

**DETERMINING THE USE OF HUMAN CAPITAL  
TO ACHIEVE A COMPETITIVE ADVANTAGE IN  
THE NATIONAL PORTS AUTHORITY OF SOUTH  
AFRICA**

**By**

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**Submitted in partial fulfillment of the requirements  
for the**

**Master's Degree in Business Administration**

**MBA Unit, in the Faculty of Business  
Administration at the Port Elizabeth Technikon**

**Promoter: Mr T Hutton**

**November 2001**

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**DECLARATION**

This work has not been previously accepted in substance for any degree and is not being concurrently submitted in candidature for any degree.

Signed .....

Date .....

**STATEMENT 1**

This dissertation is being submitted in partial fulfillment of the requirements for the degree of Masters in Business Administration.

Signed .....

Date .....

**STATEMENT 2**

The dissertation is the result of my own independent work / investigation, except where otherwise stated.

Other sources are acknowledged by footnotes giving explicit references. A bibliography is appended.

Signed .....

Date .....

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**ABSTRACT**

A new business world is emerging, which every organisation must appreciate and know how to exploit. The concepts of strategy do not need to be rewritten, but must be adapted to this new era. Utilisation of the Internet and human capital to its fullest is transforming the way that business is conducted in achieving its objectives. The key to an organisation's competitive advantage, is to invest in training, skills enhancement and the personal development of its staff. A requirement of the National Ports Authority is to be committed to basic adult education and preparing employees for re-skilling from the shop floor to the boardroom to ensure it is seen as an equal opportunity employer.

The research problem addressed in this study was to determine the factors necessary to achieve strategic advantage using human capital. Relevant literature was used to develop a new model to address some of the issues facing the organisation, as well as ensuring that the National Ports Authority can leverage itself into a competitive advantage. To manage and measure knowledge-based resources is one of the most important challenges for a modern company. This challenge is incorporated in the new model developed by the study.

The theoretical model consisted of various factors, which were analysed and formed into principles which were identifiable from the literature study. This

model was then used to compile a questionnaire to test the responsiveness of the role players concurring.

The empirical results analysed indicated that the respondents concurred with the theoretical study and factors of the new model that was developed.

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## **CHAPTER ONE**

# **INTRODUCTION, PROBLEM STATEMENT AND DEFINITION OF CONCEPTS**

### **1.1 INTRODUCTION**

The National Ports Authority is currently undergoing major strategic and organisational change, driven by political, economic and social agenda on ports in South Africa. "National Ports Authority intends and is sailing towards being a world class port system." (Ex Chief Executive Officer: Rob Childs). Considering this statement, it would be in the interest of the company to uplift its human assets to achieve its goal.

According to Gratton (2000:xiii) "People are our most important asset. We are a knowledge-based company. All we have is our people." A similar statement is shared by PriceWaterhouseCoopers (2000:28): "The intense competition in global business today is not for capital or advanced technology or market share. It is for talent. In the service-based knowledge economy, the greatest rewards will go to companies assembling the best array of human skills."

From the above statements it can be seen that companies have realised that people that are trained and skilled are important to the competitive advantage of organisations.

Davis (2001:8) states that the world is an ever changing place and various revolutions come and go. Each revolution results in a changed economy and each economy changes the form of capital in existence. First there was physical capital, now there is monetary capital which, in turn, is evolving into intellectual capital. In order for companies to operate successfully and at a competitive level, it is essential for them to adapt to a changing environment and have a strategy in place to meet the increasing demands and effectively and efficiently manage their human resources. If you are debating on whether or not e-commerce is the way forward or if it's suited for your industry, you're running far behind.

According to Mayo (2000: 2) human capital is commonly accepted as individual competence and experience, judgement, wisdom, team competence, leadership and motivation. However, all intellectual assets are maintained and grown by people - they are the source of all the components. Their unique contribution comprises their command of information and previous experience, their ability to integrate and use judgement, to be innovative and intuitive and to develop and use human relationships. This contribution we could label "knowledge" in the

widest sense and see its continual creation and its flow around the organisation as a vital dynamic of progress (Mayo, 2000: 3).

Regarding the above and the Employment Equity and Skills Development Acts, coupled with the country's quest for global competitiveness, pressure is being exerted on employers to develop and empower employees who have previously been disadvantaged. This creates a situation in which employers are forced into a position to optimise the impact of the above legal obligations, through the development of an effective strategy, which would lead to enhancement of their competitive advantage.

Porter (1990: 594) adds that firms may, through their own internal efforts, influence the creation of the resources available. This may also be done through the creation of these resources through active involvement in education institutions, government entities and local communities. Porter (1990: 595) uses the example of a major food manufacturer that benefited from founding a business school, though having a supply of talented management and continued management training. Porter (1990: 595) continues that organisations should play an active role in helping educational institutions identify the needs of industry, developing curriculum, placing graduates and providing much needed financial support for equipment, facilities, scholarships and recognition programmes for outstanding lecturers and students. The benefits of this involvement are not only directly related to the specific company, but according



to Porter (1990: 596), are of benefit to suppliers, customers and competitors, that have a stake in the pool of factors.

This poses the question formulated under the main problem.

## **1.2 MAIN PROBLEM**

The main problem to be researched in this project is as follows:

**What strategy does the National Ports Authority need to adopt to establish human capital as a core asset, leading to a competitive advantage in the local and global regulatory market?**

## **1.3 SUB-PROBLEMS**

In an attempt to resolve the main problem, the following sub-problems will be used:

- What does the literature reveal as ways to enhance competitive advantage in National Ports Authorities?
- What do knowledgeable people feel are ways to develop workforce knowledge and skills as a core asset?

- What steps does the National Ports Authority need to take in order to develop workforce knowledge and skills as a core asset?

## **1.4 DELIMITATION OF RESEARCH**

Delimiting the research makes the research topic manageable and it is necessary to demarcate the research in the areas listed below. By delimiting the research, the researcher does not imply that research on the same topic is not needed in other ports.

### **1.4.1 DEMARCATION OF ORGANISATIONS TO BE RESEARCHED**

The scope of the research is limited to National Ports Authorities operating in the Sub-Saharan African market.

### **1.4.2 GEOGRAPHIC DEMARCATION**

The area to be researched is situated in the areas surrounding the Nelson Mandela Metropole.

## **1.5 DEFINITION OF KEY TERMS**

In order to ensure ease of reading the following key terms have been defined.

### **1.5.1 MODEL**

The research conducted will result in the formulation of a model to establish human capital as a core asset in the National Ports Authority. This should assist the port in gaining a competitive advantage in the Sub-Saharan African market. Set out below is a summation of how the term "model" is defined in the literature.

Singleton, Straits and Straits (1993: 455) note that models are derived from tentative models that are "never correct about social processes". Models, they continue, are an efficient means to proceed with data analysis. Research results in a learning process as analysis of data shows a discrepancy between predictions and the data obtained, leading to a more accurate model. Dooley (1995:348) adds that a model may be viewed as "one set of causal paths that we can compare with observed data".

Mouton and Marais (1994: 138) feel that the term "model" is ambiguous in the vocabulary of the social scientist. They continue that the term's "model" and "theory" are frequently used as synonyms. Mouton and Marais (1994: 138) add that a model performs a heuristic function as opposed to a theory performing an

explanatory function. Kemp (1997: 6) states that a model is a tool used by social scientists to explain a phenomenon.

Emery and Cooper (1991:64) list three types of model, which are as follows:

- **Descriptive models:** these models seek to describe the behaviour of elements in a system.
- **Explicit models:** these models seek to extend the application of current theories.
- **Simulation models:** these models replicate current models.

The model to be used in this study is a descriptive model as the study sets out to establish the steps in developing a strategy that incorporates human capital.

### **1.5.2 HUMAN CAPITAL**

The term “human capital” was originally used by Nobel economist Gary Becker (1964) to refer to the “stored value” of knowledge and skills of members of the workforce. Workers could increase their human capital through education (which referred to formal education) and training (which referred to formal training programs and on-the-job training). At the core of the concept of human capital is the idea that people possess potentials that manifest themselves in behaviours that have economic value to organisations.

This paradigm shift is evident in today's most valuable enterprises whose most valuable assets are their "off balance sheet" human capital. These companies tend to lead their industries in productivity, profitability, employee retention, customer satisfaction, product quality and sales. Heneman and Heneman (1994:28) suggest that up to now, "knowledge" and "skills" have been the primary dimensions of the construction of human capital. Knowledge is defined as a body of information that can be directly applied to the performance of tasks. This is also called "declarative knowledge" by Campbell (1990:29), which refers to technical knowledge of facts and figures.

In the knowledge economy, more and more companies are viewing their people as critical revenue earning assets. In making use of these assets for competitive gain, effective management of key competencies is a key objective (SA Computing 2001: 20). Human resources have become an important resource in achieving competitive advantage in the local and global markets. Carrell, Albert, Hatfield, Grobber, Marx and Van der Schyf (1998: 4) state that in order for organisations to be effective, tangible assets are equally as important as intangible assets. These intangible assets are the organisation's human resources and knowledge.

Porter (1990: 74-75) states those factors of production such as land, labour and capital are traditional sources of competitive advantage. These are too general

and should be grouped into more specific categories that include amongst others, human resources and knowledge resources. The cost of developing both these categories is a function of the amount of capital available to industry and they, in turn, have a bearing on goods and services available in that region. Porter (1996: 76) continues that competitive advantage is gained through the effectiveness and efficiency by which the factors of production are deployed. This is effected through management, who forms part of the pool of human resources.

According to Lewin & Regine (2000: 44) the most successful species in nature are those that are able constantly to adapt and evolve. The same is true of organisations in the modern fast-paced, fast-changing, interconnected, interdependent business environment. The fundamental source of every organisation's ability to achieve constant evolution is its human capital and the potential creativity it represents - the knowledge and talent that's present in every individual in the organisation, no matter what their position or function (Lewin & Regine 2000: 44).

Grulke (2000: 189) states that pure knowledge is worthless. Skills and ideas are everything. "We're drowning in knowledge and information, but we're starved for skills. It's not what you know anymore. It's what you do with what you know that really makes the difference." Based on the above it is clear that the human resources and subsequent knowledge resources that lead to a competitive

advantage are a function of the amount of capital available for investment in industry and as such must be considered human capital.

### **1.5.3 CORE COMPETENCE**

Johnson and Scholes (1997: 15) state that core competencies are the basis on which

organisations achieve advantages over others. Core competencies take the form of the activities, skills or know-how that set the enterprise aside from its competitors and this results in its customers benefiting from the value that results from that specific competence. Johnson and Scholes (1997: 19) continue that core competencies provide real advantages, that other organisations find hard to imitate. These core competencies may be stretched to create new opportunities and should thus not be fitted to existing situations, but leveraged to gain maximum advantage.

Hellriegel and Slocum (1996: 760) state that core competencies are "complementary strengths" that are distinctive and make an organisation more competitive through providing "unique value" to its customers. Hellriegel and Slocum (1996: 156) continue that core competencies lead to a strengthening of an organisation's position and as such may result in access to more markets.

Prahalad & Hamel (1990: 199) have defined core competency as "the collective learning in the organisation, especially how to co-ordinate driver's production skills and integrate multiple streams of technology... unlike physical assets, competencies do not deteriorate as they are applied and shared. They grow." As organisations prepare to meet the challenges of the 21<sup>st</sup> century, there is increasing recognition that the competencies and knowledge of their people are among their greatest assets. Industry sectors, which depend heavily on knowledge workers, are looking for ways to manage their human capital, so that it contributes effectively to their achievement of business goals. In this context, one of the prime needs is to manage competencies effectively across the enterprise.

The Internet economy is placing additional pressure on companies to launch innovative new services quickly. This need is intensifying. People are increasingly being asked to work in flexible teams to learn about and deploy new technologies (SA Computing 2001: 21). To survive and succeed, every organisation will have to change itself into a change agent. As indicated in the above discussion, the pressure is for organisations to abandon things that have been unsuccessful and to organise continuous improvement of products and services that are innovative and successful.



Competency management can help to answer questions like:

- Where in the organisation can we find the correct people for specific assignments?
- How can we ensure that the organisation will keep pace with the innovation that is required to compete successfully?
- How do we ensure that our valuable knowledge workers have the skills required to support us tomorrow as well as today?

The management of human capital will allow organisations seamlessly to survey and manage the entire human capital value chain and to align capital resources strategically with the overall corporate direction and objectives.

#### **1.5.4 COMPETITIVE ADVANTAGE**

Kotler and Armstrong (1996: 256) define competitive advantage as "an advantage over competitors gained by offering consumers greater value, either through lower prices or by providing more benefits that justify higher prices". In the context of this study, the National Ports Authority could possess human capital that provides benefits in terms of high levels of knowledge and skills.

Porter (1990: 19) adds that competitive advantage is created and sustained through differences in structures, values, culture, institutions and histories that have a significant impact on competitive success. With the globalisation of trade there are fewer opportunities to shelter uncompetitive domestic industry and, as such, the significance of skills and technology is the key to competitive advantage.

According to Patten (2000: 1), our economy is dominated by technology and information companies. We need the ability to get knowledge and information to grow at rates beyond our traditional understanding. The typical "knowledge worker" must keep up with technological changes or be left behind. These challenges will add a new twist to the way individuals and corporations compete (Patten 2000: 1).

## **1.6 SIGNIFICANCE OF THE RESEARCH**

Employers need to take certain affirmative measures in respect of designated groups, namely, blacks, women and people with disabilities. These measures are in terms of Chapter III of the Employment Equity Act of 1998, where the aims of the South African Constitution of building a non-racial, non-sexist and prosperous democracy are spelt out. Fitz-enz (2000: 51) states that an integral part of empowerment takes the form of skills that stem from career development of the designated groups.

The demands of change have forced companies to have strategies in place to help them meet these demands. The only way to sustain one's survival is to innovate faster than one 'commoditises'. Knowledge is an important commodity and the more there is, the more it is shared, the more valuable it becomes. This would then mean a company should be innovative in its drive to utilise human capital as a strategic advantage.

In the light of the above the scene is set for a concerted effort to upgrade the level of skills in the National Ports Authority. In support of this, Porter (1999: 9) adds that human resources are the most decisive factor in modern global competition. Nations showing the highest levels of specialised skills in a certain field have been found to possess high levels of global competitiveness.

Porter (1999: 9) continues that these skills do not depend on the country's education system, but are due to close competition between competitors and this in turn leads to an increase in productivity. Porter (1990: 736) states that as competition demands become more knowledge-intensive, so the demand for specialised skills is developed. He continues that with the concept of globalisation, specific national skills are becoming more decisive instead of being suppressed.

Furthermore no such research along these lines has been carried out in the National Ports Authority.

