the years (Wuffi and Hunt, 1993). However, with the collapse of apartheid they are looking to extend their services to those they would not have accepted as clients only a few years ago. This is in part a political decision which is referred to as reaching the unbanked, of whom it is estimated there may be as many as 10 to 15 million such people in South Africa, out of a total population of approximately 43 million.

The term unbanked is used in South Africa to refer to people who do not have banking accounts and perhaps may never have used a bank at all. These individuals are usually, although not necessarily black people who, under the apartheid regime lived on a subsistence income, many of whom had little or no cash and thus had no real need for banking services. With the passing of apartheid more black people are in better economic circumstances and are thus in a better position to need and make use of banking facilities.

1.2. Background to the problem

Traditional banking worked well for Barclays Bank DCO and the renamed First National Bank for over 150 years. However, the original principles of banking on which this success was based have been under pressure throughout the world for at least the past twenty years (Orton, 1995).

These original principles were based around a well understood paradigm, which has been described in a somewhat jocular fashion by the bank's general manager of information technology Mr Mike Jarvis, as the 3-6-3 rule. The 3-6-3 rule means that bankers borrowed money at three percent, lent the money at six percent and would be on the golf course by three o'clock in the afternoon.

In reality the bank's ability to make the profit it requires on the margin between what it pays to its depositors and what it earns on its advances has been under severe pressure for years. This is because there is today, and has been for some time, a much smarter investor looking for the maximum return on funds and a sharper borrower seeking the lowest interest rate available. In addition, there is increasing competition between the banks and thus finer rates, than was previously the case, are frequently offered. Furthermore the operating cost of the branch network has increased considerably both in terms of staff and premises expenses.

The result of this is that the cost of lending is no longer as inexpensive for banks as it used to be. One particular example is that twenty years ago many organisations left sizeable amounts in current accounts which did not earn interest from the banks. Today many organisations have treasury functions which ensure that they earn as much interest as possible from all their available cash, therefore company surplus funds are placed where they will obtain the best return.

Although the interest turn of the bank is still the most important contributor to its profitability, non-interest income, which is earned from services which the banks provide, has become increasingly significant. This may be seen from Table 1 which shows the relative value of these two income items to First National Bank over the past 3 years.

RELATIVE VALUE OF INTEREST AGAINST NON-INTEREST GENERATED INCOME				
Year	Interest Generated Income R mil	Percentage	Non-Interest Generated Income R mil	Percentage
1992	1954.6	59.97%	1304.5	40.02%
1993	2280.0	59.59%	1545.9	40.41%
1994	2593.2	56.46%	1999.6	43.54%

Table 1. Relative value of Interest against Non Interest Generated income

Table 1 clearly shows a decline in interest generated income while there has been a definite increase in non-interest generated income. All the major players in the banking industry are increasing the range of services they provide as a means of generating additional income and are looking to technology to provide the services at reduced cost.

1.2.1. The Information Technology initiative

In the early 1980's, FNB realised that information technology was a key contributor to competitive advantage, and the ability to manage complex technology had to become a core competence within the group (Store and Guise-Brown, 1994). To achieve this, Mike Jarvis was employed as General Manager IT in 1986.

In 1991, Mike Jarvis FNB's General Manager - IT, believed that FNB was not obtaining the optimum return on the sophisticated information technology it had been implementing (Bakos and Treacy, 1986) since the mid 1980's. In an attempt to rectify this, as well as use technology to increase income Jarvis, endeavoured to implement the branch of the future project. This was initiated in 1991 with the objective being to use FNB's enormous investment in an information technology infrastructure, as well as its substantial technological expertise and experience, to gain further competitive advantage.

It would achieve this by creating strategic information systems which would deliver a shopping centre wide client server system. This system would provide benefits to both merchants and customers within the shopping complex. This would enable the bank to more completely service existing merchants and thus ensure their continued support as well as attract new business.

Initially some useful progress was made by Jarvis with this initiative in securing an interest of top management within FNB. However, no formal mandate was established, and the project was not furnished with adjquate resources in the form of funds or a dedicated team, headed up at the appropriate level of management. Thus enthusiasm for the idea of the branch of the future project as it was expressed by Jarvis soon lost momentum and by late 1991 it had somewhat fizzled out. This initial attempt lost momentum due to the fact that FNB had not appointed a line manager to champion the project.

1.3. The Objectives of the Report

This report investigates First National Bank's initiative using reengineering at Cresta branch which they named the "branch of the future" project. In addition, it furnishes some insight into advancement and achievements in the information technology area in providing unique services to it's customers. Furthermore, it provides an overview of the literature relating to and an insight into aspects surrounding business process reengineering, thereby adding to our knowledge about reengineering projects.

The objectives of this report are to establish if the branch of the future initiative was successful in terms of profit and volume growth, and identify what the major impacts on the project were.

However, the primary objective of the report is the description of the research component, which was undertaken to answer the research questions.

1.4. Scope of the Research

Due to the unprecedented nature of this initiative within the South African banking industry, a case study restricted to FNB's Cresta branch. This research was conducted mainly within FNB's Cresta branch as well as support areas who played a part in implementing the project.

These support areas included, but were not limited to:

- The Regional Head Office (Gauteng);

- Group Organisation and Methods;

- Strategic Planning;

- Group Marketing;

- Premises Division;

- ISD;

- Internal Audit; and

- Group Training.

1.5. Importance of the Research

South Africa is undergoing an unprecedented period of economic, political and social change. Increased competition from globalisation is also having an increasing impact on competition within the South African market. According to John Coombes from the Automated Clearing Bureau's (a centralised clearing house), over 200 banks will be operating in some capacity in South Africa in 1997.

This coupled with the emergence of non traditional players in the market (Toyota's zero percent car finance option, higher demands from customers for a better deal, as well as the fact the government and trade unions are stating that the bank's have *"had it too good for too long"* is increasing the pressure on banks operating within Southern Africa.

It appears that the writing is on the wall and in the near future, bank's in South Africa are going to have to provide increased and superior services at decreased costs. Bank's will need to reach new levels of productivity and efficiency in the face of increasing skills shortages, increased competition and customer demands.

Information technology, if applied properly can provide a solution to this problem by increasing productivity, profitability and customer service. Conversely, if information technology is inappropriately applied, it can become a liability.

The research is important for other banks or even other companies who intend to apply information technology and undertake a reengineering initiative as it highlights some of the major issues affected by such an initiative and where companies should concentrate their efforts

This research describes how FNB reorganised, restructured and retrained a branch in order to solve an operational and financial problem. It reports how reengineering can be used to substantially improve a branch's performance while increasing its attractiveness an service to the bank's clients.

1.6. Structure of the Report

This section furnishes a description of the report layout by chapter. A summary of each chapter is provided.

Chapter 1 of the report provides a brief description of the banking industry in southern Africa as well as some of the problems this industry is facing. The fundamental research question is then described. The objectives, scope, and finally the importance of the research is provided.

Chapter 2 deals with the literature survey. The concepts and major components of Business Process Reengineering as well as the impacts of IT on the reengineering process are described.

Chapter 3 describes the research methodology used in this study. The research approach is discussed, and the research questions and limitations are provided.

Chapter 4 provides a case study which presents the findings of the research.

Chapter 5 interprets the results of the research in terms of the objectives and research questions formulated in the preceding chapters.

Chapter 6 provides a discussion of the future in terms of the literature review and the research.

2.   Literature Review

In order for the researcher to understand the main aspects that impact on a reengineering initiative, an extensive literature review is an essential prerequisite for research. The literature review will examine the established facts in the field of study, and will establish the current theories or models which have been used by previous researchers.

2.1. Background

Computer technology has increasingly replaced many of the mundane tasks performed by human resources, which has resulted in these tasks being done faster, more consistently and with less error.

Advances in microprocessor technology have made the capability of computers more powerful and the potential of their applications enormous, affecting most areas of the business. It has provided the possibility of using technology to reduce costs, release resources and improve efficiency and effectiveness. IT empowers staff by providing better information, thereby allowing them to make better decisions.

Organisations have been using IT strategically to secure gains over competitors. However, despite implementing IT, the under utilisation of information technology is a serious problem facing both information systems and business managers (Bakos and Treacy, 1986).

Adam Smith's "Wealth of Nations" describes the process where individuals were provided with specific tasks to improve throughput. This was commonly known as functional silo's which was ideally suited to production type operations (Hammer and Champy, 1993).

Unfortunately, the main fault made in implementing IT was that corporations generally employed technology to "automate" manual vertical processes which made up the functional silos. This simply resulted in ineffective processes being made more efficient. In addition, many IT initiatives failed, which Johnston and Carrico (1988) mainly attribute to:

- Senior managements' ignorance of information technology and it's potential uses;

- poor communications between the ISD and the rest of the organisation; and

- resistance to change from within the business as well as the ISD.

More importantly, *"a lack of focus on opportunities"* is described by them as being a major contributor to IT project failures. This is supported by Hammer and Champy (1993) who state:

> *"One of the hardest parts of reengineering lies in recognising the new, unfamiliar capabilities of technology instead of it's familiar ones."*

As evidence, one only has to examine the past to find many examples of instances where the true potential of the possible application of the technology was missed, among these are:

- Edison, the inventor of the phonograph though it's value was in that it would enable "dying gentlemen" to record their last wishes;

- T.J. Watson, the founder of IBM, proclaimed that the worldwide demand for data processing computers would be less than 50 machines;

- Marconi, the developer of radio did not recognise it's use as a broadcast medium;

- IBM, when approached by Xerox and offered it's copying machine patents in the late 1950's turned them down; and

- Initially, personal computers were dismissed as toys by mainframe computer manufacturers. However, the success of PC's did not lie in emulating mainframes, but in creating an entire new class of applications and opportunities.

As the true value of systems are often outside the user's frame of reference, benefits are only fully realised when the systems have been in use for some time. The latent, unconscious need then suddenly becomes tangible and overwhelming.

The capabilities of IT are only now becoming understood. IT has advanced so far that the chasm between technical capabilities and companies being able to utilise these under existing organisational structures and operations is becoming increasingly wider and it is now obvious that companies cannot continue to operate as they always had. Hammer and Champy (1993) assert that when implementing IT, one should not ask *"How can we use technology to allow us to enhance or streamline or improve what we are already doing?"* but, *"How can we use technology to allow us to enhance or streamline or improve what we are not already doing?"*

Companies are now demanding that information systems benefits on the widest front possible, including both cost reductions and improved customer service (Remenyi, 1993), where the need to re-engineer processes to redesign the way companies perform tasks, thereby making them more effective as well as efficient has become a necessity.

Although it takes time, is usually very painful and is hard work, the only means that has proven to optimise the use IT is Business Process Engineering (BPR). To achieve success, the proponents must be comfortable and aware of the capability of technology, and how it can be applied to not only optimise existing services, but eagerly search for opportunities that were not available prior to the advent of IT.

BPR allows one to change business processes taking advantage of IT as well as allowing systems to be developed taking business realities into account. It has the potential to radically affect the organisation's internal operations to improve product delivery performance to the customers (Short and Venkatraman, 1992). This results in systems that fully support the business and provide companies with a substantial competitive edge.

2.2. Business Process Engineering

Business process re-engineering is the *"the fundamental rethinking and radical redesign of business processes to achieve dramatic improvements in critical, contemporary measures of performance, such as cost, quality, service and speed."* (Hammer and Champy, 1993). Although this statement refers to organisation and operations, these aspects are primarily made

12

up of processes. The following definitions have been applied to the term *process* in the context of business process re-engineering:

- The transition of input, using machines, methods, and labour to produce a product or provide a service for a customer.

- A set of interrelated work activities that transforms or blends input resources to produce a product or service to a customer.

- A group of usually sequential, logically related tasks that provides products and services to both internal and external customers by using organisational resources.

There are two types of processes:

- Operational processes carried out by front-line (i.e., line) workers in delivering services to clients.