## **1.7 RESEARCH DESIGN**

In this section the methodology to be followed in the research project is described.

### **1.7.1 RESEARCH METHODOLOGY**

In conducting the research for this project the following procedure will be adopted to solve the main problem and the sub-problems.

### **1.7.2 LITERATURE STUDY**

A literature study will be conducted in order to identify the key factors leading to critical success factors in National Ports Authorities in which human capital is a core asset. In addition to this, information will be gathered from the libraries of the Port Elizabeth Technikon and the University of Port Elizabeth and from the Internet and the various ports.

### **1.7.3 EMPIRICAL STUDY**

The empirical study will consist of the following parts:

- A survey will be carried out in the delimited area to determine the problem areas as identified in port authorities operating in Sub-Saharan Africa.
- The measuring instrument to be used in the survey will be a comprehensive questionnaire developed by the researcher based on information gained from the literature study.
- The population will comprise training practitioners, human resource practitioners and general management from all port authorities delimited in the study.

### **1.7.4 DEVELOPMENT OF AN INTEGRATED MODEL**

The results of the above literature study will be combined with the results of the empirical study to develop an integrated model for establishing human capital as a core asset for the National Ports Authority.

## **1.8 PROPOSED PROGRAMME OF STUDY**

The research has been planned to include the following chapters.

- |               |   |
|---------------|---|
| Chapter One   | Introduction, problem statement and definition of concepts.   |
| Chapter Two   | Competitive Advantage – Paradigm shift.   |
| Chapter Three | Developing a generic model.   |
| Chapter Four  | The empirical study, methods used and analysis of data.   |
| Chapter Five  | Integration of the findings of the empirical study with the theoretical survey developed for the study, summary, recommendations and conclusions. |

## **1.9 SUMMARY**

In this chapter the main problem and sub-problems were identified. To understand key terms, these were defined and the research demarcated in order to make the study manageable. The proposed programme of the study was set out to allow the reader an understanding of the structure of the project. In the next chapter, the application of human capital in business will be discussed.

## **CHAPTER TWO**

### **COMPETITIVE ADVANTAGE -PARADIGM SHIFT**

#### **2.1 INTRODUCTION**

Chapter One outlined the importance of the research, the main problem and subsequent sub-problems and the broad outline of the research. However, to establish an effective solution for human capital to be a competitive advantage in the National Ports Authority, it is necessary to consider and investigate a number of strategies.

With the development of information technology, the world of business has changed from pockets of isolated regions, to one global market accessible through the development of technology in electronic communications media. In the ever-shrinking world, regions are positioning themselves to provide goods or services to the global market based on the core competencies of the region where the goods or services originate. Thus, the ability to perform more effectively and efficiently at higher levels of quality, whilst maintaining acceptable price levels, becomes the differentiating factor amongst regions and ultimately the firms operating in those, gain a competitive advantage.

In the light of the above, the aim of this chapter is to map the changing paradigm of competitive advantage from emphasis on the tangible assets to intangible assets. This would mean investing in human capital. In mapping this change, Porter's five forces that lead to a competitive advantage, together with Porter's diamond, will be discussed. Schiro and Moore (2000) have proposed a new set of factors that will lead to competitive advantage. The model proposed by Schiro and Moore takes into account the changes that have taken place in the world since Porter developed the five forces that lead to a competitive advantage and "Porter's Diamond".

The above theories reveal that Porter cited labour as a component of one of the four factors that lead to competitive advantage - factor conditions - whilst the new paradigm, put forward by Moore and Shiro, implies that human capital is the key to competitive advantage - listing a knowledge based economy, the competition for the best people and e-commerce as factors that are the key to attaining a competitive advantage. This chapter will conclude with a discussion of research in support of the paradigm shift.

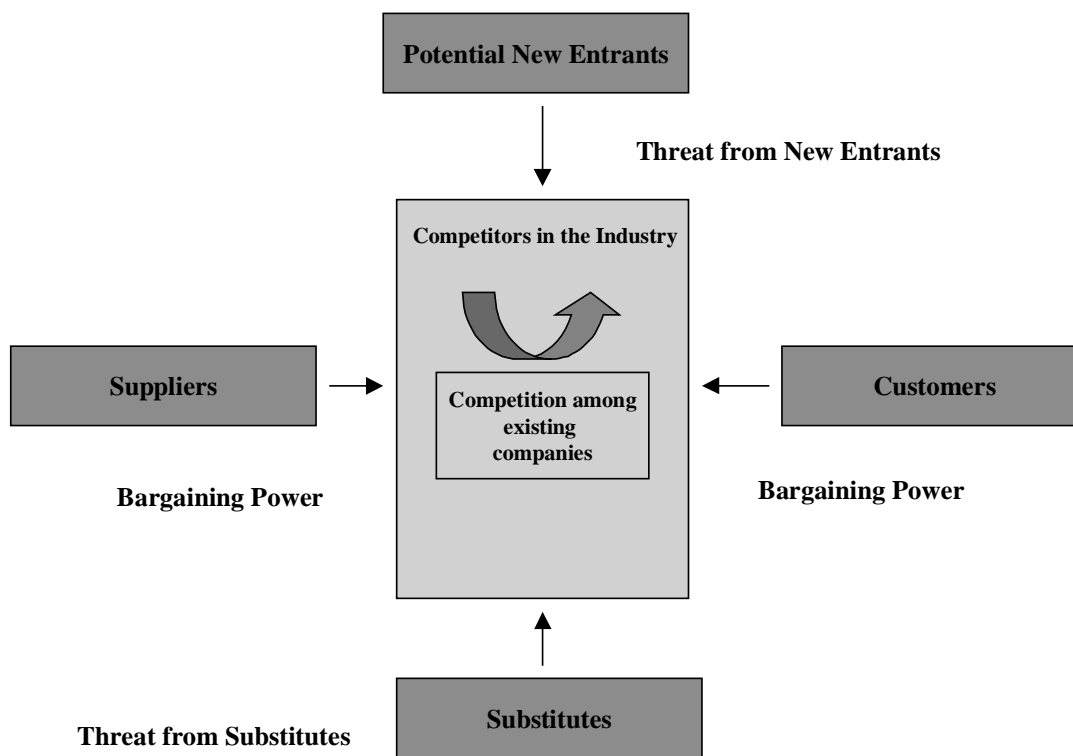
## **2.2 PORTER'S FIVE COMPETITIVE FORCES**

Porter (1990: 33) states that firms have competed in the global market, but that competitive advantage is based on factors provided by conditions that exist in the environment where firms are based. He continues that there are five basic



competitive environments and that these forces lead to the development of a competitive advantage. These five forces are shown in Figure 2.1 below and each will be discussed briefly.

**Figure 2.1: Porter's Five Forces that Determine Competitiveness**



**Source: Koch (2000: 247)**

From the diagram it can be seen that each of the forces exerts an influence on the rivalry that exists among competitors. The rivalry among existing competitors

also influences each of the factors either positively or negatively from an organisational perspective.

Porter's five forces to analyse are:

- Threat from potential new entrants;
- Threat from substitutes using different technology;
- Bargaining power of suppliers;
- Bargaining power of customers;
- Competition among existing competitors.

In principle, the underlying theory maintains that, depending on the strength of these forces in the industry, one could determine how difficult it was to function within that industry. The collective strength of these forces determines the ultimate profit potential in an industry. It could also offer guidelines, as to which competitive force needs one's focus and attention in setting a strategy for the future. These five factors and their effects will be discussed in more detail:

### **2.2.1 THREAT OF NEW ENTRANTS**

Porter (1990: 35) feels that the threat of new entrants to the market is a restraining factor to sustained growth of profits in an industry. The reason for this is that, new entrants to markets add capacity, that upsets the equilibrium

established amongst manufacturers and leads to products becoming more readily available to consumers. This forces prices down, as each firm fights for a diminished market share.

In order to maintain a competitive advantage, organisations need to optimise the barriers to entry for new entrants. Hellriegel and Slocum (1996: 154) state that there are two important barriers to market entry. These are firstly, economies of scale (this is where the higher the plant throughput and ultimately sales, the lower the unit cost) and secondly, the amount of capital required to set up new facilities or the costs to fund the development of the new product or service.

### **2.2.2 BARGAINING POWER OF SUPPLIERS AND BUYERS**

Powerful buyers enter negotiations with firms and depending on their strength and ability to bargain, attempt to drive down prices with the result that margins available to producers are decreased. In markets that have many competitors of similar size and technology, this practice is common.

Based on the above, competitive advantage is gained through buying from many suppliers thus reducing a situation where the enterprise is held to ransom by a single supplier.

### **2.2.3 THREAT OF SUBSTITUTE PRODUCTS OR SERVICES**

Firms are constantly faced with the threat of customers substituting either brand or generic products of a particular brand due to changes in taste or changes in needs. Without constant market research these changes in the demand of goods or services will not be timeously identified to allow possible adjustment to be made and thereby the minimising of damage caused by the substitution. Hitt, Ireland and Hoskisson (1999: 68) maintain that in order to reduce the attractiveness of substitute products, organisations need to differentiate their products or services in terms of price, quality, after sales service or location. If they manage to do so they will maintain a competitive advantage over other competitors.

### **2.2.4 RIVALRY AMONG EXISTING COMPETITORS**

In industries that find themselves in situations where many firms are vying for a share of a specific market, the battle to differentiate themselves in order to gain a competitive advantage from competitors is intense. In the quest for differentiation firms may seek competitive advantage through one of the four generic strategies as identified by Porter (1990: 39) and detailed in Figure 2.2

**Figure 2.2: Generic Differentiation Strategies**

		COMPETITIVE ADVANTAGE	
		Lower Cost	Differentiation
COMPETITIVE SCOPE	Broad	<b>COST LEADERSHIP</b>	<b>DIFFERENTIATION</b>
	Target		
	Narrow	<b>COST FOCUS</b>	<b>FOCUSSED DIFFERENTIATION</b>
	Target		

Source: Adapted from Porter (1990: 39)

Figure 2.2 depicts a matrix showing the four generic differentiation strategies proposed by Porter (1990: 30). The horizontal axis is the continuum that shows the basis upon which the organisation is basing their competitive advantage. This competitive advantage may be derived from either low product cost or product differentiation. Product differentiation means that a producer offers a product that stands apart from others in that they offer one or more features that no other producer offers.

The vertical axis shows the scope of competition. This scope could either take the form of a broad target market or a narrow, highly segmented target market. Porter (1990: 40) continues that if a firm is to gain a competitive advantage, it must choose the type of competitive advantage it seeks to attain and the scope

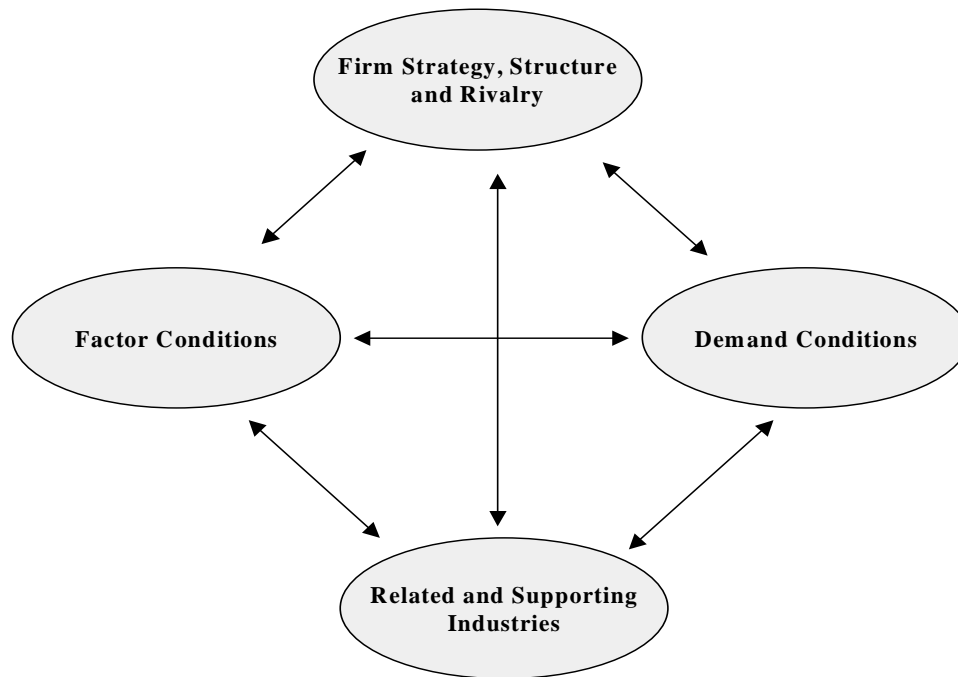
through which it can be attained and focus solely on the type and scope decided on. Firms adopting a course of action that attempts to pursue all the strategies simultaneously, or which find themselves stuck in the middle of the matrix, floundering in the inherent contradiction between each strategy, will find it is impossible to achieve any of the strategies at all. The results of the firms in this position would thus reflect mediocre or sub-standard performance.

### **2.2.5 PORTER'S DIAMOND**

Porter's Diamond suggests that there are inherent reasons why some nations are more competitive than others and why some industries within nations are more competitive than others. The home base of an organisation plays an important role in the organisation's achievement of global success. As seen in Figure 2.3, there are four basic factors that contribute to the organisation's competitive advantage resulting from their geographical position:

- Factor conditions such as human resources, physical resources, knowledge resources, capital resources and infrastructure;
- Demand conditions, which refer, to the demand for that product or service;
- Related and supporting industries, where the success of one particular industry can lead to a basis for advantage in a related industry;
- Firm strategy, structure and rivalry based on goals, strategies and manner of organisation in a specific region.

#### **Figure 2.3: Porter's Diamond**



**Source: Adapted from Johnson and Scholes (1999: 110)**

As far back as 1986, Porter reported a need to move away from the old paradigm. Since those days there have been major changes both in the world, through rapid globalisation, and in business, through the globalisation process being expedited through the advent of the internet and subsequently electronic business. These changes resulted in research being conducted by Schiro and Moore in 1999 and the results of that research are discussed below.

## **2.3 THE FORCES SHAPING FUTURE BUSINESS**

Schiro and Moore (1999: 2) state that the business world is becoming a stage in which change is acted out with industries dissolving and reforming as the

demands on them change due to the development of technology that often defies the imagination. The strengths needed to accomplish this and to deliver the end product required, are flexibility and adaptability, based on the capacity for learning quickly and implementing the knowledge gained, on an ongoing basis.

In the light of the above, business forces have been identified that virtually every organisation needs to address in order to shape the future of their business (Schiro and Moore, 1999: 2-37). The forces are listed and discussed below.

### **2.3.1 INDUSTRY CONVERGENCE**

Convergence is not a matter of vast impersonal forces that have been thrust on organisations, but the elimination of boundaries between industries through Internet based commerce and changing customer demands. Supporting these changes is the advent of large-scale efficiency based business combinations resulting from globalisation, deregulation, capital availability, the lowering of international trade barriers and the large scale privatisation of state owned organisations throughout the world.

In order to become successful in converging industries, organisations need to become more agile and flexible in redefining their business whilst focussing on their core competencies. Leaders of such organisations need to be able to act swiftly with their partners to add value to up and down stream activities.



### **2.3.2 E-BUSINESS**

The actions and strategies required to be implemented to survive in the new millennium will be analysed and commented on during the discussion to follow. The global trend indicates that e-commerce will play a critical role in the future trading of many organisations. The Internet is forcing most businesses to change the way that they do business, from providing basic information for private customers, to securing large data warehousing services for large corporations. According to Edwards et al (1995: 102) e-commerce can give businesses a leading edge if they utilise technology to create the advantage by identifying the advantages of it. Management will have to be committed in terms of funding and resources being made available.

Organisations' future strategies will have to include the enhancement of information technology and flexibility concerning their competitors' strategies, to which they must be able to adapt accordingly.

The National Ports Authority's initial strategy for strategic advantage can implement the following:

- Information sharing;
- Services trading;

- Sales promotion and advertising;
- Online digital content delivery;
- Electronic funds transfer;
- Transaction processing;
- Collaborative work interaction;
- Online sourcing;
- Procurement;
- Customer support.

Continual developments in e-business are being influenced by similar factors supporting the changes in industry listed above. Technology is at the heart of the creation of a new freedom and empowerment for individuals - as consumers, employees and entrepreneurs. This phenomenon, it is believed, will soon lead to the terms business and e-business becoming interchangeable. In the light of this, e-business will not be a tool that leads to a competitive advantage, but merely an entry requirement to participate in the specific area of business.

This will be achieved through the use of Internet applications to:

- Redefine business processes throughout the supply chain and supporting functions;
- Change conventional concepts and rules about strategic alliances, outsourcing, industry specialisation and customer relationships;

- Allow organisations profitably to combine dissimilar resources to develop and provide innovative products and services to diverse markets;
- Challenge every business to reinvent itself to be effective in an environment that operates at Internet speed;
- Allow the convenience of one stop shopping from a terminal for any article or service required.

### 2.3.2.1 THE E-COMMERCE EVOLUTION

The first phase of e-business has been building robust, reliable and high performance web sites that are easy enough for visitors to navigate. E-business intelligence technology, being the second phase, is where businesses are focussing to get the competitive advantage.

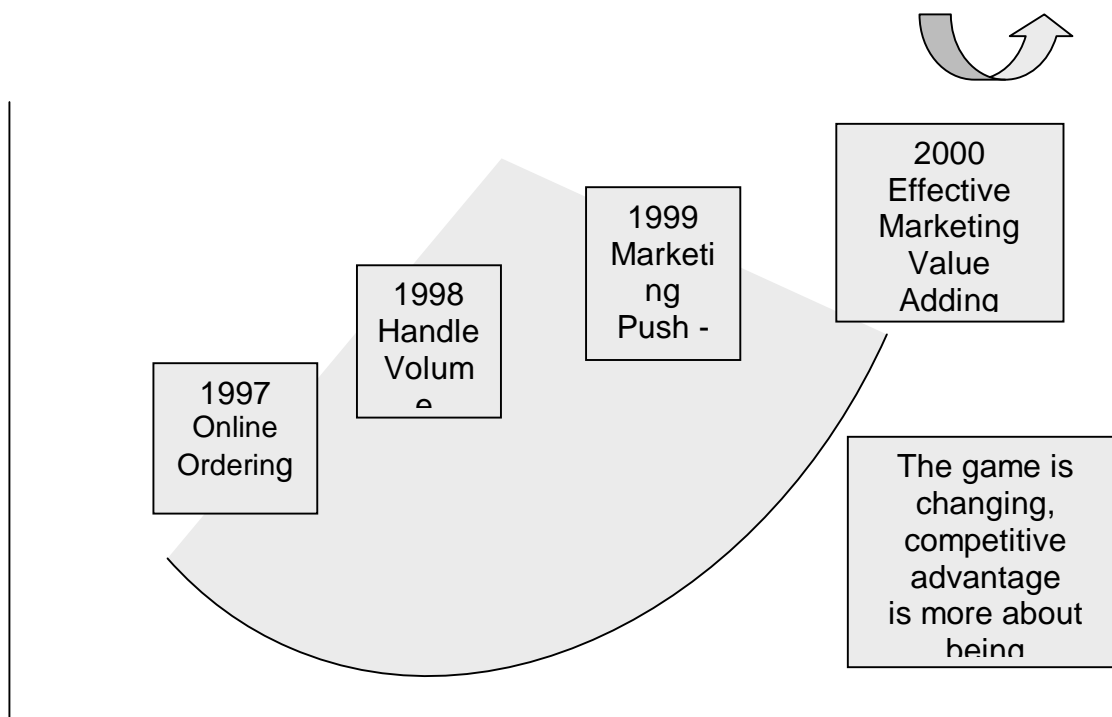
Phase 1: Getting up and running

- **1997 – Being unique** – primary focus is on offering online catalogues and taking basic orders.
- **1998 – Being available** – support large volumes and be available 24x7 with minimal downtime.
- **1999 – Being productive** – building affiliated partners, deploying basic personalisation.

## Phase 2: Getting smart

- 2000 – Being intelligent – focus on streamlining fulfillment, improving and automating customer service, customer relationship management and building closer relationships with suppliers. Deployment of intelligent e-business systems that incorporate analysis of transaction and customer profiles (Liataud, 2000: 172).

**Figure 2.4: Achieving Competitive Advantage Online**



Source: Liataud (2000: 172).

Figure 2.4 above indicates that the early work in the shift to online transactions in 1997 was mainly in the deployment of a system to interact with customers. The move was then to stabilise and to cater for the growth in the online market. The

redundancy of the systems and stability had been achieved and the next phase was to market the products online. The market had grown by the year 2000 and service was being moved to automation and being smart. This enabled business to capture a bigger market, but also get more information regarding competitors and their customers. It is this phase in which the strategic advantage can be effected. Benefits can range from reaching new potential customers to reducing paperwork, to lowering costs in inventory control.

Because of the wide applicability of enterprise business intelligence – intranets, extranets or e-business environments – the business benefits are numerous and frequently enhance the bottom line. There are four main categories:

- Lowering costs – applying activity based costing methods to identify hidden costs and missed opportunities. Users can design their own queries and reports, giving valuable information to the users when needed. Bringing real time intelligence to operational systems can bring great improvements to efficiency and therefore lower costs and increase quality of service.
- Increasing revenue – differentiate your services with access to valuable real time information and research assignments. It is also critical to have the best intelligence for market analysis. By empowering the sales force by giving them remote access to data. Web-enabled enterprise business intelligence systems give users the ability to drill into data to determine a host of strategic information to give them the edge over the competitors.

- Leveraging the investment in Enterprise Resource Planning (ERP) systems – automation of processes in helping to transform businesses into lean, agile operations.
- Improving internal communication – faster decision making and getting the solution to the floor. Developing a common language for the business and leading to goal alignment.
- Empowered users find imaginative new ways of making productive use of enterprise business intelligence.
- Educational systems will need to provide more training on how to perform the analytic process and understand filtering of data. This will remove the barrier of people's ability to understand and to analyse information correctly. Ultimately if an organisation wishes to be agile and competitive, it must not simply make decisions quickly, it must make the right decisions quickly. Smart, winning organisations will be those which invest in a combination of information systems infrastructure and their own human resources (Liautaud, 2000: 268).

### **2.3.3 KNOWLEDGE – BASED ECONOMY**

According to Marchand et al. (2000: 287), the Internet has moved from an electronic information exchange to a broad platform for strategic applications. This is a sure sign that we are entering into a new economy where basic resources are not land, raw materials or capital, but knowledge and intellect.

Unlike physical assets, knowledge assets are not subjected to laws of decreasing returns; indeed, with wider use, they increase in value.

E-business has significantly raised the value of information driven through new classes of technology and science, raising the expectations of consumers for knowledge-based products, management's need for better information, and hastening the foundation of a world economy and the shift away from tangible assets. These assets, such as capital, land and labour, are making way for intangible assets such as human capital and other intellectual assets. The management of these assets has become a critical issue in the business environment and has become a discipline that should not be ignored. In order for an organisation to achieve a competitive advantage, human capital needs to be developed in the application and the optimisation of the use of these tools. Knowledge assets in themselves are of limited value; the challenge is to translate expertise into actions that give a company differential advantage in the market place.

#### **2.3.4 REPORTING GLOBALLY**

The Internet has increased access to information and knowledge to all role players, twenty-four hours a day, seven days a week and fifty-two weeks a year. This has led to a demand for real-time information, total transparency thereof and a challenge to bundle this information into a standard format. Globalisation has

further pressurised the market to standardise reporting so that better collaboration can take place and so as to enhance the strategic advantage thereof. The challenge is enticing. Get employees to work together on-line to solve problems faster and become more responsive to customer needs.

### **2.3.5 RETAIN THE BEST PEOPLE FOR BEST RESULTS**

According to Loewen (1998: 11), the contribution of human intellect to business success is increasing. The time taken to get products out of people's imaginations and into the customers hands is shortening. Business guru Tom Peters points out that "Microsoft's only asset is the human imagination". In global business today, the most intense competition is not for capital or advanced technology; it is for talent to support the knowledge based economy. Thus the greatest rewards will go to those companies assembling the best array of human skills or human capital.

Today's environment encourages individuals who specialise in areas of interest and make unique contributions towards the value of their organisations, through continual learning. Organisations need to create employees with a good knowledge base and not only utilise employees to increase the bottom line. It must also be taken into consideration that employees will look to financial benefits as well as education and will consider companies with a career path to advanced skills, when being approached by competitors.



According to Pfeffer (1998: 64), a set of seven dimensions seems to characterise the following as producing profits through people:

- Employment security;
- Selecting and hiring of personnel;
- Self managed teams and decentralisation of decision making as basic principles of organisational design;
- Comparatively high compensation on organisational performance;
- Extensive training;
- Reduced status distinctions and barriers;
- Extensive sharing of information throughout the organisation.

The above dimensions make it more difficult for competitors to imitate the company and this will give the competitive advantage of sustained profitability.

The performance results from this advantage are the following:

- Innovation;
- Flexibility;
- Customer Service;
- Productivity;
- Cost Reduction;
- Learning and Skill Development.

### **2.3.6 BALANCING THE CORPORATE SCORECARD**

A number of companies are now adopting the Balanced Scorecard methodology to control the course of their strategy. The Balanced Scorecard is a business performance measurement system linked to a number of key performance indicators that go beyond the traditional financial measures of revenue and profitability.

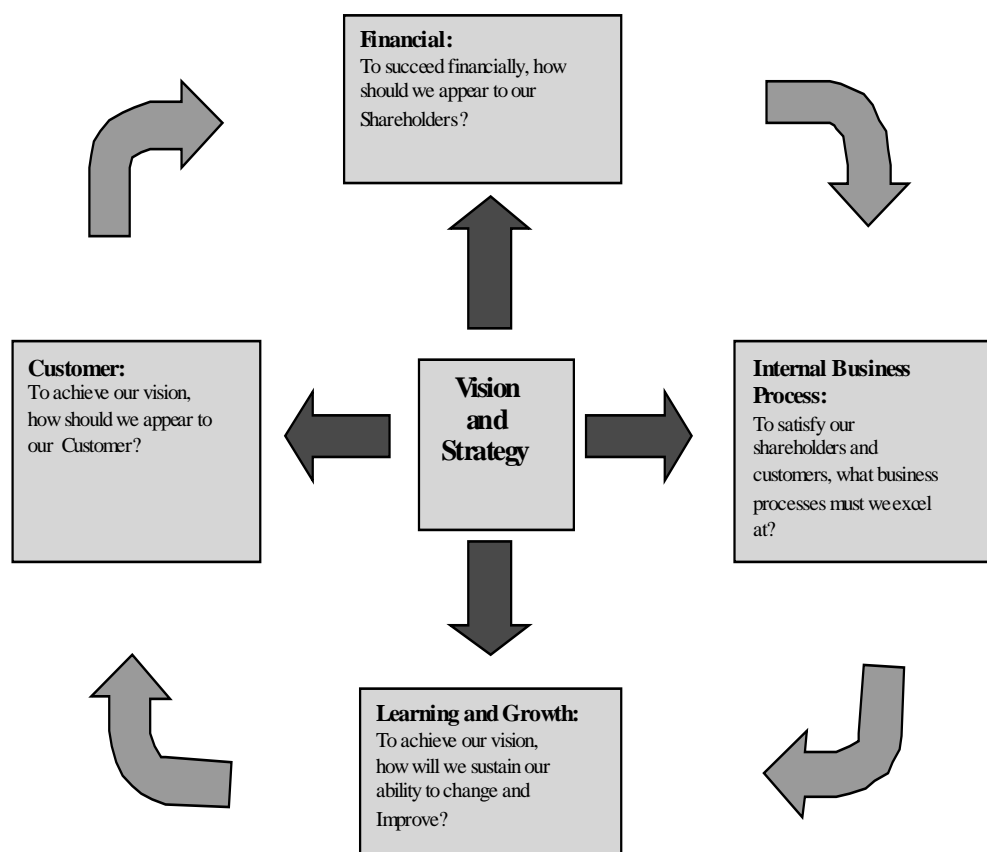
Kaplan and Norton explain, "The Balanced Scorecard retains traditional financial measures. But financial measures tell a story of past events, an adequate story for industrial age companies for which investments in long-term capabilities and customer relationships were not critical for success. These financial figures are inadequate, however, for guiding and evaluating the journey that information age companies must make to create future value through investment in customers, suppliers, employees, processes, technology and innovation".

The Balanced Scorecard suggests that an organisation be viewed from four perspectives:

- Learning and Growth;
- Business Processes;
- Customers;
- Financials.

The Balanced Scorecard approach has been recognised as one of the top management techniques. It is very useful as it forces a company to establish measures and base decisions on fact, not gut feel and it drives an executive team to agree at a strategic level on what should be measured. This tool can be implemented to the lowest levels in the organisation if the employees are empowered by way of education and training. Figure 2.5 below indicates the model that can be implemented.

**Figure 2.5: The Balanced Scorecard Model**



**Source: Liautaud (2000: 109)**

## **2.4 SIMILARITIES BETWEEN PORTER, SCHIRO AND MOORE**

It is evident from the above factors influencing business that a similarity in the acquisition of knowledge is a factor in the future success of organisations. The retention of staff with high levels of knowledge and skills will become an essential ingredient for the achievement of competitive advantage. As far back as 1990, Porter was advocating the importance of human capital and other intangible assets in achieving a competitive advantage. The discussion above has indicated that companies need to make use of technology to make informed decisions quickly in order to gain a competitive advantage. The true advantage lies with the companies that take full advantage of the Internet based technologies available, for example e-business.