- Management support (i.e., staff) processes that assist and enable the front-line workers to deliver client services.
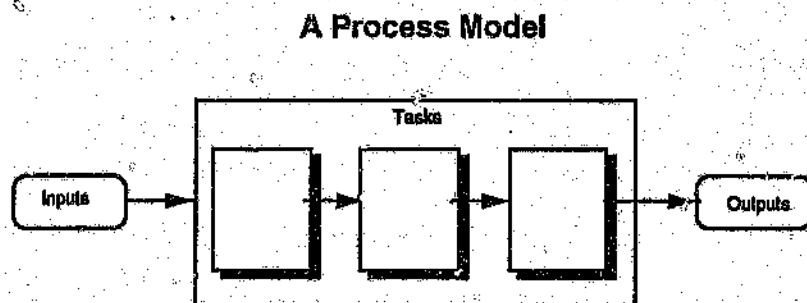
A Process Model

Figure 1. A Process Model

Each process has a "mission" or purpose, and receives inputs and deliver outputs (Figure 1) (Davenport, 1993). Inputs typically fall into two categories: resources and requirements. Resources such as funds, personnel, information, supplies/materials, facilities, equipment, and

products from other processes are provided by suppliers, and requirements are provided by customers.

Outputs include products and services delivered to customers. Design efforts concentrate on how inputs can most effectively be converted to outputs.

High-level business processes typically cross functional and organisational boundaries. Understanding this cross-organisational/functional characteristic of high-level processes is critical in business process re-engineering. These processes can be broken down to lower level processes controlled within a single unit or even by a single manager within a unit. To achieve dramatic performance improvements, however it is important to examine the cross-organisational or cross-functional nature of the entire process, rather than limiting the exercise to looking at the process within one unit (Hammer and Stanton, 1995).

Existing assumptions governing the organisation are challenged, paving the way for the radical redesign of how "the business" is conducted. This usually involves a fundamental reshaping of business processes, organisational structure, information technology, and physical infrastructures, and reorientation of corporate values and culture.

Re-designing business processes is only one component of business process re-engineering. An organisation may have the best processes in place, but without properly trained and empowered employees and supporting technologies, established goals are likely to still be out of reach. Business process re-engineering must be comprehensive, and focus on:

- Business processes, including front-line operational work functions required to deliver service to the consumer, as well as the management processes required to support those front-line functions;

- The logical organisational model that clearly defines the accountability framework and communication flows;

- The skills, qualifications, tools and training required by staff to conduct the business processes;

- The physical infrastructure required to support those who are performing business processes;

- The technology supporting the newly designed business processes; and

- The policies, regulations and/or legislation required to allow the conduct of the new business processes.

Although business process re-engineering is now a standard and increasingly popular phrase in the business lexicon, there is significant confusion as to what it encompasses. Methodologies which are used to improve business performance are provided below, but which do not in themselves constitute business process re-engineering:

- **Process Re-design**

  To many people, business process re-design is synonymous with business process re-engineering. We view process redesign as more limited in scope and objective than BPR. Process redesign examines how existing processes can be changed to obtain improvements in performance—the focus is exclusively on business processes, and the improvements sought are significant, but not dramatic.

  For dramatic changes in an organisation's business processes there must be associated changes in the "supporting infrastructure" of the organisation, including staff requirements, the organisational structure, the technological systems, the physical infrastructure, and potentially the policies, regulations and/or legislation applicable to the organisation. Existing business processes are not re-designed, but rather new processes are designed. Change is radical, and results are dramatic.

- **Total Quality Management**

  TQM and business process re-engineering both seek improved performance, lower costs, higher quality—but the extent and type of change is arrived at in significantly

different manners. Change using TQM approaches occurs incrementally; in business process re-engineering, change is discontinuous and improvements are breakthrough.

The primary client need is also different in TQM and business process re-engineering engagements. The foremost needs of TQM clients are cultural change and ongoing process management; business process re-engineering clients require accelerated transformation of the way of doing business. In business process re-engineering we lead client groups through the redesign exercise; in TQM we coach clients to undertake process redesign.

■ **Office Automation**

Most organisations have attempted office automation (OA) to some degree. OA involves the application of information technology to increase staff productivity and improve staff communications. OA seeks to provide tools to automate and improve existing process. Business process re-engineering seeks to redesign the processes and then design technology to support those changes.

The Evolution of Change

Operations Improvement	Process Redesign	Business Process Reengineering
Objective is cost reduction and improving cost-effectiveness	Objective is process improvement	Objective is dramatic improvements in cost, quality, and cycle time
Change is incremental	Existing cross-functional processes are redesigned	Focus is on customer needs
Existing functional processes are streamlined		Radical change in how business is conducted
		New processes and supporting infrastructure are designed

Figure 2. The Evolution of change
Source: KPMG Business Process Re-engineering Methodology

2.2.1. Prerequisites to a BPR

There is little doubt that there would be some factors present in an organisation that could be conducive to BPR efforts, while others might present stumbling blocks. Davenport (1993) asserts that certain elements must be present in the organisational structure and management systems to facilitate BPR, namely:

- Capability for process thinking (cross-functional analytical abilities);

- Clarity of business vision and direction;

- Suitability of current organisation structures (non rigid hierarchy);

- Relevance of performance measures and reward systems;

- Knowledge of sensitivity to customer needs;

- Level of employee involvement and empowerment; and

- Ability of information technology to deliver quality products and services in a timely manner.

BPR usually involves a fundamental analysis of the organisation and a redesign of organisational structures, job definitions, reward structures, work flows, control processes and sometimes a reevaluation of the organisational culture and philosophy (Belmonte and Murray, 1993).

2.2.2. Strategic Alignment

Alignment between strategies and key business components such as people, technology and processes is essential to carry out business strategies (Barnard, 1993). Strategic reengineering has been described as designing the organisation to compete, with the realisation that every business process in an organisation must serve the strategy of the organisation, and that the ultimate goal was to compete effectively in the marketplace (Pratt, 1992).

By making strategy an integral part of the BPR process, several strategic initiatives have to be undertaken to better understand the company's markets, competitors and things that make the organisation a success (Schnitt, 1993).

2.2.3. BPR Project Scope

Scoping the BPR project (i.e. drawing boundaries and targeting the processes to be redesigned) as a key application issue in BPR efforts. Some authors believe a holistic approach should be taken. They argue that, although efficiency and effectiveness are important objectives, business network redesign (reconceptualising the role of the firm and its key business processes in the larger business network) is of greater strategic importance. It is thus important to first articulate the larger business network that contains the critical business processes and then adopt a more holistic approach to BPR (Short and Venkatraman, 1992); (Hammer and Champy, 1993).

Others say that the project scope definition is decided by the objective of the BPR effort. If the objective is incremental improvement, it is sufficient to work with narrowly defined business processes, as the risk of failure is relatively low. When the objective is radical process change, a process to be reengineered had to be defined as broadly as possible (Davenport, 1993).

2.2.4. Business Process Identification

Before processes can be redesigned, existing business processes have to be documented and understood (Kettinger et al., 1993). There is, however, no widely accepted method for determining the processes in an organisation.

Certain primary activities in a business (inbound logistics, operations, outbound logistics, marketing and sales and service) which, with secondary activities (firm infrastructure, human resources management, procurement and technology development) can be combined into a value chain scheme (Porter, 1985). The value chain approach can help in identifying core processes to be reengineered

However, Hammer and Champy (1993) point to the following symptoms to be looked at, when choosing business processes to reengineer:

- Extensive information exchange, data redundancy and re keying could suggest arbitrary fragmentation of a natural process.

- Inventory, buffers and other assets - system slack to cope with uncertainty.

- A high ratio of control to value added due to fragmentation.

- Rework and iteration due to inadequate feedback along chains.

Scoping the area of any integrated system (especially a business system that comprises many integrated systems) to be changed is always problematic. Scope determination should be driven by the objectives of the BPR effort

2.2.5. Aspects of a BPR Project

As with any organisational change initiative, effective management of the change process is critical for success. BPR as an organisation change initiative must address several key issues.

2.2.5.1. Management Commitment

As BPR is applied in an organisational setting, there are organisational elements that provides both opportunities and threats to BPR efforts. An understanding of the interaction of the BPR process with these ᴬᵉⁿts and support from management will assist with executing BPR more effectively.

A prerequisite to a successful BPR program would be senior corporate management's total commitment to the programme (Freiser, 1992); (Davenport, 1993) and (Hammer and Champy, 1993). The uncertainties many executives have about BPR and its benefits to the organisation must be addressed at an early stage. Sustained management commitment is an important prerequisite for the success of any organisational change effort. It night be more so with BPR, due to the dramatic change in work habits that are being caused.

Obtaining commitment from senior management for organisational change is best achieved by developing management's understanding of the benefits and potential impact of the BPR effort. In addition, they should be included in decision making and agreeing the plan of action (Davis, 1993); (Hammer and Champy, 1993).

2.2.5.2. The BPR Team

A BPR initiative is a large and complex undertaking and it is crucial to ensure that the right mix of skills, capabilities and work environment exist. A reengineering team can be defined as *"a group of individuals dedicated to the reengineering of a particular process, who diagnose the existing process and oversee its redesign and implementation"* (Gulden and Reck, 1992).

There is a general belief that the reengineering team must be made up of those who work with the processes within the organisation (insiders) as well as objective, resources skilled in BPR techniques external to the organisation (outsiders) (Davenport, 1993); (Hammer and Champy, 1993). To change a process, a reengineering team will need a disruptive element – the outsiders.

- Insiders can be defined as people working inside the process undergoing reengineering. They come from the various functions involved in the process. Insiders, by themselves are, however, incapable of reengineering a process. Their individual perspectives may be too narrow, confined to just one part of the process. Further, insiders can hold a self interest in the existing process and the organisation designed to support it.

- Outsiders do not work in the process that is undergoing reengineering, so they bring a high level of objectivity and a different perspective to the team (Hammer and Champy, 1993).

In addition, staff engaged in BPR projects would require particular competencies, such as teamwork skills, business skills and familiarity with process modelling and simulation. The reengineering team n   s to be able to model and redesign business processes, simulate new

ways of working and display prototypes that lead to the development of process support applications (Cash and Woolfe, 1992).

2.2.6. Change Management

Change moves an organisation from an old state of equilibrium to a new one. Thus, from the very beginning, change managers need to understand how all the organisational elements must change and what actions and resources will bring them back into equilibrium.

The energy, commitment, resources and the expected benefits from a change effort vary with the scale of change. One way to look at the size of the change effort is whether the change represents a paradigm shift or an incremental change. Implementing a just-in-time manufacturing process represents a paradigm shift, whereas adding a new computer-controlled machine tool into an assembly line operation represents incremental change. Japanese companies have demonstrated large cumulative benefits from incremental change, but incremental change can provide only marginal benefits. A radically transformed process is required, which can then ue improved incrementally (Hammer, 1990).

Skilled management of the dramatic change that an organisation undergoes with business process re-engineering is critical to success. Change management must start at the beginning of the engagement, and be carried through each dimension of the methodology.

The challenge is to apply the appropriate change management techniques that meet the client's specific requirements throughout the project. Initially, it may be useful to define the client's requirements in terms of *how change is to be introduced* into the organisation, and the *extent of change* the organisation needs and is ready to undertake.

- Determine how change will be introduced. The approach and techniques used to manage change will be largely influenced by the way in which s nior management wishes to introduce change in the organisation. A participative or collaborative approach will actively solicit the views and ideas of employees; a coercive or directive introduction of change largely limits staff input into the change effort. Our role is to guide and advise

senior management as to the approach that can best ensure successful implementation of the re-engineering.

- Identify change sponsors. It is important to identify the key change sponsors for the re-engineering effort, and assess their skills and motivations. The primary objective of this step is to gain a better understanding of the organisation's political dynamics that are likely to have a significant impact on the re-engineering project. Identifying previous barriers to successful implementation of change is also important. Change management diagnostic tools can be used to assist in the identification and evaluation of relevant players.

- Assess the organisation's readiness for change. Interviews and focus group sessions are used to determine the organisation's readiness for change. These discussions can include key sponsors, advocates and change agents, as well as operational and administrative staff and managers. Identifying and prioritising sources of resistance from those individuals who must actually change is done at this stage. We also determine the potential for resistance during implementation from current values, behaviours and "unwritten rules" in the organisation's culture.

- Determine appropriate change management approach. Based on the information gathered, a change management blueprint is developed to guide the organisation through the project, and to ensure successful implementation upon project completion. The objective is to develop and apply practical strategies and tactics to drive the change through the organisation while building commitment. This plan will undergo regular review and adjustments through the life of the project. Change management specialists are required at the early stage of the re-engineering effort, and will continue monitoring and guiding the organisation in all subsequent dimensions.

Clearly, the benefits and the energy required for a paradigm change are substantially higher than for incremental change.

2.2.6.1. Approaches to BPR

Although there are differences on the exact phases of a BPR initiative, many authors have provided a framework, the researcher has taken what he considers highlights of these and provided them in Table 2.

COMPARISON OF BPR APPROACHES		
Davenport (1993)	Kettinger, et al. (1993)	Creemers (1993)
identifying processes for innovation	initiating the BPR effort	identification of the process, its client and contributing parties
identifying change levers	diagnosing processes to be reengineered	transaction chain representation
developing process visions	re envisioning new processes	measuring time and costs of transaction flows
understanding existing processes	designing processes through	calculating costs of redundancy and complexity
designing and prototyping the new process	reorganising	investigate ways of reducing redundancy and complexity
	measure the newly configured processes	redesign transaction management schemes

Table 2. A comparison of BPR approaches.

Based on the suggested approaches, a generic project life cycle for the execution of BPR efforts could be defined as consisting of the following phases:

■   Setting business goals

■   Understanding the current business process

■   Measure the current process

■   Identify process problems and improvement opportunities

■   Re-design the current process

■   Implement the new process

■   Monitor the implemented process.

2.3. The Influence of Information Technology on a BPR initiative

"Assessing the extent to which their company's competitive environment might contain opportunities to gain advantages from more pro active use of information technology."   Johnston and Carrico (1988)

MIT's Management in the 1990s program concluded that the benefits of IT are not being realised because investment is heavily biased toward technology and not toward managing changes in process and organisational structure and culture (Benjamin and Levinson, 1993).

The cost of information technology has been dropping steadily since the 1960s, encouraging enormous investments in IT applications which in turn simulate increasingly complex organisational change. It is anticipated that technology cost-performance improvements will continue to drive ever-large change processes for at least the rest of the decade (Benjamin and Blunt, 1992). But these IT-enabled change processes, Managers need to know how to integrate the technology, business processes, and organisation, in order to achieve the goals they expect with the technology.

> *"Information processing is one of the most fundamental and important activities of management. In fact, it is hard to imagine management performing tasks such as planning, controlling and decision making without some form of information processing activity. The need to process information becomes more acute as the business environment changes at an accelerating rate."* Hirschheim (1983).

All activities have an information processing component as well as a physical aspect. For most of industrial history, technological progress focused on improving the physical activities of what businesses do. Now the pace of technological change has reversed and information activities are advancing faster than technologies for physical processing (Sprague and McNurlin, 1986).

IT broadly encompasses all of the information that businesses create and use. In addition, it has a wide spectrum of increasingly convergent and linked technologies that process the information (Porter and Millar, 1985). This is supported by Brown (1992) where he states:

> *"Information technology as a distinct category of products will become invisible. It will dissolve into the work itself"*

Companies who prepare for the power of information systems in their competitive lives will control future events, whereas those who ignore the trends will be forced to accept the changes that others initiate and will accordingly find themselves at a competitive disadvantage.

Hammer (1990) asserts that one can *"use the power of modern information technology to radically design business processes in order to achieve dramatic improvements in performance."* . However, others view BPR as a prerequisite step towards improving returns on existing IT investments. If nothing changes about the way work is done and the role of IT is simply to automate an existing process, economic benefits are likely to be small (Johnson et al., 1995).

While information technology could enable new and improved business processes, existing systems could also constrain BPR initiatives. Very often the system defines the way things were done in the organisation. Systems might also limit the company's freedom to act. BPR efforts could thus require reengineering of existing software systems to be successful (Grant, 1993). This view is by Hackett (1990) when he pointed out,

> *"Adding high-powered automation to an obsolete operating environment dangerously institutionalises inefficient and ineffective operating procedures, making it difficult to streamline and update operation - and to achieve optimal payoff from technology investments."*

To succeed in this environment a combination of technology and management visions are required. The need for such a wide, multi-disciplinary vision is supported by Davidow and Malone (1992) when they said:

> "[In the Information Economy] there is danger in believing that technological supremacy is enough to revitalise and keep our corporations competitive. The journey to this new industrial paradigm requires more than just engineering. It will challenge us to re-think the role of every office, every laboratory and every factory workstation in the company. This technological innovation alone cannot save us......In every case, technology will be subordinate to, not a substitute for, a complete understanding of the market and business."

2.3.1. Enabling Technologies

Certain information technologies have emerged recently that are being viewed as powerful enablers of BPR efforts. Workflow software could change the structure of a business by facilitating BPR and workgroup computing. Besides automating routine tasks, workflow applications are among the few developing technologies that promised to leverage the huge investment organisations have made to develop networking infrastructures (Burns, 1993).

Another technology, document imaging, is also seen as a potential enabler for the reengineering of paper based business processes. Document imaging technology is a convenient way to store and retrieve business documents in digital form. This technology could also act as a catalyst, model and means for reengineering the flow of a company's routine business operations. Scanning documents images free the document from the constraints of paper based filing and retrieval systems (McDonell and Somerville, 1991).

Many claims have been made about the potential of new information technologies to enable BPR. While technology could, enable a drastic improvement in business processes, it is merely one of the many enablers of new, improved processes.

2.3.2. Information Systems Management

Ownership and custodianship of the BPR process in the company are important issues that many organisations yet have to resolve. Although the business must "own" the BPR initiative, given BPR's close resemblance with information systems development activities such as analysis and design, IS management play a key role in BPR efforts.

Whether the IS function possesses the required competencies and skills to play a significant role in BPR efforts remains to be seen. Kettinger, et al., (1993) believe that the IS function might need to redesign its own internal processes ahead of the business. They suggest that, at a minimum, the IS group could provide a technology infrastructure capable of supporting more highly integrated and interdependent business processes.

The application of information technology, whether traditional information systems or newer technologies, is a key issue in any BPR effort and has support the new business process, while also overcoming some constraints offered by existing IT investments.

2.3.3. Impact of IT on the Organisation

To take full advantage of IT, there is now revolutionary changes in skills, jobs and organisational control processes within organisations (Zuboff, 1988). In the 'informated' organisation, workers have access to all the information necessary to perform their jobs, and they are empowered to perform tasks previously done by supervisors. The database is an equalising source of knowledge for all parties. Workers must be educated to make good decisions and are reskilled to see work processes through computer models. Executives must shift there orientation from controlling others, to providing council. Intermediary managers have to be retrained or eliminated from the organisation. Managerial resistance builds up as power bases are disturbed or reduced, which tends to undermine the change effort; gains are seldom fully realised.

Information shifts from managers and executives to databases. Power shifts with it. Similarly, expert systems convert knowledge from professionals, who have worked all their lives to

obtain it, into digital form. It is understandable then that these shifts in knowledge and power cause resistance.

One of the major aims of reengineering efforts is to reduce the cycle time for processes critical to the organisation. The changes in technology, process and organisational roles necessary to achieve efficiency often cause organisational tensions as people used to performing in the old mode resist the increased pace. The potentially large savings from reduced process cycle times must be balanced with the amount of energy and attention required to deal with the organisational issues (Hammer and Champy, 1993).

IT was first applied to physical production and then to virtual production, such as loan evaluation and engineering design. This replaces the old, slow and inefficient process where decisions were made at the apex of the organisation for the large number of products. The new process results in a dramatic reduction in time, increased accuracy and improved service levels for customer delivery.

> *"Traditional financial institutions are beginning to sense the threat. Many have struggled to adapt delivery systems that are difficult for both themselves and customers to access; to transform costly and cumbersome business processes; and to increase their limited resources and reach more customers through alliances."*   Johnson et al. (1995)

Change sometimes has to be performed incrementally, not revolutionary (Hammer and Champy 1993). Nevertheless where possible, processes should be amended on how the work is done, and not how the organisation was structured (Hammer and Stanton, 1995).

This is referred to as "Middle Road" or "Participative Makeovers" where both the best resources are used to define top down (services) and bottom up (processes) requirements (Davenport, 1995).

28

2.4. Conclusion

The above provides an overview of the aspects most described in literature that should be considered when undertaking a reengineering initiative, with issues as diverse as strategic alignment, project scope and change management playing as an important role as the influence of information technology son the success of a reengineering initiative.

Using the literature review as a base, Chapter 3 will provide the methodology used in performing the research.

3. Research Methodology

Besides the literature review mentioned in Chapter 2, this section provides the methodology used in the research. It provides the approach, method of collecting data, the research questions and potential limitations to the research.

3.1. Approach

The research conducted was of an exploratory and descriptive nature on a very recent phenomenon in South Africa. The study therefore precluded the collection and analysis of data statistically. Rather, the purpose was to define BPR application issues, assess possible reasons for problems being experienced and obtain generic solution suggestions. Based on the literature review of BPR experiences internationally, propositions of a qualitative nature were formulated and then examined.

In addition, the author was involved in the project from an internal audit perspective, which allowed a good insight into the project as well as more non tangible issues surrounding the project.

To ensure an acceptable level of validity, the literature review was used to consolidate and integrate ideas presented by a variety of authors that could be applied to FNB's reengineering initiative at Cresta.

3.2. Data Collection

A mailed questionnaire was considered inappropriate for the intended research, as it would be difficult to select an appropriately experienced sample, nor an indication of the relative knowledge possessed by such a person. Problems of misinterpretation of questions could also arise from this medium since this research is highly exploratory. It was therefore decided to conduct in depth personal interviews with key people who were involved in the BPR projects.

Factual data about BPR activities as well as opinions related to BPR issues were required. To obtain the required information, it was decided to hold interviews with persons who possessed detailed knowledge of the BPR effort and at the same time had a responsibility for the success of the BPR effort. This research was conducted mainly within FNB's Cresta branch as well as support areas who played a part in implementing the project. Table 3 provides the areas interviewed, its' responsibility and the numbers of personnel from those areas questioned.

AREAS INTERVIEWED		
Division/Department	Number of Personnel Interviewed	Responsibility
Regional Head Office	6	Ultimately responsible for the profitability of the branch
Group Organisation and Methods	4	In conjunction with the RHO, design and implement reengineered processes
Strategic Planning	1	Ensuring that the project fitted into FNB's strategic direction
Group Marketing	4	Prioritising systems changes required by the project into FNB's overall systems priorities
Premises Division	1	Refurbish branch to cater for redesigned processes
ISD	11	Implementing technology to support the project
Internal Audit	3	Ensuring appropriate controls were provided
Group Training	2	Providing training on Reengineering concepts as well as the new processes and technology

Table 3. Areas Interviewed

3.3. Research Questions

To meet the objectives, of the report, namely to ascertain if the Branch of the Future initiative was successful in terms of profit and volume growth, and identify what the major impacts on the project were, the following questions are posed:

Question 1:   *"Was the reengineering of the Cresta branch a success in Financial Terms?"*

Question 2: *"What aspects were paramount in ensuring the success of the project?"*

Question 3: *"Could the branch of the future initiative be easily replicated?"*

Question 4: *"What was the Impact of Information Technology on the project?"*

Question 5: *"What was the impact of the reengineering effort on staff?"*

3.4. Limitations of the Research

The ability to generalise the findings of this study is compromised by the fact that the research was limited to a case study of one branch within the FNB group. In addition, due to the nature of the study, the following weaknesses were further envisaged:

- 'R is a broad topic covering many aspects that cannot be fully examined in a study of this scope;

- the limited number of BPR projects initiated so far would restrict the number of in depth interviews that could be undertaken; and

- that the study focused only on the South African banking sector.