Wolff (1999: 2) mentions that Drucker states that there is no one correct structure in an organisation anymore. Leadership will have to select a structure for the particular task and mission at hand. It will also mean that organisations will have to be flexible enough to adapt to the occasion. Schiro and Moore (1999: 2-37) reinforce this view that human capital is an important asset of an organisation and without constant development through fostering a learning culture, leaders will not meet the changing roles for management in the future.

Wolff (1999: 3-5) also implies that management will spend less time on traditional activities and less important operational decisions, but more time will be spent on the some of the following issues:

- Establishing and operating the creation of knowledge and the flows of information across extended organisations;
- The guarding of corporate intangibles;
- Attracting, retaining and growing talent;
- Co-developing aspirations and accountabilities.

Organisations will need to move to the next level from being a learning organisation to becoming a teaching organisation where it possesses a strong ability to pass information from one employee to another to achieve the objective mentioned above. The organisation's leadership will be the most powerful teacher in that organisation, driving information down through the various levels to the lowest point in the organisation. With the demand for employees with increasing levels of skills, human capital is in short supply and as such those organisations that have invested in developing their employees are building a supply of human capital.

(Marriot, 2000:1-6).

There is an evolving demand for skills in the economy, states Greenspan (2000: 418). This is due to the accelerated expansion of computer and information technology. The cumulative innovations of the past fifty years have resulted in

vast differences in the way that goods and services are produced and the way that they are marketed. This change has resulted in a new set of skills linked to the technology of the new economy.

Greenspan ( 2000: 420) further states that the continual process of change continues and that constant innovation is required to remain competitive. In order to achieve the required levels of conceptual skills, considerable investment in human capital is needed. A shift will have to take place from learning at schools or colleges to equip one for one's career, to a situation of lifelong learning in order to keep abreast of today's rapidly changing technology. The skills that are presently required are not only based on technical skills but also the ability to create, analyse and transform information in order to interact effectively with others.

## **2.5 SUMMARY**

From the above it is clear that the focus on human capital and the accompanying intangible assets has increased and is vital to the attainment of sustainable competitive advantage. The question posed is, however, how do organisations achieve this level of competitive advantage given the shortage of skills and knowledge?

The learning organisation is built upon an assumption of competence that is supported by four other qualities or characteristics: curiosity, forgiveness, trust and togetherness. Porter (1998: 81) attempts to answer this in stating that many organisations have the benefit of a pool of specialised, experienced employees that have developed personal relationships and trust in the community that promotes the flow of information. Togetherness, according to Porter (1998: 83), promotes innovation through the sharing of information regarding technology and processes leading to a constant comparison, peer pressure, not to fall behind the other members of the group and the desire to stand out amongst peers. This leads to the high levels of innovation that are required to remain competitive.

In the light of this, current and future trends in development of human capital will be discussed in the next chapter in order to understand how they contribute to the sustainable levels of competitive advantage.

## CHAPTER THREE

### DEVELOPING A GENERIC MODEL

#### 3.1 INTRODUCTION

In the previous chapter an overview was given of various models of being competitive utilising human capital. This chapter will expand on this framework, developing a more detailed model, drawing on practical experience and applying it to the previous chapter's literature.

While the rejection of apartheid created many new opportunities, jobs went unfilled due to a lack of skilled workers. In addition, the requisite skills began to change, reflecting the new economy and its appetite for knowledge workers.

According to Wagner (2001) other challenges that are of strategic importance and that businesses are faced with are:

- Globalisation – increased competition and reduced tariffs;
- Poor economic growth;
- New labour legislation;
- Adversarial workplace relations;
- Few shared strategies for success;



- Losing talent to outside organisations;
- HIV cutting many lives short.

In 1990, the South African Transport Services (SATS) was corporatised to form Transnet Limited. For the first five years the operations of the company were organised into semi-autonomous divisions and business units, each operating in niche markets within the broader transport sector.

Minister Stella Sigcau, in a parliamentary media briefing on 16 February 1999 stated, “The major parastatals (Transnet) operated in monopolistic and sheltered environments and thus were not able to survive on their own without protection” ([www.gov.za/speeches/briefings99/enterprises](http://www.gov.za/speeches/briefings99/enterprises)).

To meet these challenges, according to the minister, the Ministry of Public Enterprises embarked on a five-point programme, which may be outlined under the following headings:

- Restructuring;
- Transformation;
- Empowerment;
- Good governance;
- Reconstruction development and social upliftment.

The minister further stated: “Our objectives are more ambitious and all embracing than simply selling off state assets. They include creating competitiveness and technically advanced companies, attracting investment, improving service delivery and skills development, and attracting international investors and role players to South Africa from a broad spectrum of activities” ([www.gov.za/speeches/briefings99/enterprises](http://www.gov.za/speeches/briefings99/enterprises)).

With this in mind the author will evaluate the current scenario within the National Ports Authority and will propose a future way forward.

### **3.2 TRAINING AND DEVELOPMENT IN PERSPECTIVE**

Employee training and development is seen as a key factor in meeting the employer’s strategic business and operational goals. Carrel et al. (1998: 308) outline the following questions that face management:

- Which employees should be trained?
- In what areas?
- By what method?
- By whom?
- When or how often?
- What outcomes should be expected?

- What will be the cost?

A comprehensive training policy will ensure that a company has a successful roadmap to answering the above questions. This document must also be aligned with the company's vision and strategic objectives in achieving strategic advantage. The policy must remain a living document, which is updated with the latest trends regarding training and development and benchmarked against other successful implementations.

Furthermore Carrel et al. (1998: 310) have identified seven major purposes of a training and development programme:

- Improve performance;
- Update employee skills;
- Avoid managerial obsolescence;
- Solve organisational problems;
- Orient new employees;
- Prepare for promotion and succession planning;
- Satisfy personal growth needs.

While priorities change and new issues confront organisations, it is of utmost importance that the focus on the training and development of employees is not

put on hold. There must be regular feedback to management regarding the status of the above in the organisation.

The training systems model below illustrates the three major phases of training:

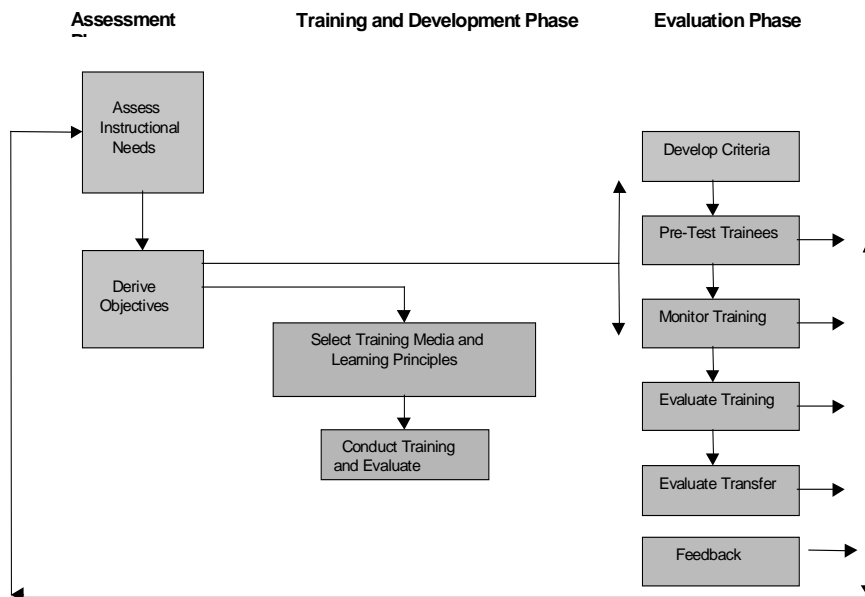
- Assessment;
- Training and development;
- Evaluation.

It is important to start the process in a structured manner by doing a needs analysis with the employee and line manager so that both parties needs can be incorporated into the final solution. Once the criteria have been agreed upon it is important to evaluate the employee to ensure that one grades him/her into the correct training session. All training must be monitored and continual feedback is required from the employee and training coordinator as to the status of the training and development.

The line manager must also realise that the employee will need continual support and encouragement during the training phase. Information developed during the evaluation phase provides feedback and therefore new input to the assessment phase. This initiates a new cycle of assessment, training and development and evaluation.

A general systems model of the training and development process is shown in Figure 3.1.

**Figure 3.1: Training Systems Model**



**Source: Carrel et al. (1998: 312)**

Information needed during the evaluation phase provides feedback and therefore new input to the assessment phase. This initiates a new cycle of assessment, training and development and evaluation.

Cascio (1995: 250) states that the following characteristics seem to distinguish companies with the most effective training practices from each other:

- Top management is committed to training and development; training is part of their corporate culture;
- Training is tied to business strategy and objectives and is linked to results;
- A comprehensive, systematic approach to training exists; training and retraining are done at all levels on a continuous, ongoing basis;
- There is a commitment to investing the necessary resources, to provide sufficient time and money for training.

If companies can implement the above recommendations they will experience a more motivated and committed staff. People want to feel supported and special and this commitment from top management will help the company to accomplish its goals.

According to Chawala and Renesch (1995: 470) for a learning organisation to take root, it must stop holding people accountable for mistake-free performance, and begin holding them accountable for learning from their mistakes. If learning results from challenging old ideas and processes and trying new ways to do everything, then an organisation is doing more and change must occur at a constant pace. A support system is of utmost importance to ensure trust and understanding of the sheer pace of speed learning. Table 3.1 represents a comparative analysis of the more traditional learning method versus a more progressive learning organisation.

**Table 3.1: Traditional Training versus the Learning Organisation**

<b>TRADITIONAL TRAINING</b>	<b>LEARNING ORGANISATION</b>
<ul style="list-style-type: none"> <li>• Teaching Content</li> <li>• Classroom Focussed</li> <li>• Teacher Centered</li> <li>• Belongs to Training Department</li> <li>• Activity Centered</li> <li>• Training Specialist</li> </ul>	<ul style="list-style-type: none"> <li>• Learning Processes</li> <li>• Workplace Focussed</li> <li>• Learner Centered</li> <li>• Belongs to each Associate</li> <li>• Outcome Based</li> <li>• Learning Consultants</li> </ul>

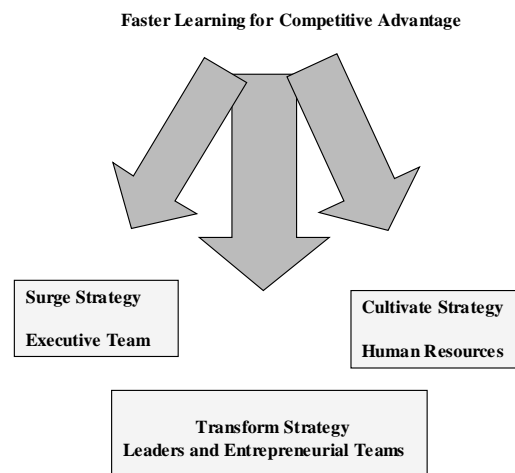
**Source: Chawala and Renesch (1995: 472)**

According to Chawala and Renesch (1995: 337) the only way to sustain competitive advantage is to ensure your organisation is learning faster than the competition. The ability to learn faster becomes more significant as the organisations become more knowledge based.

The first step is to create a stimulating climate for faster learning. Openness is a necessary condition for faster learning. Three different but complementary strategies are encompassed within the Faster Learning Organisation as indicated in Figure 3.2 below. They are:

- The Surge Strategy – short term and where one to three key leverage points are identified, coupled with fast learning, this allows the company to surge ahead.
- The Cultivate Strategy – creating a profile of a fast learner and then developing employees to that profile.
- The Transform Strategy – focusses on a range of methods to accelerate everyone’s learning in the organisation.

**Figure 3.2: Faster Learning Organisation Model**



**Source: Chawala and Renesch (1995: 338)**

Faster learning will benefit the National Ports Authority as part of their commitment to the main stakeholder’s equity and transformation of the company.



This strategy will demand competence, reflection and transformation that can only thrive if the leaders are challenging and supportive.

### **3.3 PORTER'S VIEW OF LABOUR IN COMPETITIVENESS**

Porter (1986: 4) states that traditional sources of competitive advantage are labour costs, natural resources and access to technology. However, the introduction of new technologies is making the cost of direct labour decrease and this has resulted in many nations with low labour costs becoming competent in the production of advanced products.

Porter (1998: 78) states that competition has become far more dynamic and has moved from the old paradigm of input cost disadvantages through global sourcing to the achievement of advantage through the more productive use of inputs through continual innovation.

According to Porter (1998: 83), one should promote innovation through the sharing of information regarding technology, components and machinery availability and utilise service and marketing concepts through the close proximity of sites promoting ease of visits and visibility of innovation. The pressure resulting from the availability of information leads to constant comparison, peer pressure, not to fall behind and the desire to stand out amongst peers which leads to high levels of innovation required to remain competitive. Organisations,

according to Porter (1998: 88) draw on universities and other institutions, offering scholarships and internships to local youth and with the help of local government work together to improve the local labour force.

### **3.4 DOUWES DEKKER'S VIEW OF COMPETITIVENESS IN SOUTH AFRICA**

Douwes Decker (1998: 3) defines competitiveness as the "holistic approach of integrating the social and economical dimensions of development". This approach is not achieved through the erosion of worker rights or retrenchments. The process of achieving competitiveness, according to Douwes Decker (1998: 3), is fulfilled by gaining efficiency through satisfying the needs of all groups in society. Thus, achieving world class manufacturing standards becomes a product of the National Economic Development Labour Council (NEDLAC) process, leading to institution building based on industrial democracy.

Douwes Decker (1998: 57) states that basic adult education has become a central focus in South Africa. Agreements in various sectors have been reached with regard to adult basic education and training agreements to improve literacy. According to Douwes Decker (1998: 58) it is critical to identify the difference between operational knowledge and cognitive knowledge and conceptual problem solving. It is thus noted that Douwes Decker (1998: 58) lists Huiskamp's three requirements for an employee to gain knowledge:

- Operational knowledge in a number of areas;
- An understanding of the nature of business in which they are engaged and the ability to solve problems in unexpected situations;
- Ability to demonstrate more customer orientated, creative (innovative), cooperative, punctual and loyal behaviour.

A further challenge for the National Ports Authority is the issue of employment equity. Douwes Decker (1998: 59) states that this is an integral part of the development of the labour market as legislation will form an implicit quota for the previously disadvantaged. These include those previously disadvantaged on the grounds of ethnic, gender and disability dimensions. From this Douwes Decker (1998: 59) states that "The positive nature of these developments is reflected in the emphasis on 'managing cultural diversity'".