Another limitation was the fact that the author was employed by FNB and was involved in the project at the time. This could result in two problems, namely:

- that information which was readily shared by FNB staff to "a compatriot" may not be provided to an independent researcher; and

- although the researcher has attempted to be as objective as possible, due to him being employed by FNB unintentional bias may be conveyed in this report.

Although the above limitations have to be taken into consideration, it was possible to make comparisons with other well documented studies.

4.   Presentation of Evidence

As mentioned in Chapter 3, a case study of FNB's reengineering effort at their Cresta branch, as well as the reasons for this initiative are provided in this section.

4.1. Background

There were a number of important drivers behind the need for change in FNB. From the above description of banking in South Africa it was apparent that there was substantial room for improvement in productivity and customer service. The branch of the future or Banking 2000 concept is the product of two initiatives which were set in motion by Mr Willie Willers and Mr Mike Jarvis at the start of the 1990s.

In 1990, the General Manager of the then Central Transvaal region was promoted, and was replaced by Willie Willers, a younger, progressive man who held a Masters degree obtained from the Witwatersrand Graduate School of Business. Willers who had joined the bank as a young man had gained experience in many different functions and departments in the banking environment, previous to this appointment he had been the assistant general manager of corporate banking.

Willers, a dynamic manager who does not believe in incremental change, but in quantum leaps, immediately set about to create a novel vision of future banking which he communicated throughout his region. However, for him to make the organisation change-ready, he asked his management the question - *what, and who, is this business really for?* (Champy 1995). Willers demanded that they were to provide optimal customer service in the most cost effective manner.

Willers' time frame for these changes in his region was five years. He began by setting a number of management development initiatives in motion to achieve the branch of the future vision. Apart from the reengineering and information technology aspects, the most important initiatives were:

4.1.1. Leadership Focus

One of the urgent problems which Willers faced was an unacceptable level of staff turnover. By 1990 the then Central Transvaal region, which employed 3001 staff, was experiencing a phenomenal staff turnover of up to 1 in 3 in some extreme cases. To Willers this was a major problem as his region was losing experienced bankers and by and large the staff lost were being replaced with relative new comers to the banking industry.

Having closely analysed the situation, he came to the conclusion that the branches which were managed by individuals who were achievement orientated and who showed aptitude for leadership, were retaining their staff while the others were losing them. Willers realised that an unsuccessful reengineering effort can often be retraced to managers who failed to change. (White, 1996). This sentiment is echoed by Champy (1995) who reports:

"If management doesn't change, reengineering will be stopped in it's tracks".

To counteract this, Willers focused on a programme of leadership development for management in his region. This was attained through a series of workshops to engender the concept of a winning mindset (Ball & Asbury, 1990) among his branch management.

4.1.2. Sales Focus

As business success is usually achieved through the attainment of more revenue Willers emphasised the need for a better level of selling skills in the region. This was impressed on the region through a series of workshops and extensive communication to attain a quantum leap in sales, therefore attaining the infrastructure's "critical mass". This initiative supported the objective of increased revenue and profitability.

4.1.3. Urgency

To emphasise the importance of these programmes Willers made sure his initiatives were perceived as being urgent. He personally stressed to his management the need to build this attitude into all aspects of everyone's jobs, he has coined the phrase "energised" which is followed throughout the region.

4.1.4. Reorganising the Traditional Branch

Prior to Willers arrival as General manager a typical traditional branch in the Gauteng region had seven or eight hierarchical levels of staff. Willers was aware that this structure often detracted the staff from the client focus which he felt was essential to the function of the branch of the future project. As a consequence he introduced a new approach of branch organisation which he refers to as the value chain model. Branch organisation before and after these changes are shown in Figure 3.

BRANCH ORGANISATION BEFORE AND AFTER THESE CHANGES

Before Reengineering

```
                        Chief Manager
            ┌──────────────┴──────────────┐
      Resource                      Senior Manager
      Manager                           Credit
          │                               │
       Manager                         Manager
     Administration                     Credit
          │                               │
       Branch                          Manager's
     Administrator                     Assistant
    ┌─────┴─────┐               ┌─────────┴─────────┐
Departmental Head            Clerks              Clerks
        │
    Supervisor
        │
      Clerks
```
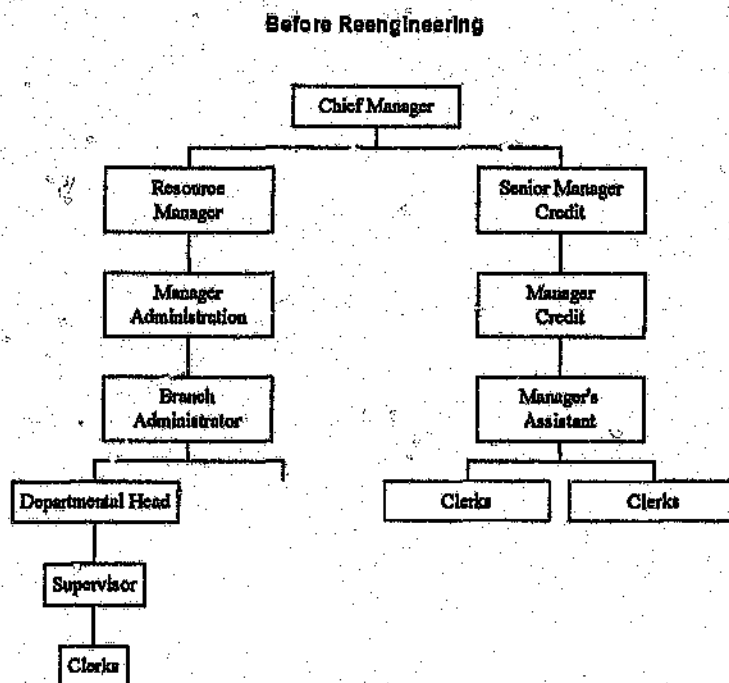
Figure 3. Branch organisation before the changes

This change resulted in a flatter structure in the branch only three levels of staff. Each of the operational boxes in Figure 3 represents a manager or supervisor and the staff actually performing the function. Thus there are three levels of hierarchy in the branch.

After Reengineering

```
                    ┌──────────────┐
                    │ Chief Manager │
                    └──────────────┘
        ┌───────────────┬──────┴────────┬───────────────┐
┌──────────────┐ ┌──────────────┐ ┌──────────────┐ ┌──────────────┐
│ External Sales│ │Client Interface│ │Customer Service│ │   Credit    │
│              │ │              │ │              │ │  Management  │
└──────────────┘ └──────────────┘ └──────────────┘ └──────────────┘
```
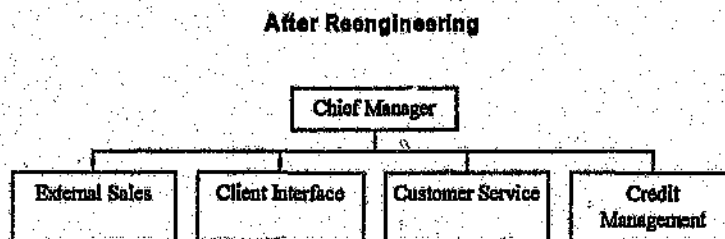
Figure 4. Branch organisation after these changes

It also reduced bureaucratic management posts. This directly supports improvements in productivity, better customer contact and increased profitability. The front line manager in a branch can now have as many as 21 individuals reporting to him or her. This gives the manager a much greater awareness of what is actually happening in the branch (Cantrell and Colby, 1993). The reorganisation also resulted in addition reports to Willers directly at the Regional Head Office. In fact he now has 45 people reporting directly to him.

4.1.5. The Retail Marketing Concept

One of Willers' strongly held views is that banking needs to adopt a retail marketing approach. Thus the bank's branches should be managed in terms of some of the principles of retailing. This is reflected in his desire to see greater customer interface, use of the space available in all the branches, and his notion that the bank's resources should be measured in terms of their ability to generate revenue and profit.

4.1.6. Quantum Change

Willers is committed to the notion that little can be achieved by incremental change and thus he placed considerable store on the notion of the quantum leap being the way to ensure business success. He believes that marginal or incremental change frequently leads to temporary change which can be relatively easily reversed when the project has been completed.

4.1.7. The Information Technology Dimension

In the early 1980's, FNB realised that information technology was a key contributor to competitive advantage, and the ability to manage complex technology had to become a core competence within the group (Store and Guise-Brown, 1994). To achieve this, FNB employed Mike Jarvis in 1985 who immediately became champion of the use of information technology, not only to maximise the organisation's efficiency and effectiveness, but also to gain a competitive advantage, primarily by increasing the bank's market share.

Under Jarvis's leadership, changes to the controversial Hogan system, which had given the bank a considerable amount of trouble, were finalised and the system was fully integrated into the bank's business. Jarvis' success is seen by the fact that according to a leading South African stock broker (McAllister, 1994) FNB uses its information technology in the most progressive manner in the country. Also, as mentioned above, FNB has been named one of the world's top 100 users of information technology by ComputerWorld Magazine in May 1995. In addition, FNB under the technical leadership of Jarvis, was awarded the Smithsonian prize for innovation in the Finance, Insurance and Real Estate category in June 1996.

4.2. The Visions

Willers' believed that by reengineering his region he could significantly improve the performance of his region while ensuring that the service delivered to both personal and corporate clients was enhanced by reorganising the way a branch functioned.

Willers believed that for success, underlying the design of the branch of the future project is the need to optimise the utilisation of very expensive office and shop space. Traditionally a branch uses 70% of its space for back office paper processing and 30% of its space for the client interface. As the cost of high street office and shop space has been escalating at 10 to 20 percent per annum in South Africa over the past decade, these proportions are now regarded as not being optimal. The back office operations need to be conducted in a smaller area giving more space for the real business of the bank which is serving clients. This is one of the key objectives of the branch of the future project.

According to members of the project team, Willers' vision was not always readily accepted throughout the bank. On many occasions Willers' personality was pitted against the bank's management establishment and it was only his tough minded conviction that the branch of the future project was the only way forward that ensured the continuation of the project.

Jarvis' vision was to use FNB's established large scale information technology and backbone data and telecommunications network to provide a value added service to customers. At the heart of this vision was the belief that the bank's information technology infrastructure could be leveraged to provide a real payoff in terms of increased productivity and improved customer service

FNB's infrastructure requires enormous investment and is not always perceived as delivering an adequate return. This view supported the notion of using the established investment and expertise to gain a further competitive advantage over the other South African banks.

The combination of these two quite different visions, which bring together information technology and management, may be seen as one of the major contributing factors to the success of the branch of the future project.

Contrary to the belief that *"[if one undertakes an initiative] without determining specifically what you want to do, you will almost certainly be dissipating your efforts"* (Keenan, 1995), Willers and Jarvis did not have a final or complete vision at the outset, but they developed the branch of the future vision on an incremental basis throughout this project. The vision started with a realisation that information technology could be used to reengineer current bank practices and thus improve both productivity and customer service in the bank in order to improve revenue and profitability by *"the fundamental rethinking and radical redesign of business processes to achieve dramatic improvements in critical, contemporary measures of performance, such as cost, quality, service and speed."* (Hammer and Champy, 1993).

4.3. The Decision

The decision to commit large resources to this project was not undertaken without considerable thought and analysis. The slow deterioration in performance over the previous years meant that the returns required to satisfy the bank's stakeholders would not be available unless a direct intervention was undertaken to reduce costs and to increase revenue.

Willers had been thorough with his homework and had considered a number of alternatives to achieve these objectives. These included:

- **To Create One or More Additional Banking Outlets**

  This was the traditional method in which the bank sought increased revenue and profit or attempted to resolve a customer or service overload issue. Willers' region has approximately 69,000 square meters of banking premises which represents a very substantial expense. Increasing the branch network would only add to the problem and thus this route to solving the current challenge was relatively easy to discount as a viable option in this case due to the high and steadily escalating cost patterns of the traditional branch network resulting in the relatively low returns.

- **Upgrade Existing Premises**

  Upgrading would involve extending the existing branches, and increasing the complement of staff. This option was rejected for the same reasons as the previous one. Although it could possibly solve the service problem, it would impact heavily on the already fragile returns and therefore not produce the increases required in profit and growth.

- **Implement the Branch of the Future Project**

  This was eventually chosen as the best option, as it was anticipated that by amending processes and supporting staff with technology, customer service could be radically improved. Although this option was expensive, it was anticipated that with the increased customer throughput, substantial economies of scale could be achieved and this would have the required effect on the profit and the return on investment.

Clearly the first two options would not address the underlying problems of productivity and return on investment faced by FNB. Neither amounted to a new strategic direction which the bank felt it needed in relation to its branch network, and thus option three was considered the only way forward.

4.4. Starting the Project

Once Willers had committed himself to the branch of the future project option, he formalised a clear mandate, albeit different from the initial one proposed by Jarvis, with the following objectives:

- create a high touch, high technology value chain environment model;

- improve customer service:

- provide a quantum leap improvement in queue management;

- facilitate excellent financial performance;

- expedite outstanding volume growth;

- allow for a reduction in staff numbers; and

- field a physical redesign that is state of the art.

Willers divided the project into two phases. Phase 1 would run from January 1994 to March 1995 and would concentrate mainly on direct customer interfaces, as it was agreed this was the area where most impact could be made. The second phase is planned to begin in October 1996 when branch processes will be reengineered by using enabling technologies such as image processing and office automation.

A pilot site had to be chosen. After considerable deliberation it was decided to choose the FNB at Cresta shopping centre in Randburg. Cresta is a well established shopping centre dating back to 1976. It is located some eight kilometres north west of central Johannesburg. It is in a moderately populated area of middle to high income families. There are more than 100 shops in Cresta, including major grocery chains, fashion stores, discount shops, boutiques,

restaurants and fast food outlets drawing many tens of thousands of shoppers each week. Several different banks are represented in this shopping centre.

This branch was selected mainly because the centre was undergoing a major refurbishment and renovation. This was going to force the bank to undergo an expensive refurbishment of the branch in any event, and it was decided to undertake the changes in line with branch of the future project design concepts. In addition, it was envisaged (after meetings with the centre management) that Cresta would have:

- a reasonably diverse customer population;

- the appropriate physical layout and shop front; and

- a wide range of merchants.

Finally the Cresta branch was regarded as a suitable test site for the ideas of the branch of the future project because it was perceived as being a very average branch and therefore if the new system worked there it would probably work elsewhere just as well.

4.5. The Branch of the Future

The branch of the future will look and feel quite different to the branches in the current bank network and so a number of major alterations were made to the physical layout.

4.5.1. The Design of the Branch of the Future

It had been realised for some time that FNB needed a new approach to operating individual branches. During the 1990-1993 period, two of the bank's staff, Dave Burke and Liz Pollard, visited a large number of banks in the United Kingdom, the USA, Switzerland and the Far East, looking for new ideas. Subsequent to this a firm of management consultants were engaged to assist the bank in ascertaining their clients thoughts and requirements for their branch operation. The consultants arranged five focus groups, each consisting of 20 clients of the bank. These focus groups met for a substantial amount of time over a number of evenings and much of the information supplied by them was fed into the design of the branch of the future.

4.5.2. Physical Layout

The original Cresta branch was identical in layout to most other branches within the Group. As mentioned above it was made up of approximately 30% customer space, and 70% factory type back office space.

The first major change was the removal of cash from the front of the branch. This was achieved by the implementation of a substantial amount of technology including the teller cash dispenser (TCD) and the customer details imaging system. The TCD resulted in the security glass traditionally found in the bank's branches being removed from in front of the teller's workstation. This allowed the project to change the teller's role from that of handling monetary transactions to that of a multi skilled service consultant.

In the branch of the future, when clients wish to deposit cash and cheques the money is accepted by the service consultant and after being checked it is inserted in a chute which carries it to a vault away from the customer access area. When a client requires cash the service consultant uses the TCD which performs a similar role to an automatic teller machine to extract the correct amount of cash for the client. Thus effectively the service consultant is not in possession of any cash except a few coins that are kept in case a client requires a precise amount of cash.

As a result of this, the teller's counter was lowered and chairs provided, as it was expected that the customer would now spend far greater time with a service consultant. However, as most of the customers' needs were being met by one multi skilled individual, the customer would not be required to be ferried from one individual bank employee to another who would deal with specific issues. It was therefore expected that overall the customer would spend considerably less time in the branch.

In addition to the above, other changes include:

▪   Easily accessible customer interview cubicles, staffed by specialists and supported by sophisticated IT systems to deal with more intricate customer requirements;

- The reduction of the "back office" area, which provides support services to the front line to less than 70% of it's original size, which included the movement of many functions out of the branch;

- A central open information desk or cubicle which acts as a customer inquiries counter. This is not the traditional post which deals with account queries, but is used to direct customers to the appropriate area of the branch. In addition, this cubicle acts as a promotional and sales office for affiliated products such as airline ticket purchases, cellular telephone, Videobank and Speedpoints sales; and

- A shop like front window where FNB products are displayed.

Another important aspect of the branch layout was the availability of the information self service device. This was prominently displayed in the front of the bank so that clients could help themselves to information. This helped reduce staff and space requirements.

Thus on completion of Phase 1, the physical layout of the branch had changed dramatically, whereby approximately 53% of the branch space is occupied by bank staff and 47% of the space utilised by the client interface functions. Although this is a considerable improvement on the traditional space utilisation position, it is believed in the bank that there is still room for more improvement.

4.5.3. Process Identification

Phase 1 of the project, which ended in March 1995, concentrated on the client interface which is the front line of the branch. In terms of the activities directly associated with the clients the following was achieved:

- 46 branch processes were identified and mapped; and

- 5 key workflows on the front-line were re-engineered. For example, the opening account procedures efficiency was improved by 64% with a reduction in activities from 71 to 25.

The work involved in the identification of these processes was conducted by internal staff supported by IBM consultants. FNB deliberately utilised the staff in designing processes as they knew that generally, users that are satisfied with systems they have helped design, as well as with information quality will make better decisions and ultimately attain a higher level of organisational goal achievement (Gatian 1994).

Apart from Willers asking his project team *"How can we use technology to allow us to enhance or streamline or improve what we are already doing?"* he also stressed that the team should concentrate on *"How can we use technology to allow us to enhance or streamline or improve what we are not already doing?"* This was in line with the aspects to be addressed when undertaking a BPR initiative as promote   and Champy (1993).

Although the implementation of the branch of the   amlined many processes, no real attempt was made to reduce paper with Phas   to ensure the smooth implementation of the amended processes and manage the impa   he staff. Phase 2 which is currently being organised and is scheduled to start in the 4th Quarter of 1996 is to address this issue as well as reengineer the back office. However, a study by FNB in 1993 estimated that a significant amount of savings could be achieved, this being over R4 million p.a. nation wide. A summary of items that could be terminated included:

- 9 pre-printed slips;

- 3 manually kept registers; and

- 14 reports.

The philosophy articulated by Willers that will underpin Phase 2 is High-Touch, High-Tech, Low-Doc which suggests the removal of much of the traditional processes and associated paper work.

4.5.4. The Information Technology

The information technology philosophy underpinning the branch of the future project was to use well established and proven technology in an innovative way to support the major changes required. As far as the technology is concerned, although it was not new to FNB, it was

certainly leading edge as far as the other Bank's within SA were concerned. This was mainly around the branch automation application system, the Tellers' Cash Dispenser (TCD) and customer self service devices. It is interesting to note that FNB used technology to increase personnel productivity as well as provide it as a substitute for direct labour.

It is generally accepted that information technology is the enabler for business process reengineering (Venkatraman, 1994); (Earl and Khan, 1994), and this has played a central role in the branch of the future project. Although many alternatives were investigated with respect to peripheral hardware and support software, the FNB networks and their operating system were assumed to be the basic standard required. This standard was insisted upon because the bank did not wish to deviate from its communications network technology base that was uniform throughout all the branches in South Africa. In addition, an important objective of its technology selection was reusability and ease of implementation in other areas when the project was successful.

Specifying the hardware and software requirement for the branch of the future project was no trivial task. This was undertaken by Liz Pollard who ensured that standards were complied with and that the new arrangements were consistent with the bank's overall information technology architecture. Liz Pollard was the head of the Organisation and Methods department and her mandate was to identify and streamline processes throughout FNB. In addition to this hardware and software specification work, Pollard also designed the staff development programmes which were necessary to ensure that the staff at Cresta would be properly trained and correctly oriented towards the new arrangements. This resulted in a relatively smooth transition process for the majority of the staff at Cresta, thereby allowing the branch to take advantage of the new arrangements with the minimum delay.

The main applications used to create the branch of the future may be considered under three headings. These are the automation of the client interface process, the automation of the client support services and the factory or back room operation.

4.5.4.1. The Client Interface Process

This refers to how the bank employee, that is the service consultant, directly works with the client and can be discussed in terms of four key systems which are, Branch Automation, the application of TCDs, the use of Customer Details Imaging System, and the Cross Selling System.

■ **Branch Automation**

The use of large scale processors together with a high speed backbone underpins the technological thrust of the branch of the future project. In addition, high powered workstations connected to a client server system constitute the cornerstone of the technology provided to the staff of the branch of the future.

The hardware aspect is made up of a client server system comprising an IBM PS2/486 model 95 fileserver and 22 PS2/486 model 80 workstations. Fourteen of these workstations are available to the tellers. Each of the teller workstations have a peripheral called a "toaster" (as it looks like one). The toaster has that ability to:

- read the magnetic ink character recognition (MICR) details on a cheque;
- read the MICR details on a deposit slip;
- read, and where applicable write to a smartcard or magstripe; and
- record image documents.

The software component runs under OS/2, and provides real time updating to the host via graphical user interface screens. This connectivity through the high speed backbone, coupled with the toaster provides the ability to implement electronic validation. It also facilitates the use of preventative, as opposed to traditional paper based detective controls.

■ **The Teller Cash Dispenser (TCD)**

The TCD device dispenses cash, and has a separate compartment for the acceptance of deposits. Although the system resides on the Branch Automation platform, it is not yet

fully integrated with Branch Automation via application program interfaces (APIs). This means that the teller has to key in the amount of the transaction twice.

On the whole, the branch has adapted extremely well to the TCD operation and has implemented some effective operating practices and controls. An example of this is that the teller no longer needs to count cash that is dispensed to the customer. The TCD has reduced teller's differences by a factor of 28 times from March 1994 to March 1995.

■ **Customer Details Imaging System**

This system operates on the Branch Automation OS/2 platform, but as yet it is not fully integrated with Branch Automation via APIs. It is envisaged that by generating images of a customer's identification and signature for tellers and supervisors when certain transactions or events occur, customer service will be further dramatically improved and fraud will be reduced.

The Cresta branch has 20,000 accounts of which approximately 40% hold supportive documentation relating to additional signing powers etc. It is obvious that where a number of accounts are held by the same customer, an image of their identification document as well as a customer signature card need only be held once.

Even though the request for an image is a conscious manual process, time savings on accessing a signature card have reduced from an average of five minutes for that of a manual search to five seconds on-line.

◢ **Cross Selling System**

This application is a rule based system specifically designed to facilitate cross selling opportunities when certain circumstances occur. For example, if a pensioner deposits R10,000.00 the system would suggest that the customer should rather open a savings or investment account where better interest could be earned, and the Bank would benefit by being able to charge the customer for utilisation of an additional account.

The system also has batch rules, whereby the branch manager, or account executive can enter a series of questions. The system will then interrogate the local database and produce a variety of outputs ranging from a simple list, to computer generated letters. It also has a diary system which will ensure that future actions are performed.

The above facilitates focused marketing initiatives to be undertaken in a pro active manner.

4.5.4.2. Client Support Services

These systems are designed to help clients obtain information about the bank's services without having to meet with several members of staff to get information about different services.