### **3.5 HUMAN, BLUEN AND DAVIES - FROM STRATEGY TO EQUITY**

Human, Bluen and Davies (1999: 71) point out that managers need to be informed of their duties in terms of the organisational equity policy, as they need to ensure that training is provided in areas where particular skills are lacking. Managers are required to take responsibility for the development of their people through the setting of measurable objectives and they will be evaluated on these

objectives on a biannual basis. These objectives should be linked to a reward system with real incentives for achieving them. Human et al. (1999: 71) continues that managers should be expected to provide plans for the workforce, succession and careers of employees in their areas. The objectives of junior managers will be related to the afore-mentioned objectives.

In addition to this designated group, members should be identified and assessed with developmental and promotional prospects in mind. It is essential that the maximum use of developmental opportunities be made and that regular discussions are held with those identified to ensure that optimum use of developmental opportunities is made and that regular discussions are held with those identified to ensure optimum use of promotional opportunities.

Human et al. (1999: 74-88) outline the roles and responsibilities of the chief executive, functional heads, line managers, non-managerial staff and human resource department personnel when implementing an employment equity strategy. They continue that in addition to the outlining of these roles and responsibilities, they should be communicated to all concerned in writing, but also verbally in order to ensure that assistance may be offered in planning the requirements for each respective area.

### **3.6 OBLIGATIONS IN TERMS OF THE EMPLOYMENT EQUITY ACT**

In terms of the Employment Equity Act No. 55 of 1998, employers are compelled to:

- Promote equality and true democracy;
- Eliminate unfair discrimination in employment;
- Ensure the implementation of employment equity to redress the effects of discrimination;
- Achieve a diverse workforce representative of all South Africans whilst promoting economic development and efficiency in the workforce;
- Give effect to the obligations in terms of South Africa's membership to the International Labour Organisation.

### **3.7 OBLIGATIONS IN TERMS OF THE SKILLS DEVELOPMENT ACT**

In terms of the above Act, employers are accountable for the implementation of this Act. This accountability should be cascaded down to the line managers to achieve the required objective. The purpose of this act is to promote equal opportunity and fair treatment through the elimination of unfair discrimination. It also implements affirmative action measures to redress the disadvantages in

employment experienced by disadvantaged groups. This will ensure equitable representation in all occupational categories and levels in the workplace. With reference to the Skills Development Act a clear education, training and development policy needs to be implemented.

Organisations will seek to achieve the following alignment with the Skills Development Act No. 97 of 1998 objectives:

- Provide employees with the requisite competencies necessary to achieve current and future business objectives (knowledge, skills and attitudes);
- Promote a culture of self-development and life long learning;
- Encourage employees to develop to their full potential through provision of mechanisms such as mentorship, skills audit, skills planning and career management;
- Contribute to productivity enhancement within the company;
- Facilitate achievement of Employment Equity goals;
- Increase the competency base of employees through multi-skilling.

### **3.8 ORGANISATIONAL ENVIRONMENT AND SKILLS PLAN**

The National Ports Authority has embarked on a development plan in line with the statement made by the Minister of Public Enterprises, that the company had to become competitive and improve service delivery and skills development.

Figure 3.3 depicts the flow of the development plan that has been implemented in the various ports in South Africa.

The first stage in the cycle is the job profiling and this is aligned to the mission of the department and what the outputs would be for that specific job. After the profile has been documented, a skills audit is done to measure whether the employee has the competencies to perform the tasks required. During the competency profiling the following attributes would be looked at:

- Knowledge;
- Skills;
- Attitudes;
- Capabilities.

Each of these attributes will be discussed with the employee and line manager for total transparency and participation of both parties before a final profile is compiled. Once the profile is completed this will be used as a generic guideline for future competency profiles.

After the audit has been completed, the gap analysis is executed and together with the employee an individual development plan is formulated. The following will be taken into consideration when the plan is documented:

- What training and development has taken place previously?
- What skills are required currently to be able to produce the outputs of the job?

- What development is necessary for the next levels?
  - Present scenario;
  - One year development plan;
  - Three-year development plan.

The competency profile will be a helpful guide to establish what the immediate requirement for the training plan will be. This plan must ensure that it will assist the employee to achieve the job outputs. The longer term planning can be done utilising the employee's career path plan and individual development plan.

According to the human resource department, the latest skills audit and gap analysis have indicated the following findings:

- Areas of weakness identified:
  - Technical;
  - Operational;
  - Supervisory level;
- Functional areas in finance ;
- Interpersonal skills;
- Age group of the above employees – average 45 years and older;
- Low ABET level in the port – 50 percent of workforce uneducated and only 10 percent educated to an acceptable level;
- Equity in the female middle management level;
- Traditionally only 5 percent females in the workforce;

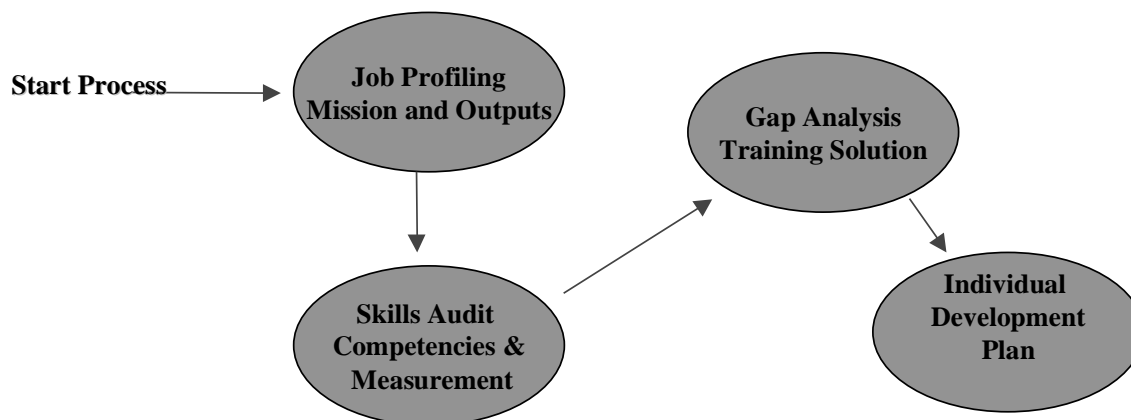


- Succession planning not implemented;
- Middle management level not in line with demographics;
- Commitment of managers in the development of subordinates .

When evaluating the above areas of weakness, it would be advisable for the National Ports Authority to embark on a comprehensive training schedule with an institution for those areas that need immediate improvement. In order for a company to operate effectively, adequate skilled resources need to be available at the correct time. Johnson and Scholes (1997: 415) state that resources need to be available to sustain continued improvement, so the investment in resources is an investment in the future. This does not mean that there must be unlimited resources, but that resources need to be skilled and stretched so that an organisation may gain competitive advantage.

The current development plan is shown in Figure 3.3 below. The scope of the plan is to align the training with business needs. This plan also needs to address the shortages in the skills area and where more specialised training needs to take place, especially in the operational areas where training can be specific to ports.

**Figure 3.3: National Ports Authority Development Plan**

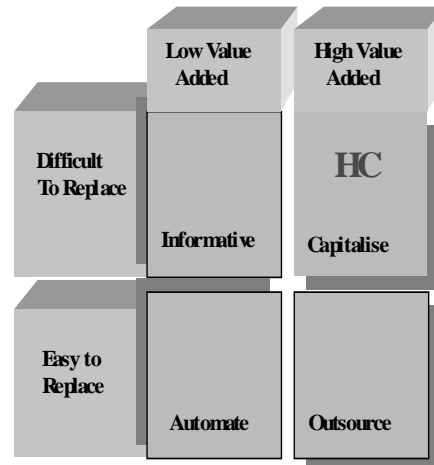


Source: Human Resource Department National Ports Authority (2001)

### **3.9 KNOWLEDGE MANAGEMENT CAPTURED**

Human capital cannot be owned by the organisation. It is personal and it leaves the company every evening when the employees go home. Even though the company does not own its human capital, it can tie it more or less tightly to the company, e.g. through incentive programmes and social structures. Hjertzen and Toll (1997: 33) point out that to see the human capital you must first identify what knowledge is important to the company. Not all employees are a part of the human capital and not all their knowledge either. There is no need to measure knowledge that is of no use to the company.

**Figure 3.4: Graph to Categorise Employees**



**Source: Hjertzen and Toll (1997: 33)**

Figure 3.4 categorises the employees in a two dimensional graph. People with high value adding services, that are difficult to replace, can be found in the upper-right hand corner of the grid. It is in this area of the grid where value adding human capital can be found. This area is certainly where the competitive advantage is moulded. The activities performed by the other employees may either be outsourced or automated or the employees should be trained to add more value. Organisations must take note that, although all employees don't fit into the high value grid, it does not mean that they cannot be retrained. Some employees that have been retrained have excelled in their new area of responsibility. Companies have to realise that to be competitive in the global village they have to have a change in mindset from a production organisation to a knowledge organisation. Table 1 below compares the two types of organisations.

**Table 3.2: Comparative Table of Production versus Knowledge Organisations**

<b>20<sup>TH</sup> CENTURY PRODUCTION ORGANISATION</b>	<b>21<sup>ST</sup> CENTURY KNOWLEDGE ORGANISATION</b>
Labour based workforce: <ul style="list-style-type: none"> <li>• Where Production is King</li> <li>• Knowledge functionally driven, personal silos</li> <li>• Passion for order</li> <li>• Appointed leaders</li> <li>• Centralised, vertical command, imposed control</li> <li>• Regional competitor</li> </ul>	Knowledge based workforce: <ul style="list-style-type: none"> <li>• Where 80 % of jobs are cerebral</li> <li>• Where customer is king</li> <li>• Information is used as competitive weapon</li> <li>• Knowledge is shared, linked across functions, stakeholders, processes</li> <li>• Passion for diversity, synergy</li> <li>• Natural leaders</li> <li>• Self management, lateral teamwork</li> <li>• Global competitor</li> </ul>

Source: Cap Gemini (2000: 35)

Many organisations including the National Ports Authority are realising that in order to transform they are also losing valuable knowledge. Optimal use of knowledge is then one important issue since it is widely claimed that knowledge is the companies' most important asset today and in the future.

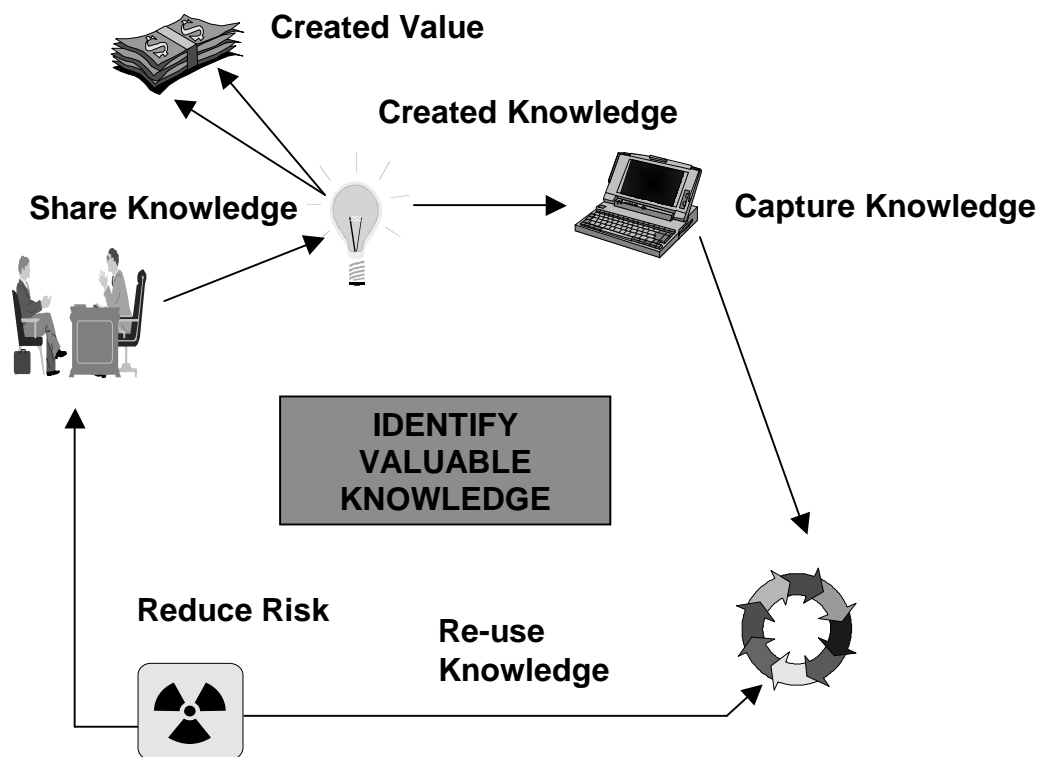
Definitions are different but they all echo some common purposes of Knowledge Management and they are listed below:

- Creating knowledge, i.e. Knowledge Management, should support innovation;
- Sharing and recycling knowledge;
- Capturing - turning personal knowledge into organisational knowledge;

- Reducing risk of losing valuable knowledge;
- Creating value from knowledge.

In order to give a clearer understanding of the definition above, Figure 3.5 depicts the knowledge process. The picture shows the main components of knowledge management and how they create value, which then leads to profit (Hjertzen and Toll, 1997: 84). This process can easily be implemented with the use of technology. If a company decides to implement this concept, it is important that a project coordinator be appointed to ensure that the process is implemented correctly and that the process is a continuous one.

**Figure 3.5: The Knowledge Process**

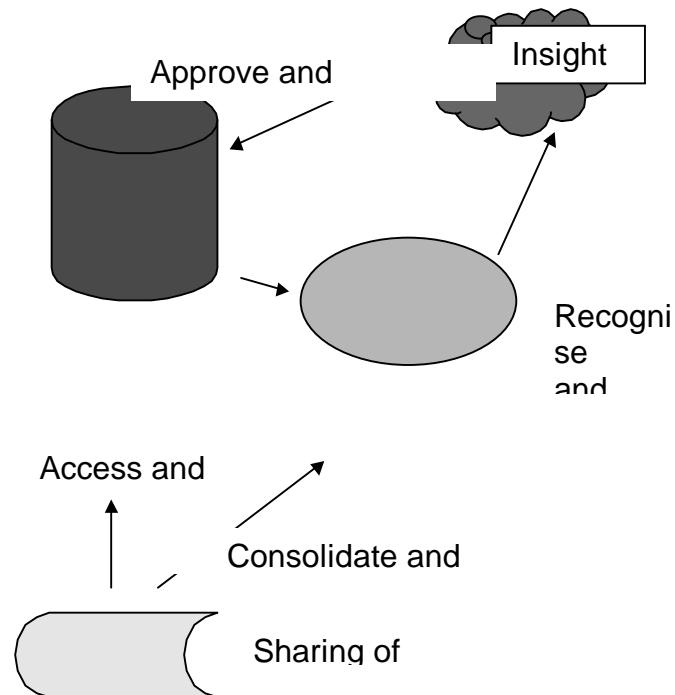


Source: Adapted from Hjertzen and Toll (2000: 84)

### 3.9.1 THE LEARNING LOOP

It was identified that the National Ports Authority has a problem concerning the age of the workforce in certain areas regarding losing knowledge. It is therefore critical that the transfer of knowledge is captured into a database as shown in figure 3.6. The model does stress the importance of direct sharing of knowledge between people and the importance of storage. This concept ties in with the knowledge management factor discussed previously.

**Figure 3.6: The Recurring Learning Loop**



Source: Adapted from capgemini.com

This model depicts the importance of sharing information with others, as well as capturing it into an accessible database for real time information and future reference. For this process to be successful all employees and management must be committed to imparting information to others, be it to people who require the information or to the person capturing information for the database. This database can be Intranet bases and therefore accessible to the workforce.

### **3.10 BALANCED SCORECARD COUPLED TO KEY PERFORMANCE**

The Balanced Scorecard develops and combines monetary and non-monetary measures so that they can be used as a guide for short-term management in striving towards long-term visions and strategies. By looking at, and measuring, the company from four different perspectives - financial, customer, internal and innovation - and connecting them to three dimensions of time - yesterday, today, and tomorrow - we can follow how today's actions will affect future performance.

Financial results will only reflect what we did right or wrong yesterday, not how we will cope with the future. The non-financial measures in the other perspectives, hopefully, will. There are two things that we should adopt from the Balanced Scorecard:

- Both financial and non-financial measures may be useful;

- The measures should indicate today what we need to do to improve results tomorrow;

In the models above, we see these two implications in the form of value creation and knowledge flows. The value creation arrows are ultimately what an organisation will want to influence. In order to achieve this, we must increase the knowledge flow between employees as well as capture this knowledge into a database.

The objectives in the learning and growth perspective are the drivers for achieving excellent outcomes in the other three scorecard perspectives. According to Kaplan and Norton (1996: 127) their experience has revealed three principal categories for the learning and growth perspective:

- Employee capabilities;
- Information systems capabilities;
- Motivation, empowerment and alignment;

The National Ports Authority has started to implement its skills development plan and by linking it with the balanced scorecard, it can achieve its results more quickly. According to Kaplan and Norton (1996: 213) the balanced scorecard can make a unique contribution to companies' objectives since it is based on a performance model that identifies drivers of strategy at the highest level.



Because financial compensation is a powerful lever, companies can tie their compensation policy to scorecard measures.

The National Ports Authority can link a percentage of compensation directly to a training and development plan, equity and affirmation action outputs. The transfer of knowledge and the capturing thereof can also be linked to the balanced scorecard. Taking into consideration the knowledge that is lost due to retirement, packages and resignations, a proposal is made where by a group of mentors are situated in a pool, that will transfer skills to the areas most needed. It would be ideal to place employees that have the ability to transfer skills and that have decided to finish up with the company. For the last six to twelve months of their time with the company they could be utilised as mentors.

According to Marriot (2001) management must take into consideration that plans can be put into place, but there are a few other considerations to keep in mind:

- The first step in retaining a good employee is hiring the right person.
- Money is just one component of value and companies have to realise that they have to start offering the whole package – a good price and good product.
- A caring workplace is a bottom-line issue – when employees come to work, there's no telling what problems they face at home. They come to work and feel safe, secure and welcome.

- Promote from within – it has proven to be a powerful tool for recruitment and retention.
- If branding products is so important, then brand employment as well.

### **3.11 E-BUSINESS AND ENTERPRISE RESOURCE PLANNING**

Liautaud (2000: 4) states that the Internet economy is revolutionising the world – in business, in governments and in society at large. New rules are being written before the ink on yesterday's rules are dry. Competition is intensifying and radically new markets – business-to-business - are swiftly reshaping nearly every industry. It is imperative for companies in virtually all industries to empower decision-makers to obtain quick answers to their business questions by accessing immediately the information they need. The effective sharing, distillation and analysis of information among an array of departments – customer relationship, sales, product planning, marketing and finance for example - coalesces into an enterprise wide intelligence that is greater than the sum of its informational parts.

The situation is slowly changing as organisations are beginning to realise that information is the currency of the new economy. Never before has data been probed, sliced, skewered and diced to assess trends and anomalies. An example of this could be:

- A dot com uses e-business intelligence to assess the strengths and weaknesses of its Internet sales and marketing;
- A financial institution uses e-business intelligence to track and reduce customer exits and entries;
- A manufacturer uses e-business intelligence to assist in quality control of its product;
- A supplies distributor uses e-business intelligence to give its customers a means of analysing purchases and delivery patterns.

The National Ports Authority has realised that to compete locally and globally the above information must be readily available. The Information Technology and Systems department of the National Ports Authority has begun to implement an Enterprise Resource Planning system to ensure that they and Transnet meet its objectives and goals.

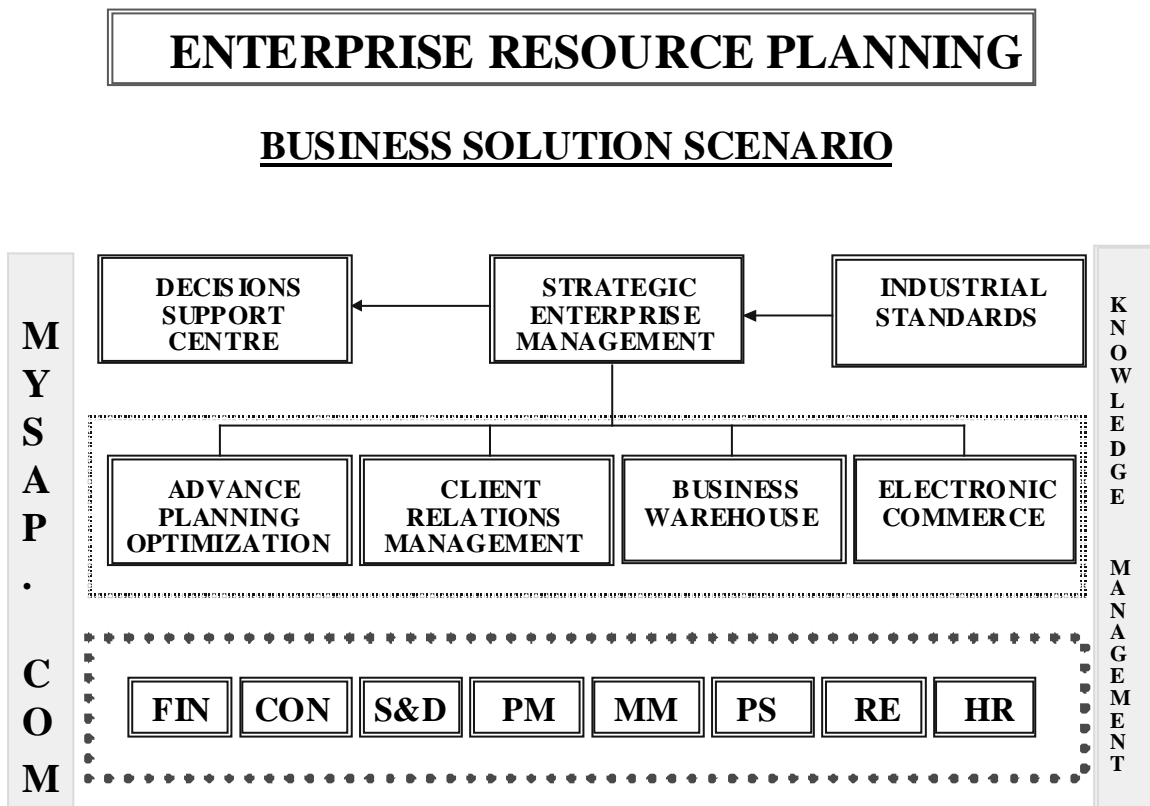
The following is a brief outline of the system:

- NPA is currently implementing the MYSAP.COM suite of the system;
- MYSAP.COM provides for a wall-to-wall range of modules to create a homogeneous environment;
- The focus of the current phase of the project is the implementation of the SAP R\3 system;

- The SAP R\3 forms the backbone of an office environment; hence the name back office systems;

An Enterprise Resource Planning system consists of software that manages the core business processes such as payroll, accounting, human resources, manufacturing, sales and distribution. The software constitutes the backbone of a corporate system serving as a central repository for data used by the entire business. The technical architecture of ERP's makes it easier to support and to integrate with other systems. All applications of an Enterprise Resource Planning system suite are integrated and therefore share a common set of data stored in a control repository. The suite also enables the buying and selling of products over the Internet. It allows business partners to have access to back end systems for information sharing. Business intelligence for decision support and monitoring customer lead trends are easily integrated into the above systems. Figure 3.7 below indicates the integration of the different modules.

Figure 3.7: Business Solution for the National Ports Authority



Source: Adapted from the National Ports Authority IT&S Strategic Charter (2001)

Figure 3.7 illustrates the modules in the dotted red line, which constitute the base for the SAP/R3 system. This will be the foundation on which the entire system will be sitting, being mainly the financial modules. All the non-SAP systems will have access to the back office through integration to ensure online viewing of information. From the illustration it can be seen that the Knowledge Management module has been added as part of the strategic positioning, which can be integrated into the solution model. If this module is implemented then the skills

and knowledge within the company can be captured into this database. The MySAP.com module has an integrated e-commerce solution, which can be implemented to ensure that the National Ports Authority can position itself in the e-business area.

### **3.12 SUMMARY**

This chapter has attempted to consider the various options that can lead to strategic advantage utilising human capital and other technological tools. It is evident that training and development can add value to the strategic objectives of the organisation if the business and leadership are supportive and committed to the process. The golden thread in this process lies in the integration of the training and development plan, linked to knowledge management and driven by the balanced scorecard. Leadership will have to make resources available, setting the correct reward systems in place for this to happen.

The next chapter will be the empirical study, in which components of the model will be tested amongst role players who have been in the field of training and development within the organisation.

## **CHAPTER FOUR**

# **THE EMPIRICAL STUDY, METHODS USED AND ANALYSIS OF DATA**

### **4.1 INTRODUCTION**

In this chapter the method used to implement the empirical study will be discussed in detail. The main problem and sub-problems will be reviewed and the manner in which these problems are solved will be offered.

The results will be tabulated for each question posed to the respondents and conclusions will be drawn for each set of results. This information will be used in the combination of the two sources of information, namely, the literature study and empirical study. This will lead to the establishment of a final model.

### **4.2 RESEARCH DESIGN**

Allison, O'Sullivan, Owen, Rice, Rothwell and Saunders (1996: 4) define research as a systematic enquiry that is reported in a form that allows the research methods and outcomes to be accessible to others. They continue that research is concerned with seeking solutions to problems or answers to

questions. With this in mind, the research design for this study was broken down into a main problem, with three sub-problems. The main problem is:

**What strategy does the National Ports Authority need to adopt to establish human capital as a core asset, leading to a competitive advantage in the local and global regulatory market?**

Following on from the main problem, three sub-problems were identified to assist with the solution to the main problem, namely:

- What does the literature reveal as ways to enhance competitive advantage in the National Ports Authorities?
- What steps does the National Ports Authority need to take to develop workforce knowledge and skills as a core asset?
- What do knowledgeable people feel are ways to develop workforce knowledge and skills as a core asset?

The procedure used to solve the main problem and the sub-problems was as follows:

- In Chapter Two a literature study was conducted of models that give organisations a competitive advantage over their competitors. This determines what leads to competitiveness in order to enable the researcher to



develop a proposed model of factors promoting the utilisation of human capital as the competitive advantage.

- In Chapter Three the discussion continues in more detail regarding a model for strategic advantage. The discussion also covers legislation that affects the organisation.
- In order to resolve sub-problem three, namely – what do knowledgeable people believe is a competitive advantage – a questionnaire based on chapter three and four was compiled.
- Finally, the results gained through the survey were analysed and used to adapt, where necessary, the model of factors promoting competitiveness.

### **4.3 PLANNING THE EMPIRICAL STUDY**

The empirical study was conducted by means of interviews, with the use of a questionnaire developed from the literature study. The results of the questionnaire were then statistically analysed. The process followed during the empirical study is set out below.

#### **4.3.1 THE QUESTIONNAIRE**

Leedy (1997: 191) states that a common instrument for observing data beyond the physical reach of the observer is the questionnaire. As stated above, the

questionnaire (see annexure 2) was developed using information obtained from the literature study in Chapters Two and Three.

The questions were selected to address each of the factors impacting on the development of an effective development and training model.

The questionnaire was developed bearing the following in mind:

- **Instructions:** The instructions in the questionnaire must ensure that all respondents understand the instructions clearly. Two principles that form the foundation for good instructions are clarity and courtesy.
- **Types of questions used:** Riley et al. (2000: 82) state that there may be open and closed questions. A closed question is where responses are restricted to a small set of responses that generate precise answers. Open-ended questions do not impose restrictions on the possible answer, but are difficult to aggregate and computerise. However, the response is often richer and deeper. Jancowicz (2000: 269) adds that a structured questionnaire must provide questions possessing an element of steering information for the respondent without any prompting from the researcher. This is the method that was used in the questionnaire developed for the empirical study.

The questionnaire was made up of closed questions requiring respondents to record the degree to which they concurred with certain statements. Allison et al.

(1996: 83) state that the most widely used form of scaled items where the respondent chooses a point on a scale that best represents his/her view, is the Likert scale. In this section a four point Likert-type scale was used.

Scoring for the scale is as follows:

- 1 = unimportant;
  - 2 = of value;
  - 3 = important;
  - 4 = extremely important.
- 
- **Wording of Questions:** Thomas (1996: 121) states that questions should not lead respondents who do not have clear views of their own on a particular issue. Grammar should be simple and the things that the respondents have to keep in mind in order to understand the question should be limited. Specific terms should be used in preference to abstract ones, ensuring a clear understanding of the question by the respondent. Finally, the questions should be easy for the respondent to answer. For example “Tick One box only”
  - **Length of the questionnaire:** According to Thomas (1996: 121), a questionnaire should not be long and complicated. More pages with a clear and user-friendly layout are better than fewer pages with a cramped and

forbidding layout, that would not encourage the respondent to complete the questionnaire.

The above principles were followed when drawing up the questionnaire. In addition to this, the draft questionnaire was tested in a pilot study. However, prior to conducting the study, the questionnaire was checked by a senior lecturer, who is a member of the staff at the MBA unit at the Port Elizabeth Technikon. Once the necessary adjustments had been effected, the questionnaire was presented to the Human Resource department of the National Ports Authority for comment. The questionnaire was duly accepted.

#### **4.3.2 ADMINISTERING THE QUESTIONNAIRE**

The questionnaire was e-mailed and faxed to the role players in the National Ports Authority demarcated in the research with a covering letter (Annexure 1) on the 10<sup>th</sup> August 2001. The aim of the covering letter was to provide the respondents with the aim of the research. A cut-off date of 25<sup>th</sup> August was set for the return of the completed questionnaires. The questionnaire is shown in Annexure 2. Thereafter the researcher telephonically interviewed the role players that did not respond. Given the strategic level at which a decision of this nature would be discussed, the questionnaire was circulated to the Port Captains, Port Managers, IT&S Managers and the Human Resource Managers. The questionnaire was e-mailed and faxed to each manager.

### **4.3.3 THE VALIDITY AND RELIABILITY OF THE QUESTIONNAIRE USED IN THIS STUDY**

According to Leedy (1997: 32), validity and reliability are terms used in connection with measuring instruments. The integrity of the research is based on the validity and reliability of that piece of work and, as such, it is important that the work should conform to the requirements of the validity and reliability. A brief discussion of these concepts and their relevance to this study follows.

Leedy also states that validity is concerned with the effectiveness and soundness of the measuring device. The crucial question is whether it measures what it is intended to measure and whether it is accurate. Therefore, in this study does the questionnaire measure what it was intended to measure?

Reliability, according to Leedy (1997: 35), is seen as consistency with which the measuring device performs. This means apart from delivering accurate results, the measuring instrument must deliver similar results consistently. According to Singleton, Straits and Straits (1993: 121), reliability may be improved by conducting exploratory studies in the area of interest or by conducting pretests on a small sample of people similar in characteristics to the target group. In this study, both were conducted by the researcher, in the form of a literature study

(Chapters Two and Three) and a pilot study. The aim of this study was to ensure that all questions were understandable and relevant.

#### **4.4 THE POPULATION**

A list of names, being more in the management grade, was obtained from the Human Resource department to define the population to be studied. Due to the size of the population, it was decided to use the total population and not a sample. The population numbered 25 people in the various Ports in South Africa.

**Table 4.1: The Population**

<b>AREA</b>	<b>SIZE OF POPULATION</b>
<b>PORT ELIZABETH</b>	<b>4</b>
<b>DURBAN</b>	<b>5</b>
<b>RICHARDS BAY</b>	<b>4</b>
<b>SALDANHA BAY</b>	<b>4</b>
<b>CAPE TOWN</b>	<b>4</b>
<b>MOSSEL BAY</b>	<b>1</b>
<b>EAST LONDON</b>	<b>3</b>

**Source: List from Human Resource Department (NPA)**

## 4.5 THE RESEARCH RESPONSE

The questionnaire was forwarded to each respondent on 10<sup>th</sup> August 2001. Responses began to arrive within a week and by 25<sup>th</sup> August there was an 80% response. The respondents were also interviewed telephonically to ascertain any other reasoning that informed the decision arrived at, with respect to the

**Table 4.2: Response to Questionnaire**

TOTAL POLLED	RECEIVED IN TIME	RECEIVED LATE	NO RESPONSE	TOTAL
25	15	5	5	20

questionnaire.

## 4.6 ANALYSIS OF RESULTS

20 out of a possible 25 respondents replied. This amounted to 80% of the population. The questionnaire revealed the following:

**QUESTION 1      Please indicate your designation:**

100% of the IT&S Managers responded to the questionnaire. Only 85% of the Human Resource Managers and 70% of the Port Managers or Port Captains replied.

As persons directly responsible for the provision of training and development in South Africa, the Human Resource Managers were the most important targets of the population polled. The Port Managers have an indirect responsibility and the 70% reply is adequate to validate the results. The IT&S Managers were targeted owing to the technological aspect of the model. Figure 4.1 indicates percentages.

**Figure 4.1: Percentage Breakdown**

Designation	Percentage
IT&S Managers	100%
Human Resource Managers	85%
Port Managers / Captains	70%

**Table 4.3: Population Polled and Responses Received**



	<b>POLLED</b>	<b>RESPONSE</b>	<b>RATIO</b>
<b>Human Resource</b>	<b>7</b>	<b>6</b>	<b>85%</b>
<b>Port Manager</b>	<b>10</b>	<b>7</b>	<b>70%</b>
<b>IT&amp;S</b>	<b>8</b>	<b>8</b>	<b>100%</b>
<b>TOTAL</b>	<b>25</b>	<b>20</b>	<b>80%</b>

## QUESTION 2

### Which Port do you represent?

A response was received from the following ports:

- Richards Bay
- Durban
- East London
- Port Elizabeth
- Mossel Bay
- Cape Town
- Saldanha Bay

All seven of the Ports operated by the National Ports Authority in South Africa responded. The response from all the seven ports also served to validate the results.

**QUESTION 3**

**Has your Port implemented a Training and Development Plan that is catering for all skills or training needs of the staff?**

Response was received from the following ports:

- Richards Bay
- Durban
- East London
- Port Elizabeth
- Mossel Bay
- Cape Town
- Saldanha Bay

**Table 4.4: Response to Training and Development Plan**

Port's Response to Training & Development Plan			
Port	Plan	Caters for Need	Does not Cater
Richards Bay	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>
Durban	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
East London	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>
Port Elizabeth	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Mossel Bay	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Cape Town	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>
Saldanha Bay	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	

**QUESTION 4****How many people do you send for training every month?**

The people trained every month ranged from 1 in Mossel Bay to 35 in Durban. This was relevant as all the Ports across the spectrum were polled. This also indicated how committed the Ports were to training and development.

**Table 4.5: Response to Staff Training**

Port's Response to Staff Training			
Port	< 10	> 10 < 20	> 20 < 40
Richards Bay		12	
Durban			35
East London	2		
Port Elizabeth		18	
Mossel Bay	1		
Cape Town			22
Saldanha Bay	2		

**QUESTION 5**

Should an Enterprise Resource Planning System be implemented with integrated training and development?

The response was 100% positive, with all ports indicating that this system was urgently required with the integration of knowledge management tools. It was also indicated that this would add value and make a positive difference to the profitability of the organisation.

**QUESTION 6**

**Do you think that the following factors should be considered when developing a Training and Development plan for the Port?**

**Table 4.6: Tabular Response from Q6.1 to Q6.4**

<b>Ports Response to Factors in Developing Training Plan</b>		
<b>Question</b>	<b>Yes</b>	<b>No</b>
<b>Q 6.1</b>	16	4
<b>Q 6.2</b>	14	6
<b>Q 6.3</b>	18	2
<b>Q 6.4</b>	15	5

The various parts of the question were answered as follows:

#### **Q6.1**

**Should Training and Development be linked to the Balanced Scorecard coupled with Performance output? YES or NO**

80% of the respondents felt that this was a relevant factor to be considered, as this will ensure that the necessary attention is given to Training and Development in all areas of the business. It was felt that it will also help to address areas where empowerment was required. The other 20% did not feel that Training should be coupled with Performance output.

**Q6.2**

**Is E-Learning an important module to be considered for implementation?**

**YES or NO**

70% of the responses indicated that the question was valid, and that it was essential to consider the implementation of this module. The other 30% felt that they preferred external training. They also did not know enough about E-Learning.

**Q6.3**

**Can the development of Human Capital add value and give a Port a strategic advantage? YES or NO**

The response to this question was unanimous as 90% of the respondents felt that developing human capital can give the organisation a competitive advantage over its competitors. It was also felt that a more motivated and committed workforce will develop over time. The other 10% of the respondents were not sure if it would give the organisation the competitiveness.

**Q6.4**

**Does the Port have enough staff resources available as backups, when other staff members are sent on training? YES or NO**

There were mixed results regarding this question. 60% of the respondents indicated that there were enough resources as backups. The 40% that did not agree felt that more work is loaded onto other staff members, who were not always competent. This situation will change as the resources are trained and empowered to develop themselves.

**QUESTION 7**

**Which of the following factors do you think will add value to a suitable Training and Development Model?**

The following options are:

- Mentors for Individuals;
- Knowledge Management Database;
- Pool of experts for transfer of Skills;
- E-Learning from the desktop;
- Fast Track development.

80% of the respondents felt that all the above aspects could play an important role in the development of human capital within the various Ports. The other 20% indicated that mentors and E-Learning could play a significant role in future development of staff. This overwhelmingly positive response increases the relevance for the development of a model for the strategic benefit of the Ports. Table 4.7 indicates the average as per the respondents.

**Table 4.7: Average of Factors Adding Value**

<b>LIKERT SCALE</b>	
<b>Average of Best Three Options</b>	
Mentors	<input checked="" type="checkbox"/>
Knowledge Man. - Train	<input checked="" type="checkbox"/>
Pool of Experts	<input checked="" type="checkbox"/>
E-Learning	<input checked="" type="checkbox"/>
Fast Track development	<input checked="" type="checkbox"/>
<b>Value Adding</b>	



**QUESTION 8**

Please rate the options below for their value to your Port.

Remember there is no right or wrong answer, so please answer as accurately as possible.

Use the scale below to answer the questions. If you think the question is extremely important, place an X in 4; if the question is unimportant, place an X in 1. If the question is of value for your situation, find the number between 1 and 4 that best describes your situation.

<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
<b>Unimportant</b>	<b>Of Value</b>	<b>Important</b>	<b>Extremely Important</b>

**Table 4.8: Response to Question 8.**

		LIKERT SCALE				
		1 →				
		1	2	3	4	Total
Internet Browsing	0	0	10	6	16	
Intranet Links	0	0	7	13	20	
Knowledge-Processes	0	0	13	9	22	
Knowledge-Customers	0	0	6	18	24	
Feedback Management	0	0	7	12	19	
<b>Total</b>	0	0	43	58	101	

**INFORMATION OPTIONS**

**Q8.1**

**By gaining access to Internet browsing and links to accredited Business Sites, will it add strategic value to your decision making and daily operational efficiency?**

64% of the respondents felt that it was from important to extremely important to have access to the Internet for informational purposes.

**Q8.2**

**By gaining access to an Intranet site solely developed for the Port with relevant Business Information, will it add strategic value to your decision making and daily operational efficiency?**

80% of the respondents felt that it was from important to extremely important to have an Intranet site with business information available. The opinion was that this tool could be used to inform the workforce of developments as well.

**Q8.3**

**By gaining access to a Knowledge Management database with Best Practices and Business Processes, will it add strategic value to your decision making and daily operational efficiency?**

88% of the respondents wanted access to a knowledge database with the latest Best Practices and Business Processes available. It was felt that this would keep management abreast of the latest trends and access to important reports. This was a clear indication that a solution of this nature was needed in the model.

#### **Q8.4**

**By gaining access to a Knowledge Management database regarding Customers and Trends, will it add strategic value to your decision making and daily operational efficiency?**

96% of the respondents wanted more knowledge regarding customers and trends concerning customer relationships. Respondents indicated that customers are king and to deliver excellent service to them, the people need to be skilled and trained. These two factors will ensure a competitive strategic advantage.

#### **Q8.5**

**By receiving continual feedback from your Management Team, will it add strategic value to your decision making and daily operational efficiency?**

76% of the respondents indicated the importance of feedback. This can be done by utilising the Intranet and Video Conferencing to ensure that Vision and direction is maintained.

## Question 9

### Should Training and Development reside under the Human Resource department?

71.4% of the respondents feel that Training and Development should not reside under the Human Resource department, but should be a section on its own reporting directly to the Port Manager. If this was not practical then it was suggested that line managers be held more accountable for the training of their staff. The feeling amongst respondents was that because of the importance of skills development and transfer thereof, as well as the need to train the people to improve service delivery, this section must have more accountability and that the Port Manager must drive this process.

#### Port's Response to Training residing under Human

Port	Yes	No
Richards Bay		<input checked="" type="checkbox"/>
Durban	<input checked="" type="checkbox"/>	
East London		<input checked="" type="checkbox"/>
Port Elizabeth	<input checked="" type="checkbox"/>	
Mossel Bay	<input checked="" type="checkbox"/>	
Cape Town		<input checked="" type="checkbox"/>
Saldanha Bay	<input checked="" type="checkbox"/>	

**Table 4.9: Location of Training Department**

## Q10

**Do you have a Succession Plan in place, taking into consideration your department's Equity Plan?**

65% of the respondents indicated that they have Succession planning in place, but not all were in line with the departments Equity Plan. This suggested that this area needs urgent attention and indicates its relevance to the model.

**Table 4.10 Response to Succession Planning**

Port's Response to Succession Planning and Equity		
Port	Yes	No
Richards		<input checked="" type="checkbox"/>
Durban		<input checked="" type="checkbox"/>
East London	<input checked="" type="checkbox"/>	
Port	<input checked="" type="checkbox"/>	
Mossel Bay	<input checked="" type="checkbox"/>	
Cape Town		<input checked="" type="checkbox"/>
Saldanha Bay		<input checked="" type="checkbox"/>

## **4.7 SUMMARY**

This chapter describes the approach adopted towards the empirical study. Details of the research design are also contained therein. Planning of the questionnaire and the logical step process is detailed thereafter. The questionnaire was then circulated to the target audience to validate the model and to conduct the empirical study. Responses received have been tabulated and subsequently analysed. Details of the responses received are documented in this chapter.

Conclusions relevant to the research are drawn from the responses received and discussed in the next chapter.

## **CHAPTER FIVE**

### **AN INTEGRATION OF THE FINDINGS OF THE EMPIRICAL STUDY WITH THE THEORETICAL SURVEY DEVELOPED FOR THE STUDY, SUMMARY, RECOMMENDATIONS AND CONCLUSIONS**

#### **5.1 INTRODUCTION**

The aim of this chapter is to integrate the results obtained from the empirical study with the model developed from the literature study. To achieve this, results of the analysis are reviewed to determine whether there are any statements made that received little or no support from the respondents. If such statements are identified they are then removed from the model. Once this has been completed a diagrammatic model will be presented and a summary of the study will follow.

#### **5.2 AN INTEGRATION OF THE FINDINGS OF THE EMPIRICAL STUDY WITH THE THEORETICAL SURVEY DEVELOPED FOR THE STUDY**

Theoretical components of a training model, using technology and a performance tool, was developed through information gained from secondary sources. This

theoretical model that was developed, solved the first sub-problem mentioned in chapter one. The information gathered from the research for this sub-problem was then utilised to compile a questionnaire in order to solve the other sub-problems. Opinions were sought from role players within the National Ports Authority.

### **5.2.1 A REVIEW OF THE EMPIRICAL STUDY WITH A VIEW TO ELIMINATING STATEMENTS WITH WEAK SUPPORT**

A survey of the results obtained from the empirical study did not reveal any statements that were not acceptable to the National Ports Authority. The respondents did express various opinions, but this was due to the fact that some of them had not been exposed to the internet or e-business. Other respondents did not feel that training and development had to be driven by coupling it to performance.

There was a high percentage of positive support for the model and therefore no factors need to be deleted from the model. The next section will deal with the finalisation of the new training and development model for the National Ports Authority.



## **5.2.2 A TRAINING AND DEVELOPMENT MODEL FOR NATIONAL PORTS AUTHORITY**

The objective of this study was to identify an effective training and development programme . The following three steps were followed:

- A theoretical model was developed from the relevant literature, taking various factors into consideration that are strategic enablers as well as technology that is available;
- A sample of the population from National Ports Authority was surveyed by using a questionnaire developed from the literature study. This survey measured the acceptance or non acceptance of the model;
- The results obtained from the empirical survey were integrated with the theoretical model to build a new model of components leveraging strategic advantage utilising human capital.

The existing model is shown in Figure 5.1 and the final model is shown in Figure 5.2 for easy comparison.

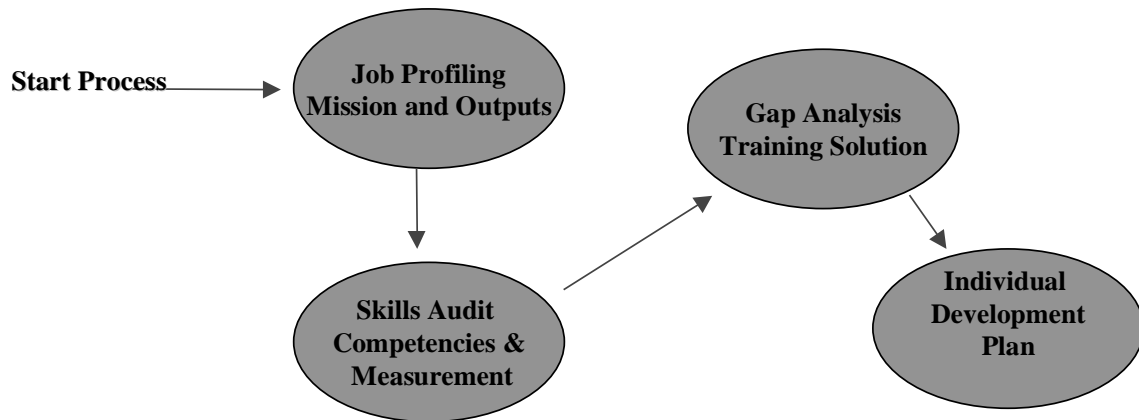
**Figure 5.1 Existing Model**

Figure 5.1 shows the current model and the processes, which are followed within the National Ports Authority. This model has limitations as the people are not fully committed and many don't have the persistence to see people empowered and grow. There are also external forces that must be taken into consideration, for example Equity and Affirmative action. The skills development Act must also be adhered too. With all these pressures, it is important to implement a model that can assist the stakeholder in achieving its strategic objectives utilising human capital.

**The Figure 5.2 New Integrated Model**

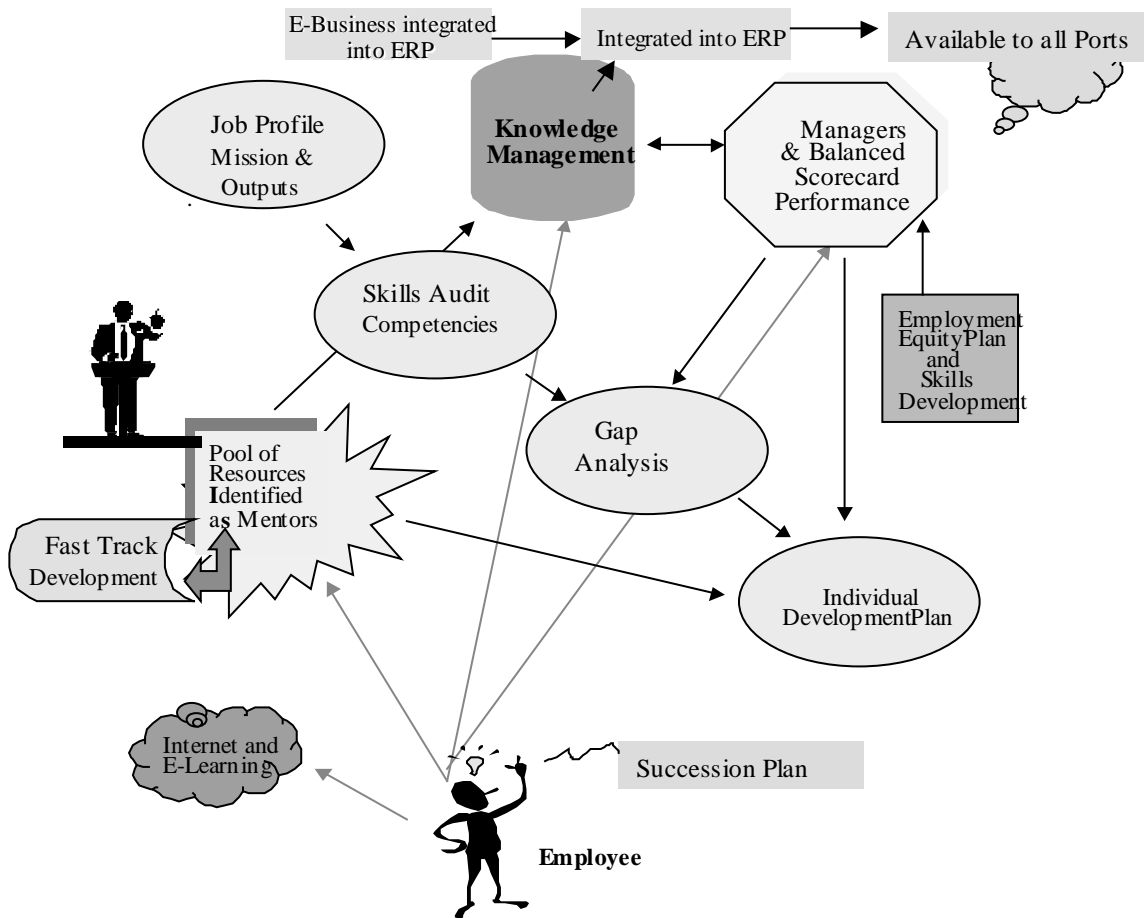


Figure 5.2 indicates the proposed new model. The new model includes the processes of the existing model, but has built-in additional processes as discussed in chapter three.

These new processes include the following:

- Pool of experts to transfer skills and act as mentors for the trainees;

- Linked to the pool there is a fast track method of transferring skills to areas where they are desperately needed;
- E-Learning and Internet capabilities are implemented for easy access to information;
- E-Business is integrated into the Enterprise Resource Planning system;
- Knowledge database implemented for access to all employees and integrated into the Enterprise Resource Planning system;
- The outputs of individuals and the implementations of the Skills Development Act and Equity directly linked to Balanced Scorecard with high performance outputs.

This process will be “Benchmarked” against certain requisites and targets set by management.

### **5.3 SUMMARY**

In the previous section the results were obtained from the empirical survey questionnaire and were integrated with the theoretical model developed in the literature study of this research. This has resulted in a new model being developed and confirmed for utilising human capital and technology as a strategic advantage as shown in figure 5.2.

### **5.3.1 RESEARCH METHOD**

The main problem that was stipulated in chapter one and identified to be resolved was, “What strategy does National Ports Authority need to adopt to establish human capital as a core asset leading to competitive advantage in the local and global regulatory market?” What was the motivation behind this question? The answer to this question is that National Ports Authority needed to implement a strategy to empower its employees with valuable knowledge and expertise that is being lost by people retiring or leaving the organisation. It was also a necessity that the organisation position itself with the newer trends in technology namely E-Business.

The traditional ways of training and developing people to the point where they assist in giving the organisation a strategic advantage has changed over the years. This in itself is a point where National Ports Authority can implement more modern ways to empower and also fast track the skills transfer to areas of concern. Organisations have the problem of keeping their staff members up to speed on the latest technology, processes and procedures they need to efficiently and effectively perform their jobs. National Ports Authority can limit time spent away from their desks and slash costs in travel, accommodation and classroom hire by implementing E-Learning providing their workforce with latest skills.

The research was based on a literature study, firstly on the concept of the shift in technology and secondly in empowering of people by training and development plans. Various models were identified and factors identified that enable business to utilise human capital as a strategic advantage. Thereafter a discussion of each of these factors promoting strategic advantage was conducted in detail. Based on this information, a questionnaire was developed and e-mailed to role players within National Ports Authority. The replies by the respondents were analysed and the support for the new model was positive.

## **5.4 RECOMMENDATIONS**

The results of the study have been tabled and areas that need attention have been identified. They have been incorporated into the new model for National Ports Authority. A short discussion of each of these factors will follow:

### **5.4.1 QUESTIONS USED AND EXPERTISE OF ROLE PLAYERS**

The questions used in the study were a mixture of closed-ended and open-ended. The closed-ended questions required them to use the Likert-type scale, while the open-ended questions gave them an opportunity to give their opinion. It was noted that on the more technology related questions that some of the respondents lacked the skills in this area. It would be beneficial for National Ports

Authority for ensure that all people are aware of technology related business benefits.

#### **5.4.2 POPULATION**

The target audience for this survey numbered twenty-five. It could be argued that this number may to small for a big organisation like National Ports Authority, but role players were targeted that would have an impact and that could implement the model. The survey received an 80 percent response which is very positive to the implementation of a new model.

#### **5.4.3 APPLICATION OF THE STUDY**

It is recommended that National Ports Authority study the model for developing human capital as well as incorporating technology for future strategic objectives. The model sets out certain processes that needs to be implemented to ensure that legislation, Equity targets and the general upliftment or empowerment of people. This process is also driven by new concepts, as well as performance outputs from line management. It is evident in today's world that technology like E-Business and the Internet will have a major influence on the future of businesses. When integrating these strategies with an Enterprise Resource Planning system, National Ports Authority will be able to position itself competitively locally and globally.

## 5.5 CONCLUSIONS

It is evident from the survey and the above discussion that there is an acceptance for the model of processes that ensure the development of human capital and the implementation of technology systems and procedures to allow people to develop to give the organisation strategic advantage. The model developed enables identification of the most suitable options and processes to be considered. This also allows for further research to ensure that this model is benchmarked with other global models and best practices.

Cognisance must be taken of the fact that in order to take advantage of empowering people and maximising the advantages of human capital together with technology, a change in mindset of the average line manager and employee would have to change. Succession planning is another area where proper planning needs to take place to ensure that the correct people are identified and put onto the fast track development programme for National Ports Authority to achieve the correct Equity in the short term.

The main advantages in National Ports Authority embracing this new model are having skillful, trained and knowledgeable people that can steer them into a strategic advantage by utilising good business principles and procedure coupled with technology.



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**Annexure 1**

QUESTIONNAIRE

Dear Sir or Madam

***Survey on Factors that Lead to Competitive Advantage***

Please find attached a questionnaire relating to the above topic. Your assistance in completing the questionnaire by 10<sup>th</sup> August 2001 would be highly appreciated.

The following questionnaire has relevance to the research of my MBA degree and tests the suitability of human capital as a strategic advantage for the National Ports Authority of South Africa. The questionnaire should not take more than 10 minutes of your time. I would be grateful for your input at your earliest convenience. Any queries may be addressed to me as indicated below.

Thank You

**I.J. du Preez**

**IT&S Manager, Port Elizabeth**

***Phone: +27 (41) 507 1970***

***E-mail: iandp@npa.co.za***

***Fax: +27 (41) 585 2859***

## SURVEY QUESTIONNAIRE

*The following questionnaire is designed to assess the suitability of human capital and technology as a strategic advantage to the National Ports Authority for academic purposes. It has relevance to my Masters degree in Business Administration.*

**Your early response would be highly appreciated**

**Q1**

Please indicate your designation:

<i>IT&amp;S</i> <b>Manager</b>	<i>Human</i> <i>Resource</i>	<i>Port</i> <b>Manager /</b> <b>Captain</b>
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***Other, Please specify***-----

**Q2**

Which Port do you represent?

**Q3**

Has your Port implemented a Training and Development Plan that is catering for all skills or training needs of the staff?

**Q4**

How many people do you send for training every month?

More than 10 less than 20

More than 20 less than 40

More than 40 less than 100

**Q5**

Should an Enterprise Resource Planning System be implemented, integrating a Training and a Knowledge system.

 YES NO**Q6**

Do you think that the following factors should be considered when developing a Training and Development plan for the Port?

**Q6.1**

Should Training and Development be linked to the Balanced Scorecard, coupled with Performance Outputs?

 YES NO

**Q6.2**

Is E-Learning an important  
Module to be considered for implementation

 YES

 NO
**Q6.3**

Can the development of Human  
Capital add value and give the  
Port a Strategic advantage?

 YES

 NO
**Q6.4**

Does the Port have enough staff  
resources available as backups,  
when other staff members are  
sent on training?

 YES

 NO
**Q7**

Which of the following factors do you think will add value to a suitable Training  
and development model?

**Please tick the best Three options**

**Q7.1** Mentors for Individuals, to ensure that candidates  
complete and pass their Training

**Q7.2** Knowledge Management Database – access to  
valuable Training information / material

**Q7.3** Pool of experts for the Transfer of Skills,  
especially in the areas of scarce skills or in areas that need

expertise training

**Q7.4** E-Learning from the Desktop

**Q7.5** Fast Track development – developing people in a structured manner for a periods of 3 months in areas where skills are scarce.

**Q8**

By gaining access to the following options listed below, will it add strategic value to your decision making?

**Remember there is no right or wrong answer, so please answer as accurately as possible.**

Use the scale below to answer the questions. If you think the question is extremely important, place a X in 4; if the question is unimportant, place a X in 1. If the question is of value or important, find the number between 1 and 4 that best describes your situation.

1	2	3	4
Unimportant	Of Value	Important	Extremely Important

	1	2	3	4

**Q8.1**  
 Internet browsing and links to accredited business sites

**Q8.2**  
 Intranet site developed solely for the Port with Business Information

**Q8.3**  
 A Knowledge Management Database with Best Practises and Business Processes.

**Q8.4**  
 A Knowledge Management Database regarding your customers – trends

**Q8.5**  
 Continual feedback from your Management Team

**Q9**  
 Should Training and Development reside under the Human Resource Department?

YES

NO

If not, please elaborate on your answer. Where do you think it should reside?

-----

**Q10**

Do you have a succession plan in place, taking into consideration your department's Equity Plan?

YES

NO