- **Information Self Service Devices**

  This is a high resolution colour interactive touch screen, with sound capability. It is simple to operate, as it "talks" the customer through the system. It provides functionality such as:

  - product knowledge;
  - estimates on loans ;
  - purchasing of shares;
  - requesting a visit from a product specialist; and
  - linking existing accounts (for nominated electronic payments).

  The implementation of this device, as well as the multi functional teller and the information desk has eliminated the need for enquiries clerks, public relations officers and product executives.

- **Telephone Self Service**

  This allows the customer to communicate on the telephone, from within the branch, or a location suitable to the customer to a specialised group of services situated a number of

kilometres away from the branch, where rental is far more inexpensive. These services include:

- **DirectLine**: This service is mainly geared toward cheque account holders from all branches within southern Africa and deals with general banking transactions and account enquiries.

- **ChequeLine**: This facilitates the opening of accounts over the telephone. In addition, all instruments for the account are ordered from this centre, but still require to be collected by the account holder at the branch.

- **StudentLine**: This is a general help line specifically trained in the dealings with student loans and student cheque accounts. The area also has the ability to provide the equivalent of the ChequeLine operation in relation to FNB's student products.

- **Service CareLine**: This has been specifically created to handle general customer enquiries and complaints on behalf of the FNB Group.

4.5.4.3. The Factory Operations

These operations are put in place to ensure that complex tasks are handled by competent resources supported by appropriate technology, and situated in a central complex that is relatively inexpensive. In addition, these areas are used to centrally store records enabling FNB to retain up-to-date information regarding client arrangements. Such systems can greatly reduce the amount of paper and procedures previously required to maintain this important information.

■ **On-line Automating of Excess Notices**
The piloting of an automated F90(a) process (this reports when a customer is over his arrangements with the Bank) has reduced the production of new F90(a)'s from five days to one day. It has reduced the number of actions from 29 steps to 9. This is initiated by the branch, but the evaluating and processing of the loan is performed by a highly skilled advance team of credit managers located in a centralised "warehouse" type operation.

- **Centralised Back Office**

  Although this service is not fully operational, it is envisaged that it will be provided to customers from all FNB branches within southern Africa. It will mainly handle non-financial general banking transactions and account enquiries. It is planned that a number of the back office type functions will increasingly be handed over to this area, thereby ensuring a centralised area manned with specifically skilled individuals to handle the tasks found within the back office.

- **Centralised Bulk File**

  After an initial analysis, FNB customers were informed that the bank would in future retain the customer's cheque forms unless requested otherwise. This was accepted by the bank's customers and FNB then set up the Centralised Bulk File (CBF) operation. The method in which this operates is that once cheques have been processed by Cresta, the cheques are forwarded to the CBF area, where they are retained. This facilitates a major saving in storage and productivity. FNB is currently undertaking a project to perform this operation nation wide and utilise image technology to allow processed cheque forms to be inspected from any FNB location.

- **Centralised Loans Administration**

  Once Cresta has negotiated the terms of a loan with a customer and approved the application, this is sent to the Centralised Loans Administration (CLA) area. The Loan is then entered into the system by personnel highly proficient with the loans system (a notoriously complex system). The loan is then maintained by the centralised area. The branch still has the ability to inquire on the loan if the customer has a query, but it is envisaged that the branch will have no need to have employ special skills or waste time maintaining loans. The customers also have the ability to enquire on their loans directly with the CLA area via telephone.

4.6. Human Resource Issues

"People are our most valued resource"

FNB Annual Report (1995)

In the Bank's traditional branches, the division of labour creates narrow jobs for staff members that make one-client-banker servicing, in the sense of one bank employee taking care of all the customers needs impossible. However, with the branch of the future and the multi-skilling of the service consultants, the idea of one-point banking becomes a reality as customers can have all their needs attended to by one customer consultant. This of co i e means considerable retraining of the branch staff.

It was identified by FNB that the success of this initiative depended on requirements from both the staff and customers. Consequently, many hours were held with customers requesting from them what they needed and desired from the reengineering effort to s.   that the system was designed with the customers needs in mind (Scherr, 1993). FNB w   il aware of the issue of "not invented here" and took this into careful con.. 'eration when designing the system.

Moreover, Willers realised that the most important component to reengineering success was the human resource element, and of that, the most critical aspect was his management team. To create a momentum of continuous change in his region, his change programme was designed to develop leadership skills to ensure that management would obtain the full commitment of the staff in their organisations. This was attained by holding many preparatory sessions after hours to prepare his management for the radical changes that were envisaged. Many professional lecturers, not only on matters of finance and banking, but of psychology and change management were invited to prepare the mindsets of the management of the branch. This included:

- Leadership Focus and Management by Responsibility training;
- classes in the creative thinking skill process;
- development of Senge's Learning Organisation principles; and
- a number of Management Development workshops.

Even with the unique measures taken by FNB, the staff at Cresta who were mostly traditional bankers and thus somewhat resistant to change did not rush to embrace the new arrangements. However, as the project proceeded, the benefits of the branch of the future project slowly proved themselves to all those who worked with the new systems and today the project is regarded by those individuals who stayed involved with the changes as a great improvement. One of the major reasons for this is that expert systems allow human judgement to be better exercised (McFarlan, 1990).

4.7. Costs of the Branch of the Future Project

There were a number of aspects affected by the branch of the future project which were spread over a number of divisions within the bank. It was agreed by executive management that each division affected should make provision for the project in their budgets.

Table 4 gives details of actual against anticipated or budgeted direct costs as well as the variances. Note the variances are generally small except for the premises and the marketing costs. The actual premises cost exceeded expectation as the initial estimates were developed before the final requirements were fully understood. The marketing under expenditure was the result of the need to cut back on the total expenditure on the project. The indirect costs are also shown in Table 5. These were allocated cost that were not originally budgeted in the same way as the direct costs.

These figures were obtained from a presentation which was given to the bank's executive management in April 1995. The investment amounts for the existing branch automation LAN and it's peripherals are not included in these figures as all branches are supplied with this platform. The approximate cost of this is R700,000.00.

The percentage variance as shown in Table 4 is calculated as the difference between the budgeted and actual expenditure divided by the budgeted. A negative variance denotes an over expenditure while a positive variance indicates an under expenditure. The variance is provided as it is one of the primary control statistics used for project management.

DIRECT PROJECT COSTS				
Division Responsible	Category of cost	Budget Amount (R)	Actual Amount (R)	Percentage Variance
ISD	New Technology	189,634.00	197,328.00	4.06
Premises Division	Physical Layout	1,069,000.00	1,330,000.00	24.42
Regional Head Office	Reengineered rules	50,000.00	54,941.00	9.88
Group Training	Human Resources	30,000.00	31,400.00	4.67
Marketing Division	Marketing issues	167,600.00	123,145.00	26.52
Totals		1,506,234.00	1,736,814.00	15.31

Table 4. Direct Project Costs

Examples of the categories of cost supplied in Table 5 include training, branch renovations, the implementation of the TCD's as well as the unique marketing that was required to Cresta's customer base.

INDIRECT PROJECT COSTS		
Division Responsible	Category of cost	Actual Amount (R)
ISD and Systems Support	Project Implementation	366,688.00
Regional Head Office	Front-line support	25,760.00
ISD	Development	165,215.00
Totals		557,663.00

Table 5. Indirect Project costs

The costs provided above are simply the internal charge out costs for the staff provided to the project from each division shown in Table 5.

5. Analysis of Evidence

The following provides answers to the research questions posed in this report. In addition, it meets the objectives of this report, namely to establish if the branch of the future initiative, implemented in March 1995 was successful in terms of profit and volume growth, and identify what the major impacts on the project were. Table 6 furnishes the number of responses in descending order against a number of reengineering related concepts posed by the researcher during interviews.

No.	Concepts/Question	Total
	CONTENT ANALYSIS OF CONCEPTS	
1	Leadership is an important aspect in a reengineering initiative	78
2	The education of staff and the understanding of their needs	73
3	Management commitment is an important aspect in a reengineering initiative	65
4	It is imperative to align a BPR initiative to the organisations strategy	57
5	Technology was not imperative for the success of the Cresta initiative	44
6	Change management was an integral aspect of the project	44
7	Physical layout was important	42
8	Customer education was imperative	22
9	Technology is the single most important aspect of reengineering	18

Table 6. Content Analysis of Concepts

Question 1: "Was the reengineering of the Cresta branch a success in Financial Terms?"

It is at present difficult to attribute the growth in the business and the profit experienced by the Cresta branch solely to the branch of the future project initiatives. But on interviewing the management and staff of the branch, they unanimously agreed that the branch of the future project was a major contributor to the growth.

In addition, from a survey of bank clients using Cresta, conducted by independent consultants, it was clearly established that they are very pleased with the branch of the future. They feel that the service has improved and that the bank has shown more interest in them.

Table 7 provides some key indicators showing growth in value. Due to confidentiality, figures in this table are shown in percentages, and are a calculation based on year end figures for 1994, against those of the current year. The number of current accounts (net) introduced to the Bank's books grew from 200 in 1994 to 1200 in 1995.

With the branch of the future project, it was decided that to be considered a financial success, the payback period needed to be met within three years. From Table 7 it may be seen that the branch experienced a growth rate in excess of 100.07 percent in profit in the first financial year in which the branch of the future project had been implemented. This should be compared to a four percent growth in branch profitability from the previous year.

GROWTH STATISTICS	
Category or Product	1995 Percentage comparison against 1994
Total lendings (net)	22.70%
Current Accounts	29.60%
Total deposits (Savings)	24.00%
Irrecoverables (shortages)	(164.70%)
Home Loans	26.80%

Table 7. Growth statistics

The first indications are that a satisfactory Return on Investment (ROI) is being made, but the general feelings of the staff involved in the project believe that the real benefits will be experienced over the next two years once the branch and support structures have settled down. This comment suggests that the branch of the future technology will revolutionise the way that FNB will function in the future. However, it must be realised that the achievements described in this paper were not accomplished easily, and it has been difficult to ascertain the

strain placed on the infrastructure to attain the growth discussed here. Only the future will tell if the branch of the future initiative and its consequent growth are sustainable, or if in fact Willers has "squeezed the last drop of blood out of the stone".

PROFITABILITY IMPROVEMENT		
Comparison	Profit	Improvement
1992/1993	21.99%	Base
1993/1994	25.74%	17.05%
1994/1995	51.50%	100.07%

Table 8. Profitability improvement

Question 2:   "What aspects were paramount in ensuring the success of the project?"

Chapter 4 of the research unveiled that this project was more a leadership and change management project than an information technology application project. Information technology was a secondary issue. This conclusion is supported by Dixon et al. (1994) who from a study of a large number of companies who had claimed success in reengineering found that:

> "information technology was not the most critical enabler of reengineering efforts studied."

From the start, Willers' vision was not wholly dependent on the application of information technology. He was aware that by adding high-powered automation to an obsolete operating environment could institutionalise inefficient and ineffective operating procedures, making it difficult to streamline and update operation (Hackett, 1990).

This focus on management is evidenced by the fact that line management in FNB was the only effective champion and without Willers tough minded commitment the project would have floundered in a similar way to Jarvis' first attempt. Willers' initial leadership training for the management in his division was a critical success factor of this project.

Furthermore Willers' ability to convince staff from the highest to lowest level of the bank was essential to the success of the project. He did not expect the staff being exposed to the change to automatically embrace it willingly and therefore, he sold the new arrangements to them.

Question 3: "Could the branch of the future initiative be easily replicated?"

The services and premises set up at Cresta cannot be applicable for every branch, and only time and experience (on getting the balance at each site appropriate for it's requirements) will provide FNB with the knowledge base to optimally implement similar type branches in the future.

With the success of Cresta, the branch of the future initiative is being rolled out to other branches in Willers' region. As soon as a branch is due for refurbishment it is re-equipped and rearranged to comply with the branch of the future project.

In addition, it was agreed that the branch of the future value chain model would be piloted in the other regions during the 1996 financial year and is scheduled to begin in November 1995. Furthermore, it was agreed that:

- Phase 2 of the Cresta model will commence whereby the branch back office processes would be reengineered using enabling technologies such as image processing and other office automation;

- Gauteng region could commence with the next shopping centre branch for roll-out as the full Cresta model was deemed appropriate for shopping centre environments; and

- Certain elements of the Cresta model with regard to best practices, teller assists, multi-skilling and the value chain model would be appropriate for all full-service branch environments.

Many of the lessons learned from other Bank initiatives proved invaluable in the design of the branch of the future pilot at Cresta, with the realisation that projects which were initially independent in their own right could be availed of to support the branch of the future initiative. These mainly focused around self service philosophies to take the load off the front line staff and include aspects such as providing the customer with the ability to:

- purchase shares;

- purchase airline, theatre and similar type tickets;

- perform a number of transactions through the Telebet network (a gambling facility); and

- through an attached video, or telephonic link, talk to a number of specialised areas.

With the planned implementation at a further number of branches throughout the country, it has been decided to allow each of the regional head offices to take full responsibility for not only the identification of potential branches or areas for upgrading to the branch of the future initiative, but for that of the actual implementation as well. The main reasons for this are to obtain regional involvement at the highest level and allow the branch of the future concept to be accepted and adapted to meet the unique needs of the area it is servicing. An example of this, is the Cresta model, as it is deemed to be ideal for a shopping mall operation, where perhaps only the marketing aspect of that branch's services may change per shopping mall. However, the setup at Cresta would be totally inappropriate for a branch located in an industrial area.

Question 4: "What was the impact of Information Technology on the project?"

It is generally accepted that information technology is the enabler for business process, and this has played a central role in the branch of the future project reengineering (Venkatraman 1994); (Earl and Khan 1994).

FNB's enormous investment in its information technology infrastructure was indeed exploitable and this was proved by the fact that many different technologies were relatively easily and rapidly integrated at Cresta to deliver the unique service required for the branch of the future. This suggests that investment in information technology which does not immediately show a return can eventually lead to a substantial competitive advantage (Johnston and Carrico, 1988).

As a direct result of infrastructure investments made in a previous period, Cresta has been able to easily utilise this technological base to create new applications and thereby increase its throughput of clients, its turnover of revenue and its profitability. One of the major reasons for this is that expert systems allow human judgement to be better exercised (McFarlan, 1990).

It is interesting to note that FNB used technology to increase personnel productivity as well as provide it as a substitute for direct labour. This is contrary to the assertion by Roth and van der Velde (1991) where they report:

> *"To be competitive in a constrained environment, retail banks will either deploy technology that increases personnel productivity (such as a platform automation) or that substitutes for direct labour (ATMs and other self service technology)."*

Question 5: "What was the impact of the reengineering effort on staff?"

Drucker (1988), stated that *"a good deal of work will be done differently in the information based organisation"*, this is supported by Sculley (1993) who reports:

> *"The single biggest theme of this decade, I believe will be the reorganisation of work."*

During the project, a number of staff found it difficult to adapt to the sometimes radical change that was required of them. This was mainly due to the fact that most of the staff were

career bankers and had been working with FNB's procedures which was the only means they knew for all their working lives. FNB was now expecting them to act like entrepreneurs (Handy, 1994). Moreover, some staff could not handle the stress imposed " *from having to cope simultaneously with increased workloads and technological change.*" (Drew, 1994).

In addition, the management function for the value chain model required a team-based management development approach. Relearning was difficult for the management team and it was very apparent to the project team that the power of the culture change could not be underestimated. This was due to the methods of managing the change, from that of a strict authoritarian, command and control style, to one a more participative nature (Davenport, 1995). Two of the five original managers at the Cresta branch could not adapt to this change and were transferred to other branches.

The bank was well aware of these potential problems and was very sympathetic to the management and staff. The Bank took extraordinary steps to resolve these problems through counselling, but where it was clear that an individual could not adjust to the new method, they were transferred to another branch or area within the group. To an extent, FNB as well as many of it's staff see their relationship as that of one of an extended family, and the bank was very careful in handling these transfers in a positive manner.

While FNB has many branches, almost all of which at present operate under the old paradigm, the above begs the question that "*what will FNB do once their ability to absorb these type of staff has diminished, and the amount of these type of resources has increased as all branches are eventually converted?*"

One of the issues FNB utilised to embrace staff into the change was to obtain involvement of both branch staff and customers in the systems design and development. FNB believes that this helped lead to increased user information satisfaction and increased system usage. (Baroudi et al., 1986).

The research highlighted that it is not possible to skimp on the investment in people. This project involved substantial investment in various types of training which was essential in order to prepare the staff in seeing the value of the new arrangements.

6. Discussion

This report began by outlining how banking is changing internationally due to factors such as technology, increased competition, the emergence of non traditional players in the market, and higher demands from customers. However, the problem appears to be more urgent in South Africa due to the fact that the demise of apartheid has effectively opened South Africa to the international community. In addition, the government, trade unions and the media in South Africa are placing pressure on the bank's margins.

With over 200 banks operating in South Africa in 1997, the traditional banking fraternity in South Africa is under real threat. These new entrants will not be seek to attract the labour intensive, non profitable personal customer, but will instead "cherry pick" the extremely profitable corporate and high net worth customers.

Traditional banks and financial institutions suffer from burdensome delivery systems based on brick and mortar branches and paper. With these systems, many customers those who carry out many transactions, but keep low balances are unprofitable. Traditional banks also cater to mass market systems and advertising approaches that allow little differentiation in service or pricing. The new financial institution, on the other hand, will avoid both the expense of physical branches and, in the long run, the processing costs associated with paper transactions

As these banks will not be required to sponsor a large infrastructure, they will be able to attract these customers with vastly reduced costs and differentiation. This is supported by Cantrell and Colby (1993) where they state:

> *"Time was when banks considered their loans and the bank buildings their primary asset, but not anymore. Today, the ability to use information may be the most important asset a bank has."*

An example of this is Wingate bank who differentiate themselves by being *"The Accountants Bank"*. This allows them to enter a low risk market, offer exceptional service from a central

point, and provide finance with interest at less then prime. Although not a major problem in itself, the author predicts that the future will be saturated with many institutions that will target specific profitable markets. This could be compared to hyenas challenging a lion for a chance to *"feed on the carcass"*, more often than not they drive the lion off.

With the traditional banks wanting to be *"all things to all people"*, as well as social responsibilities thrust on them by government pressure, they will be left to cater for the unprofitable masses. Income to these banks will decrease and they, from a pure economic perspective will be forced to downsize their operations, mainly from an infrastructural viewpoint. This, in turn will have a spiralling effect which will force more customers to leave. Charles Handy (1996) predicts this where he reports:

> *"The twentieth century will be known as the century of the organisation...and we're seeing the withering of the employment organisation. It won't totally disappear, but it will be reduced to an organising core."*

The new financial institutions that are evolving will have delivery economics far superior to those of existing retail banks, as well as offering consumers much greater convenience. They will be especially attractive to younger and more affluent customers. With strengths like these, they pose a real threat to traditional financial institutions. In response, banks and other established providers will have to transform their branch-based delivery systems and at the same time make investments and build skills in order to compete against these powerful new entrants.

For bank's in southern Africa, who wish to service the mass market which consists of processing large numbers of transactions at low costs, this will only be achieved by the application of innovative information technology as well as the capability of the banks to identify and exploit opportunities (Johnston and Carrico, 1988).

However, in the mid 1980's, when this use of technology was attempted to allow banks to connect to petrol stations and facilitate self service petrol dispensing, the government intervened and put a stop to it's continuance. They did this as the implementation of this technology would have eliminated the need for petrol attendants.

The means exists now to employ technology to serve the mass market, but FNB for example have been thwarted in attempting to implement some of plans as the government views the mass deployment of cash dispensers at the back of some branches to cater for the mass market as racist. This results in these unprofitable customers saturating the banking halls and causing the high net worth customer to avoid, and ultimately transfer their accounts. First National Bank suffered from this when they acquired the majority of the provincial government accounts in 1995.

The new financial institution looks nothing like a traditional financial institution. It need have neither branches nor tellers, although it might choose to set up low-cost branches in busy locations to handle customers who want personal service. It will provide consumers with easy access to a wide variety of financial services in a single integrated account.

The information elements of this revolution is already becoming apparent. On the Internet, banking is now possible. Institutions like First Dallas Securities, Wells Fargo, AmeriCard Services, Deutsche Bank and First Securities all offer loan and money transmission services online. MicroSoft's Bill Gates, in his book, "The Road Ahead" mentions an electronic wallet which will facilitate electronic cash. Dozens of alliances have been struck between credit card companies, banks, software houses and other information businesses, including Mondex, First Virtual, DigiCash and CyberCash (Johnson et al., 1995).

The ability to capture, integrate and disseminate information at extremely low cost will enable highly customised marketing approaches and a flurry of new product innovation. Smart cards, for example may be used to search out the best lending rate from among a number of providers at the time of sale. Integrated cards could allow several payment methods to be accessed from the same card.

What is for certain, is that in the short term, globalisation, increased customer demands and technology will revolutionise banking in a way (I believe) that will make the evolution of the PC pale in comparison. Banks internationally will need to specialise and differentiate themselves to cater for specific markets.

The need to remain competitive, as well as the ability to transfer money, untraced on the Internet, will render any protection from the government helpless.

Traditional financial institutions should respond to the coming threat by redesigning their entire delivery system, locking in the desirable customers with remote channels while aggressively shrinking their branch infrastructures. They must build new skills and capabilities in teleservicing, interactive technologies and database marketing.

The research suggests that information technology will fundamentally change how banking is performed. The work done at Cresta is probably the first step towards coping with the very profound change which the banks will have to accept in the short to medium term. In spite of the government's standpoint, banking services will be devolved away from branches at far more intelligent automatic devices.

However, considering the longer term the branch of the future project which FNB has now established may not be the solution. Clearly FNB still see a bank as a physical place or location rather than a service concept. A type of paradigm shift which allows the physical nature of banking to be seen as secondary, is needed to grasp the major opportunities of the future. This view is echoed by Johnson et al. (1995) where they assert:

> *"Layering electronic channels on top of branches is the wrong answer as it*
> *results in extra cost as channels multiply and complexity rises."*

The next step which the banks must face may well involve the abolition of the branch network itself and the creation of electronic networks which will make extensive use of strategic

alliances with other organisations, using their infrastructures. An example of this, is that many petrol stations now have convenience stores where the workshops used to be. This has proved to be extremely popular with the clientele and is far more profitable than the workshop. If banks will be handling most of their cash and loan operations either via the telephone or through a variety of ATM type devices, why could these convenience stores not dispense cards or cheque books on behalf of the banks. FNB has already an alliance with Score stores, who handle cash on the banks behalf.

What is clear is that the bank of the medium term future, never mind the long term future will be a very different organisation to manage than the institutions which exist today.

References:

AmeriCard Services, Inc: *http://www.vifi.com/americard/services.htm*

Bakos J.Y. and Treacy M.E., "Information Technology and Corporate Strategy: A Research Perspective", MIS Quarterly June 1986.

Ball A. and Asbury S., "The Winning Way", Jonathan Ball Publishers, 1990.

Barnard B., "The Keys to Successful Reengineering", Strategic Direction, September 1993.

Baroudi J.J., Olson M.H. and Ives B., "An Empirical Study of the Impact of User Involvement on System Usage and Information Satisfaction", Communications of the ACM Vol.29 No.3, March 1986.

Belmonte R.W. and Murray R.J., "Getting Ready for Strategic Change", Information Systems Management, Summer 1993.

Benjamin I., and Levinson E., "A Framework for Managing IT Enabled Change", Sloan Management Review, Summer 1993.

Benjamin R. and Blunt J., "Critical IT Issues: The Next Ten Years", Sloan Management Review, Summer 1992.

Burns N., "Ebb and Flow", LAN Magazine, Vol.8 No.5, May 1993.

Cantrell and Colby, "Getting a Grip on Information", Bank Management, No.2, September 1993.

Cash J., and Woolfe R., "Business Realignment: IT gets in line", Information Week, 21 September 1992.

Champy J., "Reengineering Management: The Mandate for New Leadership", HarperCollins Publishers, London 1995.

Computerworld, "The Global 100 - Outstanding users of Information Technology from Around the World", 1 May 1995.

Creemers M.R. cited by Blaauw A.J., "Business Process Reengineering: An Application Framework", A research report to the University of the Witwatersrand, 1995.

Davenport T.H., "Process Innovation: Reengineering Work through Information Technology", Harvard Business School Press 1993.

Davenport T.H., "Will Participative Makeovers of Business Processes Succeed where Reengineering Failed?", Planning Review, January/February 1995.

Davidow W.H. and Malone M.S., "The Virtual Corporation", HarperCollins, New York, 1992.

Deutsche Bank: *http://www.deutsche-bank.de/index_e.htm*

Dixon J.R., Arnold P., Heineke J., Kim J.S. and Mulligan P., "Business Process Reengineering: Improving in New Strategic Directions", California Management Review, Vol.36 Iss.4 Summer 1994.

Drew S., "BPR in Financial Services: Factors for Success", Long Range Planning, Vol.27 Iss.5 Oct 1994.

Drucker P.F., "The Coming of the New Organisation", Harvard Business Review, January/February 1988.

Earl M.J. and Kahn B., "How new is Business Process Redesign?", European Management Journal Vol.12 Iss.1, March 1994.

Easterby-Smith M., Thorpe R. and Lowe A., "Management Research: An Introduction", SAGE Publications, London 1993.

E*TRADE: *http://www.etrade.com/*

First Dallas Securities: *http://www.firstdallas.com*

First National Bank's Annual Report 1995.

Freiser T.J., "The right start for Business Reengineering", Information Strategy, Fall 1992.

Gatian A.W., "Is User Satisfaction a valid measure of system effectiveness?", Information and Management 26 1994.

Grant I., "Legacy Systems", Information Technology Review, August 1993.

Gulden G.K. and Reck R.H., "Combining Quality and Reengineering Efforts for Process Excellence", Information Strategy, Spring 1992.

Hackett G.P., "Investment in Technology - The Service Sector Sinkhole?", Sloan Management Review, Vol.31 No.2, Winter 1990.

Hammer M., "Re-engineering Work: Don't Automate, Obliterate", Harvard Business Review, July/August 1990.

Hammer M. and Champy J., "Reengineering the Corporation: A Manifesto for Business Revolution", Nicholas Brealy Publishing Limited, London 1993.

Hammer M. and Stanton S.A., "The Reengineering Revolution: The Handbook", HarperCollins Publishers, 1995.

Handy C., "The Empty Raincoat" Hutchinson Publishers, 1994.

Handy C., quoted by Ettorre B., "A conversation with Charles Handy On the Future of Work and an End to the Century of the Organization", Organisational Dynamics, Vol.25 No.1, Summer 1996.

Hirschheim R.A., "Database: A Neglected Corporate Resource", Long Range Planning, Vol.16, October 1983.

Johnson B.A., Ott J.H, Stephenson J.M. and Weberg P.K., "Banking on Multimedia", The Mckinsey Quarterly, Number 2 1995.

Johnston H. and Carrico S., "Developing Capabilities to Use Information Strategically", MIS Quarterly March 1988.

Keenan K., "A Management Guide to Planning", Ravette Books Limited, Horsham 1995.

Kettinger W., Subashish G. and Teng J.T.C., "Business Process Reengineering - Building a Comprehensive Methodology", Information Systems Management, Summer 1993.

McAllister, P, "The changing technology in South African Banking", Ivor Jones Roy and Co., 23 February 1994.

McDonnell E.D. and Somerville G.E., "Corporate Reengineering that Follows the Design of Document Imaging", Information Strategy, Fall 1991.

McFarlan F. W., "The 1990s The Information Decade", Business Quarterly Vol.55 No.1, Summer 1990.

Orton I., "Reengineered Banks", Lafferty Publications, Dublin 1995.

Porter M.E., "Competitive Advantage: Creating and Sustaining Superior Performance", The Free Press, New York 1985.

Porter M.E. and Millar V.E., "How Information gives you Competitive Advantage", Harvard Business Review, July/August 1985.

Pratt M.D., "Creating and Sustaining Change for Business Renewal", Information Strategy, Spring 1992.

Remenyi D.S.J., "Introducing Strategic Information Systems Planning", Blackwell NCC, UK, 1993.

Roth A.V and van der Velde M., "The Retail Technology Advantage", Bank Management December 1991.

Scherr A.L., "A New Approach to Business Processes", IBM Systems Journal, Vol.32 No.1, 1993.

Schnitt D.L., "Reengineering the Organisation using Information Technology", Journal of Strategic Information Systems Management, January 1993.

Sculley J, cited by Schroth R, Mui C. and Craumer M., "Observations on the Information Age", Insights Quarterly, Summer 1993.

Security First Network Bank: *http://www.snfb.com*

Short J.E. and Venkatraman N., "Beyond Business Process Redesign: Redefining Baxter's Business Network", Sloan Management Review, Fall 1992.

Smithsonian Institute, "1996 Innovators: Finance, Insurance, Real Estate", http://innovate.si.edu.

Sprague R.H. and McNurlin B.C., "Information Systems Management In Practice", Prentice Hall Inc. New Jersey, 1986.

Store T. and Guise-Brown C., "Positioning for the Future: A survey of business issues facing the South African financial services industry", Deloitte and Touche South Africa 1994.

Venkatraman N., "IT-Enabled Business Transformation: From Automation to Business Scope Definition", Sloan Management Review Winter 1994.

Wells Fargo Online Banking: *https://banking.wellsfargo.com/*

White A., cited in "Putting People Back into Reengineering", The Star Workplace 13 March 1996.

Wuffi P. and Hunt D., "Fixing the Credit Problem", The McKinsey Quarterly, No.2. 1993.

Zuboff S., "In the Age of the Smart Machine: The Future of Work and Power", Basic Books, New York, 1988.

Appendix 1:

Other Technologies in use, or being Developed by the First National Bank of Southern Africa

Not only were a number of technologies implemented into Cresta as support tools, but a number of unique technologies were spawned by the branch of the future initiative. Examples of these, which are already a reality at FNB are provided below:

■ **Cash Paymaster Services**

This has been very successful in *taking banking to the people*, it involves armoured vehicles with biometeric finger recognition devices as well as modified ATM machines specifically modified to operate from vehicles. This initiative provides FNB with a mobile, secure cash handling operation, and has been particularly successful in the rural areas of southern Africa.

The CPS system has gained immense popularity with the processing of government pensions as it has, through biometrics almost eliminated fraudulent claims by illegitimate users. This system has also many secondary spin-offs to the people of the area. An example of this is the informal markets that have been established. This is where hawkers (informal traders) either follow the mobile payment vehicles and stop at each point to offer a variety of goods, or set up at a particular point as a fixed site that operates for a few hours on a few days, or for many hours each day, effectively *taking shopping to the people*. These points of trading are also becoming social and medical centres and some have expanded into adult education. A few have evolved into permanent structures acting as community centres (The Smithsonian Innovation Network, 1996).

According to FNB, initial scepticism from the old, illiterate and non technology based rural population turned to absolute delight as the pensioners realised that they could be paid their full pension on a fixed day every month.

■ **Container Banking**

Due to the old apartheid policies, many of the traditionally black areas still suffer with a poor infrastructure. In an attempt to address this imbalance, Black entrepreneurs set up small shopping areas using shipping containers. To take advantage of this opportunity, FNB followed the same route to provide basic, but appropriate banking services to the container stores, as well as it's customers.

To ensure complete flexibility, FNB can operate from the most desolate areas, whereby electricity is supplied by generator, and telecommunications links provided by satellite. Mobile ATM facilities operating within a shipping container have been in use with FNB for some time, and they have achieved favourable savings by being able to move a container to various destinations as and when required.

■ **Score Stores**

Score stores is a supermarket chain which operates nationally within South Africa. It mainly caters for the rural black population. To economically increase representation throughout southern Africa, without having to construct highly costly and secure branches, FNB has entered into a mutually beneficial arrangement with Score stores.

Score provides approximately 10 square meters within their stores to FNB at no cost. FNB then provide a small counter, equipped with a terminal, a pin pad and receipt printer which allows accounts to be opened, and withdrawal receipts to be printed. The "branch" within the store does not handle any cash whatsoever, and is only used for attracting clients and generating withdrawals. Withdrawals are processed by the client receiving a withdrawal slip (providing he has sufficient funds available) from FNB, which he takes to the Score till operator who exchanges cash or goods for the receipt.

The advantage to FNB is that they are able to provide increased representation at extremely low cost, and as this type branch does not handle cash, the risk of loss and the expense of security is eliminated. Although Score stores do accept the risk of cash

handling, this problem generally existed for them anyway. Score now have the benefit of having a dedicated branch within their premises, where FNB's customers are effectively tied into buying at the Score store.

■ **Wholesale Distribution**

In the current crime filled environment in South Africa, Wholesale Distributors face untold risks and massive financial losses through mostly robberies and truck hijackings as a result of cash being physically transported.

In an attempt to manage this risk, smartcard technology is being implemented by all the major Bank's. This allows the transporter to effectively carry cash using a portable smartcard reader on his vehicle. On receipt of the goods, the retailer can effectively transfer funds real time to the wholesalers account, effectively paying cash on delivery using "virtual cash".

Commitment and support are being offered by the wholesalers, retailers and merchants who urgently require these banking smartcard solutions to eradicate their escalating risks associated with cash distribution. The market has witnessed corporate wholesalers, such as S.A. Breweries, Barlows, Premier and Suncrush, offering substantial additional financial incentives to entice retailers, of all levels to use the new payment mechanism.

These financial incentives have reached all parts of South Africa, including remote areas of the Northern Transvaal, Ga Rankuwa and even the Transkei. Previously sceptical, and in many cases unbanked businessmen, are now seeing the advantage of allowing FNB to manage their business accounts.

Naturally, bank's facilities will change in order to accommodate this new market. FNB experienced a reduction in large cash deposits, which has resulted in less costs for the bank in having to process and secure these large deposits. Moreover, FNB have witnessed how Nedcor have substantially reduced cash deposit fees, service fees, allowed easier account qualification and reduced account closures. In addition, branches

have been readjusted to provide maximum client service and additional Treasury Bulk Depots have been built to accommodate their larger cash paying clients.

- **FirstDirect**

Although, this service was initially launched to the higher income bracket, it is mentioned as it utilises technology to provide a highly convenient form of banking in an efficient and effective manner. The FirstDirect operation handles a variety of enquiries that flow from the base of existing and potential subscribing customers. In addition, calls to this area result from traditional advertising, and when a caller responds to such advertising there is an established interest in the product or service that generated the call.

This operation requires a high degree of courtesy and efficiency and the knowledge and know-how to resolve a problem supported by complex interactive computer systems.

It is also important to note that the South African banking sector has made extensive use of information technology for quite some time. South African banks have been computerised since about 1964. The computer banking systems in South Africa are generally regarded as being among the most sophisticated anywhere in the world with banks increasingly turning their attention to opportunities for achieving competitive advantage through information technology (Bakos and Treacy, 1986). The banks are in constant competition to be seen as innovative and market leaders in the use of information technology.

The elaborate nature of the information technology is evidenced by the intricate and user friendly customer interfaces as well as the on-line clearance of negotiable instruments. Many of the banks have real-time update capability for their own customers. Furthermore, First National Bank has been named one of the world's top 100 users of information technology by ComputerWorld Magazine in May 1995 and for their CPS system, FNB received the Smithsonian prize for innovation in the Finance, Insurance and Real Estate category in June 1996.

Author: Cinnamond William Gerard.
Name of thesis: Reengineering a branch to create the branch of the future at the First National Bank of Southern Africa.

PUBLISHER:
University of the Witwatersrand, Johannesburg
©2015

LEGAL NOTICES: