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## **Abstract**

The literature on the Learning Organisation (LO) falls into two broad categories. First, that which treats the LO as a variable and something that can be designed into an organisation and which has significant influence on other organisational outcomes (eg. Watkins and Marsick, 1993; Cullen, 1999). Second, that which treats the LO as a metaphor to describe an organisation (eg. Garvin, 1993; West, 1994). It basically views the organisation as a cultural phenomenon and sees the LO as a particular variant of culture.

This research focuses on the first category and attempts to find out whether moving towards being a LO leads to enhanced organisational performance. The ideas that surfaced represent a shift to organisational development and growth by using the Malcolm Baldrige Quality Award strategic determinants as a proxy to move towards being a LO, namely (i) leadership, (ii) strategic planning, (iii) customer and market focus, (iv) measurement, analysis, and knowledge management' (v) workforce focus; (vi) process management, and (vii) business results.

The case study company in this research is NTUC LearningHub Pte Ltd (LHub), a newly incorporated small and medium size entity which decided to embark on ISO 9000 and other Singapore Quality Award (Singapore's equivalent of Malcolm Baldrige Quality Award) related initiatives. It is an account of problem situations and events that took place in the organisation over a period of one year from July 2005 to July 2006. Questionnaire survey and evidentiary documents were used as primary and secondary sources of data collection to gather detailed information about the entity over a period of one year, with a view to obtaining in-depth knowledge.

From the findings on whether LHub has moved towards being a LO by adopting the Singapore Quality Award (SQA) business excellence approach, there is a seemingly positive show of results in the 6 strategic determinants of (i) Leadership, (ii) Planning, (iii) Information, (iv) People, (v) Processes and (vi) Customers in LHub from year 2005

to 2006 although dissatisfaction index has increased slightly. It appears that although LHub could not claim to “be” a LO, it might have moved towards becoming one in some respects.

On whether there is an improvement in LHub’s business results, the findings only partially support the hypothesis that there is an improvement in the areas of (i) sales revenue and profitability, (ii) customers’ satisfaction, and (iii) employees’ satisfaction after adopting the SQA business excellence approach. This is because only (i) and (iii) show signs of improvement and (ii) has a dropped in desired outcome. Moreover, for (i), the improvement is not statistically significant.

Finally, the reader may wish to note that while the Malcolm Baldrige approach is being used as a proxy to move towards being a LO, this research does not devise rules for managers to transform their companies into LOs. There are no neat models or rules for implementation which can be applied easily in a wide range of contexts and settings. However, it is hoped that this research will strike a chord with practising managers as well as with academics - purely because it conforms more closely with their own tacit understanding of organisational realities.

## Acknowledgement

A few people have contributed in a variety of ways to the realisation of this work. However, two people made contributions without which the research would have been impossible. Professor Mike Byram of the University of Durham was the wellspring of many of the conceptual insights in this thesis. He was, despite a formidably full schedule, generous with his time and advice. Professor Byram encouragement, support and advice are greatly appreciated. More than anything he gave me numerous ad hoc lessons in how to achieve things. Mr Stewart Martin also provided invaluable source of ideas and inspiration to my writings. Despite his busy schedule, he has always found time to read through my draft to understand my thoughts and ideas. He frequently took these ideas, added a new level of complexity to the analysis with his knowledge and understanding of issues previously beyond the conceptualisation of the author. More than anything else he raised my understanding of methodological issues to a level hitherto unobtainable.

As will become obvious to the reader, I am deeply indebted to Mr Zee Yoong Kang and Ms Jenaline Low, the Chief Executive Officer and Chief Operating Officer respectively of NTUC LearningHub Pte Ltd, who generously allowed me to conduct two surveys over a one year period in the organisation.

Finally, a special thought here goes to my wife, Jessie Tan, who has selflessly quitted her job to shoulder the responsibilities of looking after our home and children, Rachel and Reagan Chan. She has done a superb job in ensuring that my two young, lovely and energetic children do not disturb me whenever I was doing my research writing in my study room. Her constant reminder and encouragement often managed to stir me up or excite my enthusiasm when spirits were beginning to flag. I thank her for always believing in me and helped me to believe in myself.

Chan Mun Kitt

May 2008

***TOWARDS BEING A LEARNING ORGANISATION***

***- A BUSINESS EXCELLENCE APPROACH***

**By**

**Chan Mun Kitt**

**May 2008**

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**Thesis submitted to the University of Durham  
in partial fulfilment of the requirements for the Degree of  
Doctorate of Education**

**13 NOV 2008**

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## Chapter 1 – Introduction

### **1.1 Background**

It was to the disbelief of this author's wife that he decided, on 1 August 2004, to volunteer to cross over from the luxury of the spanking new corporate headquarters of the National Trades Union Congress' (NTUC), located at the new downtown area overseeing the scenic Marina Bay in Singapore, to a newly incorporated training arm, NTUC LearningHub Pte Ltd, (LHub), located at a 30-year old building in the old Central Business District.

LHub was formerly part of NTUC Skills Development Department. The author was appointed as Director, Corporate Services, there and was tasked to start up and oversee the departments of Finance, Human Resource, Operations, Admin, Facilities Management, Information Technology and perform organisational development duties. Together with the author were a few good staff that he had brought along to help start up the establishment.

One month before the date of incorporation on 1 August 2004, and the next few months thereafter, LHub was in a big mess. As staff at the training arm were given an option to cross or not to cross over, one third of them had decided to return to NTUC. These were the more risk adverse staff that feared for their job security after incorporation. Those who remained were either staff that were not wanted by the various departments at NTUC due to performance issues, or the newer and younger staff who had decided to stay on to try out their fortune.

In a short time span of 4 months, LHub was able to recruit people from the private sector to fill up the vacancies left behind by those who returned back to the corporate HQ, and expanded the staff strength from an initial 29 to 48, including new hires for the Marketing, HR and Finance departments as these functions were formerly handled by

NTUC. Beside the full time staff, there are some 150 freelance trainers who are experts in the field of soft skills training, English and IT literacy.

The turnover of LHub in calendar year 2004 was about S7 million, with some S250,000 profits. This result was not at all bad considering that the education and training industry is a highly fragmented and competitive one with some 500 players, and many of the major players are losing money or are in crisis mode. The new management team of LHub believed that the company had tremendous potential as the education and training industry was still growing and the demand for quality training was even greater in the Asia region, so there was scope for expansion.

## **1.2 Strategic Challenges**

To ensure LHub's survival and to develop its full potential, it was necessary to get everyone together to work as a team, share the same vision and work towards one common goal. But the question of "how" remained. There were many strategic challenges faced by the new management team then, including:

- How can the leadership move LHub towards a culture embracing innovation, customer service and quality management? (Leadership)
- How to chart a new strategic direction for LHub, now that it is a for-profit private entity? (Strategic Planning)
- How to position LHub vis-à-vis all the competition and expand the current customers' base? (Customer and Market Focus)
- How to establish a set of "measurables", analyse the performance gaps, make improvements and track the progress? (Measurement, Analysis and Knowledge Management)
- How to motivate and make the best use of the skills and capabilities of LHub's employees? (Workforce Focus)
- How to re-engineer existing business processes to meet demands for increased profitability, higher productivity, better quality and improved customer service? (Process Management)

The above challenges should not be treated as difficulty related problems, but as opportunity related problems. Because of the author's keen interest in the concept of the Learning Organisation (LO) and Business Excellence in the area of organisational development, it is believed that moving LHub towards being a LO and Business Excellence will help answer many of the above questions.

Hence, the purpose of this study is to identify an opportunity-related problem, summarized below using Hague's (1987) four questions approach (see Table 1.1):

**Table 1.1 - Hague's Four Questions Approach**

<b>What is the problem?</b>	<b>What is the cause of the problem?</b>	<b>What do I want to know?</b>	<b>What will I do with the information when I have got it?</b>
A new team of management and staff at LHub are immersed in the "storming" stage of group behaviour, with lots of anxieties about the new work environment and unknowns about the company's future.	High turnover of staff with many replacements and new hires during the incorporation period. Lots of handling/taking over and "fire-fighting" work to do as many new departments are set up. Unclear future strategic direction.	How the concept of LO could help contribute to the organisational development of LHub, its relationship with Business Excellence concepts and its ultimate impact on organisational performance.	Make use of the research findings as learning points and reference guides, perhaps fine tune it further for the purpose of organisational development and staff management for LHub.

The research question for this study is as follows:

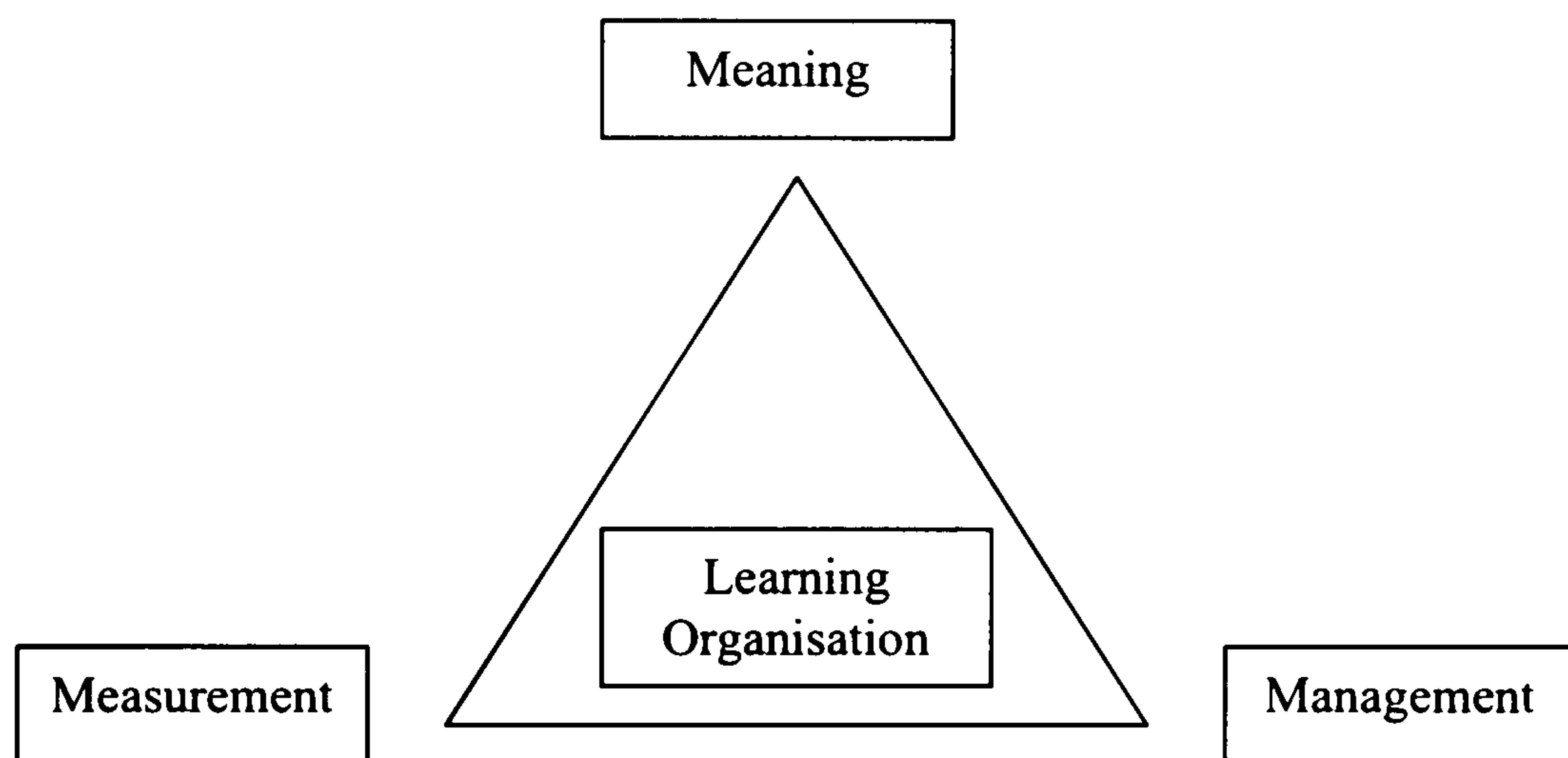
*Will an attempt to change an entity into a LO have a positive effect on business results in the area of sales revenue, customer satisfaction and employees' satisfaction?*

This leads to a few process questions:

1. What is a LO and why the need to move towards being a LO? (Chapter 2)
2. Why is the Malcolm Baldrige Business Excellence framework being treated as a proxy of LO and does adopting such a framework improves business performance? (Chapters 3)
3. How are the strategic determinants or variables found in the Malcolm Baldrige Business Excellence framework related to LO? (Chapter 4)
4. For the purpose of this study, how then can LO be measured and what research methodology should be used? (Chapter 5)
5. How can the relationship between the business results and the other strategic determinants found in the Business Excellence framework be tested empirically? (Chapter 6)
6. What are the learning points and limitations of this research as well as the areas for future research? (Chapter 7)

Answering these process questions will form the basic framework of the research study. Garvin (1993) argued that the LO should be (i) meaningful, (ii) manageable and (iii) measurable. The three Ms may indicate why it is so difficult to find examples of LOs - each M is independent, yet, like the LO itself, is interdependent, each like an apex of a triangle, which when taken together form the whole (see Figure 1.1).

**Figure 1.1 – The Learning Organisation**





This research study can broadly be divided into three parts, covering in-depth the three Ms outlined by Garvin:

Part 1 - Focuses on the first M of 'Meaning' and covers the concepts, characteristics and behaviours inherent in a LO (Chapter 2).

Part 2 - Deals with the second M of 'Management' which discussed in-depth the 7 dimensions of the Malcolm Baldrige framework that is taken to assist in the management of the journey towards being a LO, namely (i) leadership, (ii) strategic planning, (iii) customer and market focus, (iv) measurement analysis, and knowledge management' (v) workforce focus; (vi) process management, and (vii) business results (Chapter 3 and 4).

Part 3 - Discusses the third M of 'Measurement' which adopts a self-assessment diagnostic instrument, a modified version of the existing Singapore Quality Award's Business Excellence for Continuous Improvement (BEACON) company audit questionnaire, to measure the level of change and the degree to which a case study company, NTUC LearningHub Pte Ltd (LHub), has moved towards becoming a LO (Chapter 5 and 6).

In essence, this research stems from the realisation that there remains a vital need to integrate managerial theory and practice. It highlights the rationale of one method of moving the concept of LO to a management reality by using the Malcolm Baldrige Quality Award framework. Although many definitions have attempted to capture the essence (meaning) of the LO, it remains difficult to move the theory to reality (management) without effective "measurement" tools. Measurements must be taken to assess the current culture, attitudes and systemic disabilities in an organisation, in order to determine which actions to take to manage the progression towards a learning culture (Campbell and Cairns, 1994). Once a LO is established it can progress to a leading organisation which is capable of achieving and sustaining competitive advantage (Campbell, 1993).

### **1.3 Chapter Summary**

In this introductory Chapter, the challenges faced by NTUC LearningHub (LHub) have been highlighted. Essentially, it is a newly incorporated unit of the NTUC group of business and faced tremendous pressure on both the competitive business front and human resource arena. The proposition of this research is that by attempting to change LHub into a LO using the Malcolm Baldrige business excellence approach, there will be a positive effect on LHub's business results in (i) revenue and profitability, (ii) customers' satisfaction and (iii) employees' satisfaction.

The next chapter will be a literature review of the concept of LO and analyse it for its relevance to the problem this thesis is going to deal with. Chapter 3 will then bring the discussion further and relate the concepts of LO to literature concerning Business Excellence. It highlights the relationship between Business Excellence and Business Results. Chapter 4 describes the relationship between LO and (i) Leadership; (ii) Strategic Planning; (iii) Customer and Market Focus; (iv) Measurement, Analysis and Knowledge Management; (v) Workforce Focus; and (vi) Process Management.

In Chapter 5, the focus will be on Research Methodology, follows by Chapter 6 on the research findings. Finally, there will be a concluding Chapter 7 that wraps up the whole research, highlights the limitations of the study, provide recommendations and directions for future research.

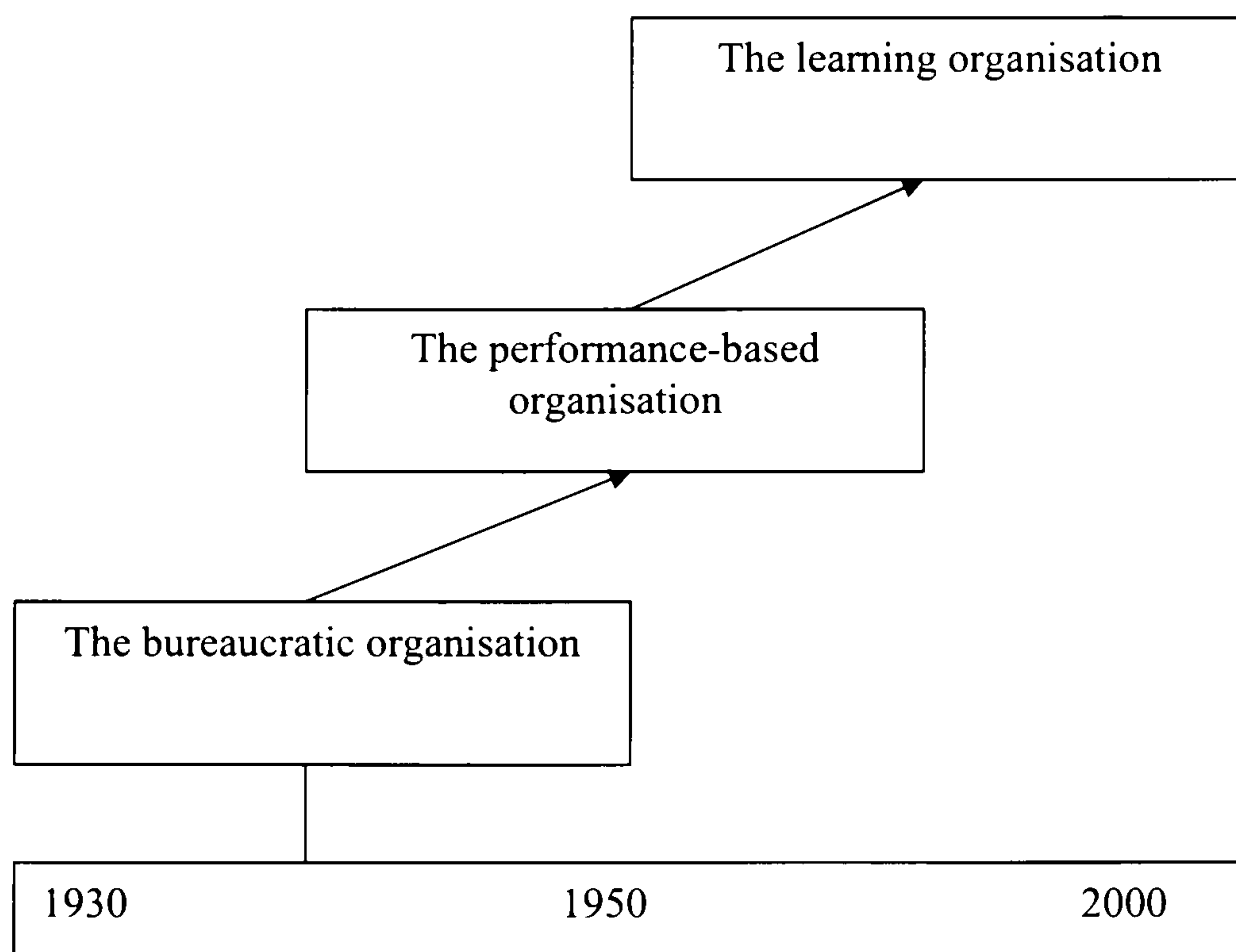
## Chapter 2 – Defining the Learning Organisation

Having stated in the previous chapter the background and objectives of the research, the purpose of this chapter is to answer the first process question: ‘What is a LO and why the need to move towards being a LO?’ The chapter will first discuss about the concept of LO, starting with its definition, the factors that spurred the development of the LO, the ideas put forth by various thinkers on how to go about doing it, and finally, the general problems with the literature of LO.

### 2.1 What is a LO

The 20th century has witnessed the emergence of three quite different organisational paradigms (see Figure 2.1).

**Figure 2.1 – A Snapshot of Organisational Evolution**



In the early part of the century, Weber (1947) wrote extensively about the nature of the bureaucratic organisation - a paradigm that focused on rationality and efficiency. Then, in mid-century, Drucker (1964) introduced the concept of the performance-based organisation - a paradigm that promised results and effectiveness. Towards the end of the 20<sup>th</sup> century, Senge (1990) has helped popularize the concept of the Learning Organisation (LO) - a paradigm centred on continual adaptation to an ever-changing environment. Senge and other researchers have described the characteristics of the LO and made suggestions for organisational implementation (Kline and Saunjders, 1993; Marquardt, 1996; Pedler, Bourgoyne, and Boydell, 1991; Senge, 1990; Watkins and Marsick, 1993).

The dimensions commonly described in the literature as being associated with a LO are not new concepts, but their coordination into a system focused on organisational learning is. However, there is no single definition of what the LO is. Senge (1990) defines a LO as “a place where people are continually discovering how they create their reality”. Watkin and Marsick (1993) define it as “an organisation which learns powerfully and collectively and is continually transforming itself to better collect, manage, and use knowledge for corporate success. It empowers people within and outside the company to learn as they work. Technology is utilized to optimize both learning and productivity”.

There appears to be some common recognition and agreement about the core characteristics of a LO. Researchers suggest that individuals and teams work toward the attainment of linked and shared goals, communication is open, information is available and shared, system thinking is the norm, leaders are champions of learning, management practices support learning, learning is encouraged and rewarded, and new ideas are welcome (Marquardt, 1996; Senge, 1990; Watkins and Marsick, 1993). The learning outcomes found in a LO are expected to include experiential learning, team learning, second-loop learning, and shared meaning (Argyris, 1977; Argyris and Schon, 1978; Dodgson, 1993, Senge, 1990). As a result of this learning, organisations are believed to be capable of new ways of thinking.

## 2.2 Why LO?

The fundamental question that organisations need to ask of themselves is why they want to embark on this journey that does not have an end. Senge commences with the notion that organisations have learning disabilities. He says that “it is no accident that most organisations learn poorly. The way they are designed and managed, the way people’s job are defined, and most importantly, the way we have all been taught to think and interact (not only in organisations but more broadly) create fundamental learning disabilities. These disabilities operate despite the best efforts of bright, committed people. Often the harder they try to solve problems, the worse the results” (Senge 1990). There will always be systemic inefficiencies in the way organisations are managed. How does one reduce or eliminate disabilities or inefficiencies in management?

In practice, organisations are able to identify disabilities that supposedly stop them from learning. The test for effectiveness appears to lie in translating concepts as espoused by Senge (1990), for example, the five disciplines of systems thinking, mental models, team learning, shared vision and personal mastery into action and results. Senge (1990) argued that organisations must learn (which he defines as finding ways to expand employees’ capacity to create and produce results) if they want to succeed in the 1990s and beyond. He goes on to outline why the model used by most organisations is flawed and thus why they must become LOs. He states that the old, bureaucratic command-and-control model will not be good enough for the challenges ahead:

1. It will not be fast enough to meet the new product development time of foreign competitors or to spot new market opportunities;
2. It will not be wise enough to deliver the high levels of service customers will increasingly demand;
3. It will not be smart enough to manage a diverse workforce or to motivate its smartest employees.

These three challenges touch on a number of the antecedents of LO and Denton (1998) identified six of them as follows:

1. The shift in the relative importance of the factors of production away from capital towards labour, particularly intellectual labour. This increasing importance of people has gradually forced companies to reduce levels of bureaucracy and create cultures which allow their employees greater freedom. LO is clearly a people-oriented philosophy, and a way of managing the transition from focusing on mechanisms to focusing on people.
2. The increasing acceptance of knowledge as a prime source of competitive advantage. This means improving the ability of an organisation to create knowledge, to transfer knowledge, to use knowledge as a source of competitive advantage. This idea is supported by Zuboff (1988), who notes that an organisation may need to become a learning institution, since one of its principal purposes will have to be the expansion of knowledge – not knowledge for its own sake, but knowledge that comes to reside at the core of what it means to be productive.
3. The increasingly rapid pace of change in the business environment, which make the ability to manage change a key attribute of a successful organisation. The most salient point about change from a LO perspective is the impetus that it provides for organisations to find new information about their customers, their markets, their competitors, their suppliers and themselves. The faster the world changes, the more there will be to learn, and the more time, effort and money will be needed to keep pace with all the changes. Becoming a LO may be one way to reduce the costs of learning by making learning a core competence which the organisation can do effectively as part of its everyday activities.

4. Increasing dissatisfaction among managers and employees with the traditional command-and-control management paradigm. A study by Graham (1996) suggests a number of negative aspects of the status quo which include lack of time and 'fire-fighting' (cited by 63% of respondents), inability to gain access to information perceived to be privileged (47%) and company politics (46%). The LO concept is an attractive concept to fill this void because it attempts to address many of the concerns that have led to the traditional paradigm being discredited.
5. The increasingly competitive nature of the global business environment, which makes it important for organisations to be manoeuvrable, fast-acting, aware of their competitors' actions. As this trend continues, the idea of becoming a LO is made ever more attractive.
6. The greater demands being placed on all businesses by their customers. LOs should be better equipped to understand exactly what it is that their customers want (Haines and McCoy, 1995). This knowledge can be acquired only by a constant effort to understand customers and learn from them and, having obtained the information, LOs will be well placed to respond rapidly to the needs of their customers.

In summary, interest in LO as an organisational development (OD) intervention has been spurred by the constantly changing work and business environments, which have been prompted by technological advances, increased levels of competition, and globalization of industries. The emergence of LOs is not the result of any one factor, but rather the result of a confluence of circumstances. These circumstances, each of which by itself suggests that adopting LO philosophy may be a suitable way to proceed, have conspired to make it highly attractive to organisations faced with the long-term prospect of dealing with the combined problems resulting from the antecedents discussed above. This underlines why moving towards being a LO represents a good opportunity for many organisations.

### **2.3 Moving towards a LO**

Becoming a LO is seen by some managers as a strategy to create intellectual capital and competitive advantage (Garvin, 1993) by placing learning at the centre of the organisation's efforts. By focusing on improving the organisation's learning, organisational effectiveness and adaptation is enhanced (Edmondson and Moingeon, 1998). Further, organisations that can identify and foster their organisational learning enhance their intellectual capital in the form of knowledge and know-how about their organisation's learning, that is, how it learns, how it learns how to learn and how it encourages or inhibits its own learning.

Moving towards being a LO means the need for managers to develop an organisation which has the types of culture and processes to create the necessary climate. Systems are also needed to ensure that the organisation can learn continuously. In other words, moving towards being a LO entails change. To do so, managers must ensure that people understand the need and direction for change. They must be clear about what new values, processes and skills are likely to be needed.

The most common method used for creating a LO is Organisational Development (OD), which is defined by Beckhard (1969) as an effort planned, organisation-wide, and managed from the top to increase organisation effectiveness and health through planned interventions in the organisation's processes, using behavioural science knowledge. For LO's OD, the key focus is "organisational transformation" which differs fundamentally from the approach of OD which gained support during the 1960s and 1970s. The term "transformation" implies that there is a greater emphasis on the process by which "the organisation develops itself rather than being changed by outside intervention" (Pedler et al, 1988).

The development of a LO essentially involves agreement with the basic assumptions that:



1. learning is of value;
2. while learning happens all the time, the quantity and quality of learning can be increased if it is done deliberately rather than by being left to chance;
3. learning is a continuous process with no beginning and no end; and
4. shared learning with other people is easiest to sustain.

The philosophy of a LO goes beyond the definition of a company which provides a high degree of training. Essentially, there is a priority objective of developing all human resources, enhancing skills and then being responsive to learning from those people regarding how the organisation can be improved. In this way, the essence of learning within the company is that it is a cyclical process.

In a comprehensive review of literature and practice on the subject of LOs, Jones and Hendry (1992) concluded that companies have to pass through five phases to qualify for the term 'LO'. These five phases are the (i) foundation/dependency stage; (ii) formation/transitional stage; (iii) continuation/independency stage; (iv) transformation stage; and (v) transfiguration stage. Supporters of the idea will want their organisations to try to move through these stages, or at least some of them. The start is easy but it will gradually become more demanding. Stage 1 is described as concerned with the following:

- 1) Learning how to learn;
- 2) Developing a natural instinct for learning;
- 3) Creating motivation and confidence; and
- 4) Showing that investment can produce success of various kinds.

If one progresses satisfactory through all the five stages then, in the eyes of Jones and Hendry, one will end up with transfiguration. This ultimate stage is said to be concerned with the following:

- 1) Transformation of an organisation that elevates it into a state of idealising the existence of this organisation;

- 2) People coming first and a concern for society's general welfare and betterment;
- 3) Asking crucial questions about why the organisation exists in the forms that it does;
- 4) The organisation representing a way of life to be cherished because of its values;  
and
- 5) The organisation developing to accommodate and understand global cultures, tolerance, integration and cooperation.

While studying their review has given one a good picture of the different stages of organisational development, Jones and Hendry did not offer many prescriptive measures on how to go about moving through these stages.

Marshall et al (1995) gave a more definite answer on how to move towards being a LO. Their basic argument is that organisations that reward people for learning could create an environment where people are willing to learn. They said that to start off, as a first step, one should define accurately the costs of not learning. Then, tie learning's value to critical organisational needs. They also recommended organisations to ride on the quality movement waves, embrace continuous improvement and question their assumptions, have effective teamwork and practise benchmarking to explore "best practices" and leverage the learning process. Other tools and strategies include:

- 1) Modeling, that is, identifying an ideal and then copying it;
- 2) Dialogue which explores issues from the base of their assumptions and allows underlying beliefs to be surfaced, prior to decision making;
- 3) Adopting Argyris's double loop technique, which shared feedback in written form with each other to illuminate and address assumptions and beliefs; and
- 4) Practising action-reflection learning, a process that says that learning does not stop when action is taken. Rather, that's when learning begins.

Marshall et al's recommendations have focused mainly on challenging assumptions and benchmarking, but they have stopped short of asking for a total business process reengineering. On their argument of rewarding learning to allow a learning

environment to take root, one advice is that one should stop expecting people to produce a mistake-free performance, and begin holding them accountable for learning from their mistakes.

At about the same time as Marshall et al, Robert Dilworth (1995) came out with a new concept, the 'organisational DNA', to help tackle the issue of sustaining the learning process. He defined 'organisational DNA' as 'the internalized values and beliefs that govern individual and team behaviour which operate much like a genetic code'. He then suggested some specific strategies would help create the kind of DNA necessary to perpetuate individual and group learning processes in direct juxtaposition with the organisational business processes. Dilworth's strategies includes cross-functional teams or task forces, job rotation, work-outs, action learning, succession planning, career pathing, mentoring programmes, employee exchange programmes, distributive learning, formal training, town meetings, celebrations of success, self-directed teams, e-mail interconnections, and cross-peer tutoring. However, he remarked that these strategies do not represent a single system or all-inclusive list of strategies and will vary widely depending on circumstances in a given organisation.

Dilworth's strategies actually complemented Marshall et al's recommendations by focusing on processes. In fact, an analysis of the LO concept suggests that it is more useful to approach it in terms of organisational values and processes that adopt a learning-based approach than in terms of specific structures and models of good practice. This suggests that developing a LO is not a matter of adopting procedures and practices used elsewhere because to do so runs contrary to the processes of learning and change. Many of the issues and choices raised by the idea of the LO relate to broad questions of culture and learning structures. The essential task appears to be the creation of enabling cultures and structures which are needed at organisational and individual levels.

It is perhaps more appropriate to suggest that organisations can develop in a progressive manner towards a LO but it is an idealised state which may never be attained. Such a perspective is sustainable if one views the LO as a variable.

## **2.4 General Problems with Literature on LOs**

There are a number of specific difficulties with the LO literature. Some of these issues are worth considering here.

### Variable vs root metaphor

The idea that a “strong LO” has a distinct and positive impact on performance is very popular, and commentators have identified a range of benefits of developing such an organisation (Garrett, 1987; Mayo and Lank, 1994; Mumford, 1995). The key question from this perspective is - are they right in their assumption that there is a strong and positive impact on performance which results from being a LO? Is there any evidence? The less popular perspective stresses that the LO is a type of culture and that the organisation is essentially a culture. It views the organisation as an expressive, idealistic and symbolic phenomenon (Jones, 1994). The latter view of the LO plays down the pragmatic results that may follow from having one in favour of a more general understanding of what it is. This, however, is not the way in which many of those who embrace the LO notion think about it.

### The nature of an organisation

Viewing organisations as systems is essentially adopting the metaphor of organisations as organisms. Such a metaphor has significant limitations, primarily its assumption of functional unity, whereas in reality organisations are not normally characterized by harmony. Organisations are products of visions, ideas, norms and beliefs so that their shape and structure is much more fragile and tentative than the material structure of an organism (Argyris and Schon , 1981).

### The nature of a LO culture

Much of the discussion in the literature is clearly written from the perspective that the LO can be designed and managed effectively to produce positive outcomes for the organisation. Many commentators have attempted to specify what the LO culture should consist of (Burgoyne 1995). However, the literature on learning culture characteristics is extremely broad, drawing on work from sociology, psychology and anthropology as well as business disciplines, which perhaps makes the task of formulating such a theory a monumental one.

### The nature of the learning process

Many commentators on the LO tend to emphasize learning in the context of the organisation transforming itself in relation to its environment and a reciprocal process of individual learning and development. However, the concept of learning itself is being used too casually and indifferently (Jones, 1994) and many organisations try to quantify learning in very prescriptive ways. It is tenable to suggest that because so many varieties and kinds of learning go on in organisations, to attempt a rigorous assessment of it in terms of outcomes may be inappropriate.

### Learning vs teaching

French and Bazalgette (1996) essentially argue that the LO concept will continue to be distorted unless the teaching component of management and of the organisation generally is given as serious consideration as the learning function.

### The role of organisational size

There has, in general, been little attempt to address the role of organisational size in discourse on the LOs. In fact, in general, there is a large organisation mentality underpinning much of the writings on the LO. Fiol and Lyles (1985) identify culture, strategy, structure and the external environment as important contextual influences on the LO but fail to consider size in any explicit way. Shrivastava (1983) gives implicit recognition to size in his consideration of various levels of learning but does not specifically examine how size characteristics may influence the capacity to become a LO.

### The notion of teams in a LO

The notion and role of teams in the LO literature gets mixed treatment. Jones (1994) points out that influential work by Quinn (1992) and Hampden-Turner (1990) make little or no reference to teams, and Huber (1991), in a major review of organisational learning processes, neglects the role that teams may play.

### The nature of organisational knowledge

A central issue, in the context of notions of the LO is the nature of organisational knowledge (Lyles and Schwenk, 1992; Prahalad and Bettis, 1986). Agreement and disagreement are apparent at many levels of the organisation at all times, and as organisational members try to reach agreement or settle for disagreement they continue to develop organisational knowledge, enabling finer and finer distinctions. However, what is knowledge and how does it develop as well as what are the conditions for knowledge to develop? These issues have received limited attention in the LO literature.

## 2.5 Chapter Summary

In this chapter, the focus is on the factors that have raised to prominence the notion of LO. It attempts to answer the first of the research questions raised in the previous introductory chapter: what is a LO, what factors have spurred the development of the LO? It was discovered that there is no single definition of what a LO is, although there appears to be some common recognition about the core characteristics of a LO like teamwork, shared goals, open communication, sharing of information, system thinking, management support and encouragement of new ideas.

After this, the chapter then turned to look at the various driving forces, forming the context in which a LO must be placed before it may be explored effectively. The factors to consider include (a) the shift in the relative importance of the factors of production away from capital towards labour, particularly intellectual labours; (b) the increasing acceptance of knowledge as a prime source of competitive advantage; (c) the increasingly rapid pace of change in the business environment; (d) increasing dissatisfaction among managers and employees with the traditional, command-and-control management paradigm; (e) the increasingly competitive nature of global business; and (f) the greater demands being placed on all businesses by their customers.

The above driving forces do not on their own combine to create a LO; they merely create an environment in which the LO is a possible route to competitive advantage. This leads one to the discussion that the two main reasons for moving towards being a LO are for survival and excellence, and to do so means one needs to develop an organisation which has the types of culture and processes to create the necessary climate. Systems are also needed to ensure that the organisation can learn continuously. In other words, moving towards being a LO entails change, and most change models emerge from what is generically known as organisational development (OD). OD is about planned change; ie., getting individuals, teams, and organisations to function better. This involves common sense, hard work applied diligently over time, a

systematic, goal-oriented approach, and valid knowledge about organisational dynamics and how to change them. OD programmes are long-term, planned, sustained efforts.

The final part of this chapter briefly looks at a few general problems related to the literature and concept of LO. This includes (a) whether LO proponents are right in their assumption that there is a strong and positive impact on performance which results from being a LO; (b) the limitation of adopting the metaphor of organisations as organisms especially its assumption of functional unity as in reality organisations are not normally characterized by harmony; (c) the challenging task of formulating LO theories as the learning culture characteristics is extremely broad, drawing on work from sociology, psychology and anthropology as well as business disciplines; (d) the large variety and kinds of learning going on in organisations may make any attempt to rigorously assess them in terms of outcomes inappropriate; (e) the fact that teaching component of LO generally is not given as serious consideration as the learning function; (f) a large organisation mentality underpinning much of the writings on LO; (g) mixed treatment on the notion and role of teams in LO literature; and (h) limited attention on the definition of knowledge in LO literature and how it develops as well as the conditions for it to develop.

While it is not possible for this research to address all the issues, an attempt will be made, in the context of NTUC LearningHub (LHub), to (i) move the direction of an organisation towards being a LO using the Malcolm Baldrige Business Excellence framework; (ii) do this in the context of a small and medium enterprise (SME); and (iii) gather evidence to link LO with company performance in the area of sales, customers and employees' satisfaction.

The next 2 chapters will discuss about (i) above, by introducing an OD programme, the Malcolm Baldrige National Quality Award (Chapter 3), and states the relationship of the various dimensions found in the framework with LO concepts (Chapter 4). Chapter 4 will also deals with (ii), highlighting LHub and its various initiatives in relation to LO



and the Malcolm Baldrige Business Excellence framework, and Chapter 5 and 6 will focus on (iii), describing the research methodology and findings.

### **Chapter 3 – Learning Organisation and Business Excellence**

As discussed in Chapter 2, the development of the LO concept is affected by a few important driving forces and in response to this, companies take different routes to move towards being a LO. As such, LOs can take many forms. How this idea develops depends upon the type of business concerned, the context and the situation, and above all the people in that organisation – their skills, values, beliefs and aspirations. Having said this, the chapter also discussed some models of LOs that might be helpful in plotting one's own course.

In this chapter, one particular model, the Malcolm Baldrige National Quality Award, will be introduced. The chapter attempts to answer the second process questions, namely, 'Why is the Malcolm Baldrige Business Excellence framework being treated as a proxy of a LO and does adopting such a framework improve business performance?' It will discuss how the seven dimensions found in its framework are very similar to some selected LO models. The Malcolm Baldrige framework will also be the OD model used for NTUC LearningHub (LHub) and for the purpose of this research, to test the validity of the hypothesis that there will be a positive effect on LHub's business results in the areas of sales, customers and employees' satisfaction after attempting to change it into a LO.

The last section of this chapter will summarise the contents of a few important studies over the last 15 years on the benefits that may be achieved from implementing Malcolm Baldrige business excellence activities and the reasons why it has been implemented. The work includes key learning points. Not all the messages are positive. Although there is compelling evidence that business excellence delivers benefit to the organisation, it is clear that it does not work for everyone.

### **3.1 Business Excellence in Organisations**

Modelling an effective organisation is a traditional pursuit in business schools and consultancies. Systems thinking and total quality management, especially in the teachings of W. Edwards Deming (1986, 1993), have been strong influences. So has the idea of excellence, famously introduced in the 1982 bestseller “In Search of Excellence”, and which has become an enduring focus for many organisational improvement schemes ever since.

However, the problem with excellence is sustaining it. Even a few years after the publication of Peters and Waterman’s book (Peters, 1982), as Futrel (1984) gleefully pointed out in *Business Week*, a sample of companies highlighted in the book no longer met the original criteria. They had, in various ways, fallen from grace. The fall from excellence of twelve of these fourteen companies was attributed to their failure to adapt to fundamental changes in their markets. Such findings raise questions about the traits companies need to sustain excellence.

Organisational performance excellence means different things to different organisations (Scholtz, 1997; Prescott, 1998; Prinsloo et al., 1999; Peters and Waterman, 1982). According to Robson (1988), the absence of a comprehensive and integrated practical model has caused the demise of many efforts to introduce organisational performance excellence. Therefore, constructing a definition of organisational performance excellence seems to be quite a challenging task (Knauft et al., 1991).

Samson and Challis (1999) state that the world’s truly excellent companies illustrate definite observable patterns. These patterns include: (i) a single, integrated improvement strategy; (ii) a conscious focus on using a set of fundamental principles of management to guide behaviour in their organisation; (iii) active management of performance, linking rewards for all employees to organisational performance; (iv) benchmarking themselves against other leading companies and setting corresponding

stretch goals and most importantly; (v) linking together elements of strategy, actions and operations, performance and rewards in powerful, sensible ways.

Veldsman (1994, 2002) postulates that world class organisations need to be characterised by: (i) convergence around specific foci and divergence towards new foci; (ii) extrapolation from present to future creation, maintenance of the existing and creation of the new; (iii) alignment around vision/philosophy and flexibility in the ways to achieve the vision; (iv) control over the context of action (eg. direction, outcomes); and (v) allowing for the survival of the fittest through constructive competition and ensuring support through caring.

Rhinesmith (1996) is of the opinion that no business can excel and succeed without a proper business strategy, which must be translated into appropriate policies, processes, structures, procedures and plans of action. This implies that the integration of these elements into an efficient and effective management system is a prerequisite for corporate success and also the foundation of a global strategy.

Prinsloo et al (1999) developed a model of a world-class organisation. This model depicts direction, delivery system and business results as key elements and concepts of corporate excellence. Prinsloo et al (1999) also regard the concept of joint governing (“partnering”) as an essential component in the management of world-class organisations. Joint governance refers to the inter-relationships between the various stakeholders - customers, suppliers, employees, organised labour, government, community, etc.

Most world-class organisations practise what has been called the “lean management” concept of business (Aurik et al, 2003). Steen (2002) summarises this concept as follows: (i) defining customer value; (ii) adding value at every step along the way; (iii) creating a value chain; (iv) tailoring product to customer needs; and (v) pursuing perfection, ie. seek continuous improvement.

Against this background of premises formulated by different scholarships, and for the purpose of this study, organisational performance excellence, therefore, can be conceptualised as a goal, based on corporate culture, values and belief systems (mindsets), underlined by an integrated framework and fundamental strategic determinants. These strategic determinants provide the foundation stones on which an organisation, committed to excellence, can build its strategic competitiveness (Hamel and Prahalad, 1994; Scholtz, 1997; Denton and Campbell, 1999; Doug, 2000).

### **3.2 Malcolm Baldrige Business Excellence Framework**

Strategic determinants for organisational performance excellence are key areas of organisations, which, if properly managed, will improve an organisation's global competitiveness and performance excellence (Doug, 2000; Ali et al, 2001; Stiglitz, 2002). Organisational model like the U.S. Malcolm Baldrige National Quality Award (GAO, 1991; Wisner and Eakins, 1994; NIST 2002) has condensed a list of strategic determinants for organisational performance excellence. Specifically, these strategic determinants, or 7 dimensions of the Malcolm Baldrige National Quality Award (Figure 3.1), are:

- 1) Leadership - Examines how senior executives guide the organisation and how the organisation addresses its responsibilities to the public and practices good citizenship.
- 2) Strategic planning - Examines how the organisation sets strategic directions and how it determines key action plans.
- 3) Customer and market focus - Examines how the organisation determines requirements and expectations of customers and markets; builds relationships with customers; and acquires, satisfies, and retains customers.
- 4) Measurement, analysis, and knowledge management - Examines the management, effective use, analysis, and improvement of data and information to support key organisation processes and the organisation's performance management system.

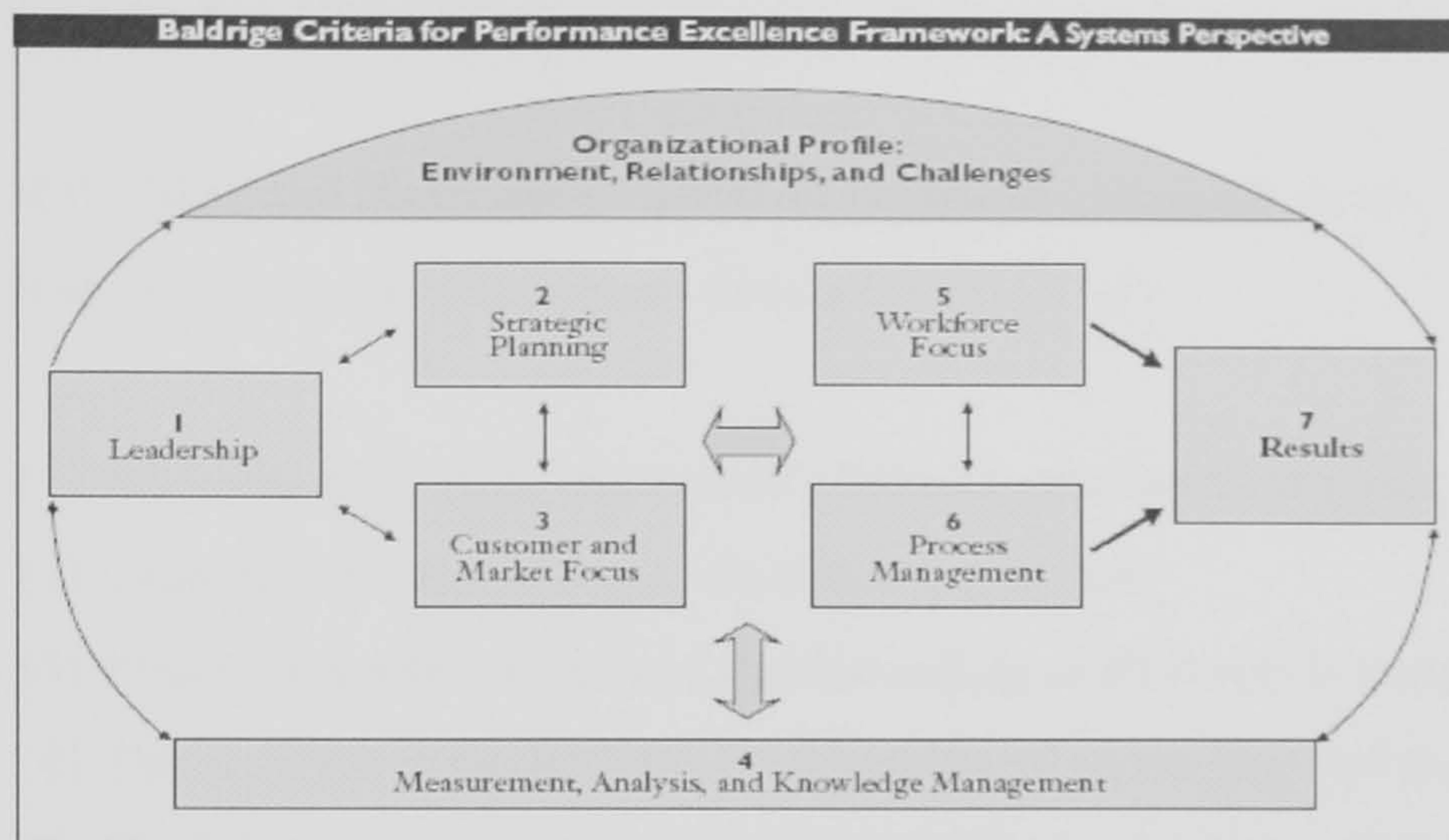
- 5) Workforce focus- Examines how the organisation enables its workforce to develop its full potential and how the workforce is aligned with the organisation's objectives.
- 6) Process management - Examines aspects of how key production/delivery and support processes are designed, managed, and improved.
- 7) Business results - Examines the organisation's performance and improvement in its key business areas: customer satisfaction, financial and marketplace performance, human resources, supplier and partner performance, operational performance, and governance and social responsibility. The category also examines how the organisation performs relative to competitors.

These criteria can be used by organisations of all kinds for self-assessment and training and as a tool to develop performance and business processes. The Award frameworks were seen to be best-practice models for implementing excellence strategies, performing self-assessment, benchmarking, and ultimately delivering improved performance.

The Excellence Model conceptual framework used in this study consists of the Malcolm Baldrige Business Excellence Model, which is based on the following premise as depicted in Figure 3.1 (NIST, 2007):

- Customer and stakeholder satisfaction, people satisfaction, impact on society, supplier and partnership performance  
*are achieved through*
  - Leadership  
*driving*
- Policy and strategy, customer and stakeholder focus, people management, resources and information management, and processes  
*leading ultimately to excellence in*
  - Organisation results.

**Figure 3.1 - The Malcolm Baldrige Criteria Framework**



*Source: 2007 Award Criteria Booklet (NIST, 2007)*

The Award criteria are designed to help organisations utilize an integrated approach to organisational performance that results in (NIST, 2007):

- (1) Delivery of ever-improving value to customers, contributing to marketplace success;
- (2) Improvement of overall organisational operational effectiveness and capabilities; and
- (3) Organisational and personal learning.

In the area of organisational and personal learning, assessing business excellence or organisational excellence is an essential part of a learning and measurement process. This involves people in self assessment and allows organisations to identify strengths and improvement opportunities, as well as enabling the progress of excellence programmes to be monitored in a systematic way. By encouraging each person to develop new awareness about how they view themselves, their work and the world they live in, an organisation will eventually incorporate some common beliefs and characteristics in the work that people do. These beliefs and characteristics will soon translate into policy, practice, and procedures that become ingrained in the way people within the organisation behave. Of course, this process will take time, true

commitment, much practice and the willingness to honestly examine one's personal beliefs, limitations and aspirations.

The focus of the Malcolm Baldrige Award is on enhanced competitiveness. The Award Criteria reflect a few key competitiveness thrusts (NIST, 2007):

- (1) Excellence model is strategically linked to the business goals;
- (2) Customer understanding and satisfaction is vital;
- (3) Employee participation and understanding at all levels is required;
- (4) The need for management commitment and consistency of purpose;
- (5) The organisation is perceived as a series of processes which incorporate customer supplier relationships.

The next section attempts to use these five competitive thrusts to critique the Baldrige model.

*(i) Excellence model is strategically linked to the business goals*

The Baldrige model supports this principle in a number of ways. First, the 7 dimensions represent a business in its totality. Second, policy and strategy is a key criterion and third, the results criteria give some idea of successful strategy. However, the Baldrige model does not formulate strategy, nor does it properly evaluate strategy, rather it evaluates the process of forming strategy. The danger in this limited involvement in the strategic process is that the Baldrige model could be seen as simply a strategic audit tool rather than intrinsically linked with strategy (Madu and Chu-Hua, 1994).

*(ii) Customer understanding and satisfaction is vital*

In this area the Baldrige model is seen as making a significant contribution. Customer Satisfaction is a key result criterion and links must be shown back to enabling criteria.



Customer satisfaction ratings can also be benchmarked across other organisations. One cause for concern is the lack of a predictive element that would help identify new customers and markets, reflecting the lack of strategic integration referred to already.

*(iii) Employee participation and understanding at all levels is required*

The Baldrige model has both people management and people satisfaction enabler and result criteria respectively. These criteria enable approaches to people involvement to be evaluated and benchmarked. However, there are a number of problems in this area. First, the model is an audit tool of what is already happening; it does not indicate best or preferred practice in an organisational context. Also, whereas Total Quality Management (TQM) is often translated through the workforce by simple easily understood approaches (Borley, 1994), the Baldrige model remains rather complicated and bureaucratic in this respect.

*(iv) The need for management commitment and consistency of purpose*

The leadership criterion is a key enabler within the model. Unfortunately, it is difficult to evaluate the effectiveness of leadership. The selection of appropriate criteria depends on the objectives and values of the person making the evaluation, and people have different values. The Baldrige model attempts to include a variety of different criteria in the evaluation but this approach still requires subjective judgement about how to assign a weight to each measure. For instance, one of the criteria is based on a coach/mentor style of leadership that advocates a role modelling approach. This style of leadership is very supportive of the TQM framework (Wilkinson and Willmott, 1994). Perhaps this definition of leadership is not appropriate in all business circumstances and emphasises the limitations of defining all organisational settings within a rigid model.

(v) *The organisation is perceived as a series of processes which incorporate customer supplier relationships.*

Central to the Baldrige model is the business process criterion. This criterion defines a series of steps for systematic management and improvement of business processes. However, the model does not show how business processes can be identified or improved – it remains as a detached audit tool. Also, it may not be appropriate for organisations to be completely process based; there may be a partial process–functional structure (Peppard and Rowland, 1995). The model takes no account of this situation.

Other criticisms of the Baldrige model (Leonard and McAdam, 2002) include (i) criteria are static and not dynamic; (ii) applicants nominate themselves and are not nominated by customers; (iii) it fails to define quality clearly; (iv ) Awards encourage a home-grown approach to quality and this will not help them to achieve world-class performance; (v) companies may focus on winning the Award rather than opportunities for self-examination, learning and improvement; and (vi) pursuing the Award distracts the attention of key executives from running the business.

Despite these shortcomings, quality and business excellence awards that recognise excellent organisational performance have emerged as a significant component of the productivity and quality promotion strategies of many countries as many organisations do see merits in embarking on business excellence (Calingo, 2001). The central purpose of these awards is educational - to encourage sharing knowledge and experience of competitiveness and to drive this learning, creating an evolving fund of knowledge (Porter and Tanner, 2004). In this respect, the purpose is very similar to one of the goals of LO.

### **3.3 Business Excellence and LO**

The similarities between the LO and business excellence characteristics far outweigh the differences. Tobin emphasises the need for LOs to be committed to quality, describing quality as ‘a measure of the skills, knowledge, and abilities of the people

involved in the learning effort' (Tobin, 1993). Interestingly, Lessem (1991) sees quality and learning as the two dominant factors in organisations, viewing learning as the process and quality as the end. He fuses the two concepts to form a more fundamental concept for those interested in organisation learning: total quality learning. Again, this serves to emphasise both the importance of quality as emphasized in Malcolm Baldrige's Criteria for Performance Excellence (CPE) and its close relationship with LOs.

Table 3.1 compares the 7 dimensions of the Business Excellence framework with the different variables derived by Senge (1990), Peddler et al (1991) and Marquardt (1996). Some of these items point clearly at action, others are removed from the action and describe how it appears. Most of them require considerable planning and lobbying. Basically, the intention of all the models is to offer pointers for developers to use as they see fit and tailor to their own organisations. Table 3.1 is thus a mixed list of characteristics that serves as a guide for developers and is not intended to be definitive as there are many ways one can propose what a LO should look like. The very point about the subject matter is that it should be enabling rather than prescriptive. The goal is to put together two streams of thought: the continuous process of learning and the continuous process of improvement.

Finally, both Excellence and LO models share a set of fundamental philosophies. These include: acceptance of responsibility by the top management, customer orientation, high level of employee participation, open and effective communication, fact-based management and strategic quality planning (Pedler et al, 1990; Senge, 1991; Marquardt, 1996; Porter and Tanner, 2004). Both models attempt to focus attention on organisational performance excellence and facilitate a better understanding of the underlying issues. By and large, both fit into an integrated approach to organisation development. However, the full impact of these model frameworks on improving organisational performance, global competitiveness of national and international industry and commerce, as well as applicability to small and medium enterprise and non-profit public service organisations must still be ascertained.

**Table 3.1 - Comparing Business Excellence Framework with Different LO related Variables**

<b>Malcolm Baldrige (1988)</b>	<b>Peddler et al (1990)</b>	<b>Peter Senge (1991)</b>	<b>Marquardt (1996)</b>	<b>Fundamental Philosophies &amp; Concepts</b>
Leadership	A learning climate	Shared Vision	Involved Leadership  Climate of Openness  Multiple Advocates or Champions	Top management leadership; visionary leadership; leadership through involvement; leadership and constancy of purpose; leadership direction and support are essential; social responsibility; fulfil obligations to all stakeholders and society
Strategic Planning	A learning approach to strategy  Participative policy making	Mental Models	Experiment Mindset	Future planning; focus on the future; strategic alignment; agility
Customer & Market Focus	Boundary workers as environmental scanners		Scanning Imperative	Customer-driven excellence; customer focus; primary focus on customers and the marketplace; customers define quality
Measurement, Analysis and Knowledge Management	Informating  Formative accounting and control		Concern for Measurement  Performance Gap	Results orientation; focus on results and creating value; management by facts; factual approach to decision-making; knowledge-driven system
Workforce Focus	Reward flexibility  Self-development opportunities for all	Personal Mastery  Team Learning	Continuous Education	Organisational and personal learning; valuing employees; people development and involvement; continuous learning; cooperation and teamwork; people are most important resource; continuous improvement requires continuous learning
Process Management	Internal exchange  Enabling structures  Inter-company learning	Systems Thinking	Operational Variety  Systems Perspective	Process control; Kaizen improvement; managing for innovation; management by processes; continuous innovation and improvement; partnership development; prevention-based process management; focus on continuous improvement and breakthrough thinking; understand process variability; innovation focus; valuing partners; system thinking and perspective

### **3.4 LO, Business Excellence and Business Results**

Much of the LO literature is conceptual and descriptive. This section attempts to answer a key research question - whether organisations that embrace strategies consistent with the LOs are thought to achieve improved performance (Guns, 1996). Surprisingly, few empirical studies have examined the relationship between the LO concept and firm's financial performance. One exception is recent evidence that firm performance is positively associated with those strategies (Ellinger, Ellinger, Yang, and Howton, 2000) and that LO strategies are related to perceived innovation (Holton and Kaiser, 2000).

As discussed in the previous section, there are similarities between LO characteristics and Malcolm Baldrige National Quality Award framework. Hence, for the purpose of this study, the business performance of Malcolm Baldrige Award winners will be treated as a 'proxy' to the business performance of LOs. This section will present the work by various researchers in chronological order.

The first comprehensive study into the benefits of following a business excellence approach was conducted by the American General Accounting Office (GAO, 1991). The purpose of the study was to determine the impact of formal business excellence practices on the performance of selected US companies. The study reviewed twenty companies that were among the highest-scoring applicants in the 1988 and 1989 Baldrige Award process. The overall summary concluded that:

- 1) Companies that adopted business excellence practices experienced an overall improvement in corporate performance. In most cases companies achieved better employee relations, higher productivity, greater customer satisfaction, increased market share and improved profitability.
- 2) Each of the companies studied developed its own unique environment that had its own opportunities and problems. There were, however, common features in

their management approach that were major contributing factors to their improved performance.

- 3) Many different types of companies benefited from a business excellence approach, underpinning the fact that the practices were universally applicable.
- 4) None of the companies reaped the benefits of their approach immediately. It was concluded that allowing sufficient time for results to be achieved was as important as initiating a business excellence programme.

Research conducted by Wisner and Eakins (1994) studied the performance of Baldrige winners over the period 1986-1993. Companies under review include Motorola, Zytech, AT&T, Granite Rock Co and Ritz-Carlton Hotel. All recorded significant improvements in their key performance indicators such as sales volume, costs savings, on-time deliveries, in-process defects, design cycle times and employee satisfaction. There are several common themes with the decrease in costs and cycle time standing out, as does the increase in employee involvement and customer satisfaction.

The overall conclusions of the report are that, while winning the Baldrige Award has not guaranteed success, the Award winners are generally recognised as profitable companies and exhibit strength in terms of market share, product quality and other performance benchmarks. Of particular importance is that the Baldrige Award winners provide examples that investment in quality programmes can result in cost savings, market share improvement, and impressive improvements in manufacturing and service performance.

While the above studies basically indicate that there is a positive relationship between Baldrige winners and their business performance, Helton (1995) in his study on the share price performance of Baldrige winners discovered that a couple of the early Baldrige winners actually ran into financial difficulty within a few years of winning the award, and this was not a good advertisement for the process. Such was the impact of

Helton's work that each year the National Institute for Standards and Technology (NIST), which manages the Baldrige Awards, releases updated figures to reflect the latest data.

In 1995, Powell conducted a survey of firms with the objective of identifying whether business excellence led to a competitive advantage (Powell, 1995). The firms selected for the study included organisations that were considered to have implemented business excellence, and those that had not. Interviews were conducted with the CEO and Quality Executives to collect more information about their approaches and performance. A number of interesting conclusions were drawn from the work:

- 1) The study concluded that business excellence could produce economic value to the firm, but not for all adopters;
- 2) Success depended on executive commitment, having an open organisation, and employee empowerment;
- 3) Success depended less on benchmarking, training, flexible manufacturing, process improvement and improved measurement.

The overall conclusion from the study was that business excellence can produce a competitive advantage, but that it is not necessary for success in every instance. It was further suggested that business excellence's highest purpose and real contribution to US business is that it provides a framework that helps firms to understand and acquire resources as part of an integral change programme.

Hendricks and Singhal (1997, 2000, 2001) did a study similar to Helton and NIST described above, but theirs was more extensive because it concluded many types of excellence awards and not just the Baldrige Award. By using the receipt of a quality award as a 'proxy' for effective business excellence implementation, winners from 140 different award bodies were selected and a sample of about 600 publicly traded award winners, including those from Baldrige, were studied. The organisations' performance during implementation, which was taken to be a five-year period before the award was

given, was compared to the performance post-implementation, which was a five-year post-award period. The performance of the winners was compared with the performance of carefully chosen benchmark organisations.

The first major conclusion from the research was that there was no difference in the performance of the award winners and the benchmark group in the period prior to winning the award. The performance post-awards was, however, significantly different. A further conclusion is that more benefit in percentage terms is achieved by small compared to larger organisations. The work by Hendricks and Singhal provides compelling evidence that business excellence is of benefit to organisations. The research papers include some other information that is also of interest, such as an analysis of self-assessment scores to see what factors drive the financial performance. The authors conclude that business excellence is not a tool or technique, a programme, or a replacement for corporate strategy, but it is a source of competitive advantage. Although an American study, it has been accepted that the findings are applicable throughout the world, and work is currently being undertaken to replicate the work with European Award winners (Porter and Tanner, 2004).

Fisher et al (2001) conducted a survey of the different USA State Awards, and compared some economic factors found in these States with those found in States that did not administer a State Award. The underlying principle of Baldrige is that the promotion of such awards will lead to economic success. Logic thus dictates that if this is indeed the case, the economic performance within States with awards will be superior to that in those that do not.

The results indicated that there may be a relationship between States that demonstrate commitment to quality business practices, but it is accepted that many other factors have an influence on economic performance. This is an important conclusion, as several of the studies covered in this section conclude that business excellence is not a guarantee for success. The research supports these findings.



To sum up, in this section, a range of empirical research conducted has been examined to show the value that an organisation may gain from adopting a business excellence philosophy which, as stated in an earlier section, has a number of similarities with the key components of the LO. This work stretches back over a decade, and includes all the major business excellence frameworks covered in Chapter 3.

Research indicates that business excellence delivers competitive advantage. Many researchers have shown a link between quality activities and organisational performance. While receiving a Baldrige Award or any other award is not a guarantee of success, to win the award organisations must show continuous and major improvements. The approach for all the studies in this section is essentially the same but it is apparent that the selection of the comparison or benchmark group makes all the difference in how impressive the results appear.

With this, the research question mentioned in Chapter 1 is slightly modified with an extension as follows:

- (i) Will an organisation that adopts the Malcolm Baldrige business excellence management approach be one step closer towards being a LO?*
- (j) Will an attempt to change an organisation into a LO by using the Malcolm Baldrige business excellence approach have a positive effect on business results in the area of sales revenue, customer satisfaction and employees' satisfaction?*

The following section will explain briefly a real life situation of NTUC LearningHub Pte Ltd (LHub) and examines the extent to which the company has grasped the opportunity that LOs represents. The purpose of highlighting this is that LHub is the subject of interest in this research work and the author will empirically study its performance in the area of sales, customers and employees' satisfaction from the research period of July 2005 to July 2006. Details of this will be covered in Chapter 5 on research methodology.

### **3.5 Case Study – NTUC LearningHub Pte Ltd (LHub)**

In late 2003, the National Trades Union Congress made a decision to incorporate its Computer Training Centre (CTC) on 1 August 2004 and renamed the training centre to NTUC LearningHub Pte Ltd (LHub). The newly incorporated unit is 100% owned by NTUC Investment Cooperative, which is in return 74% owned by NTUC and 36% owned by 34 NTUC affiliated unions.

NTUC hopes that the move will not only boost its commitment to promote lifelong employability for union members, but will also enable it to expand in new areas such as executive training, adult learning and skills certification. The newly incorporated arm will become a completely independent organisation that will respond faster to customer needs and provide even higher standards of quality training. The move will also allow the NTUC to focus on its core business of labour relations. At the same time, training and skills upgrading continue to remain a priority area for the labour movement.

At incorporation, LHub had 29 staff, including 8 senior officers and 21 support and counter staff. The products offered by CTC then included 60 different types of information technology courses targeted primarily at union members and workers, English literacy courses like Functional Literacy for Our Workers (FLOW), Basic Education for Skills Training (BEST), Worker Improvement through Secondary Education (WISE) and Critical Enabling Skills for Workers (CREST).

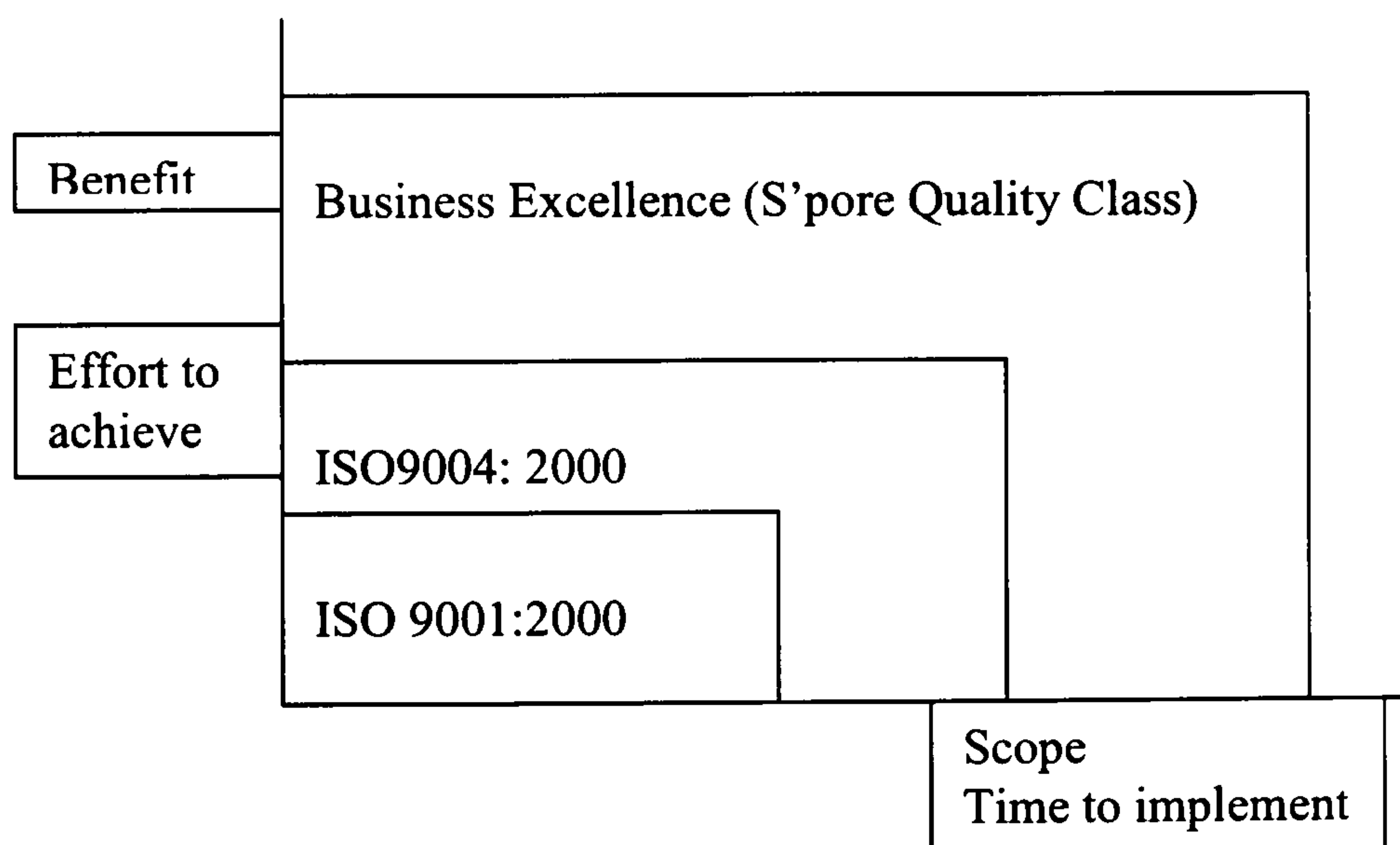
In 2006, LHub decided to embark on an ISO 9000 journey and use the ISO 9000 framework as a vehicle for business improvement. The management felt that the process of assessing LHub for conformance to a Quality Management System like ISO 9000 and the review process are important elements in the process of continuous improvement. The ultimate goal is to:

1. Achieve a better understanding and consistency of all quality practices throughout LHub;

2. Ensure continued use of the required quality system year after year;
3. Improve documentation;
4. Improve quality awareness;
5. Strengthen LHub as an organisation and improve customer confidence and relationship;
6. Yield cost savings and improve profitability;
7. Form a foundation and discipline for improvement activities within the quality management system.

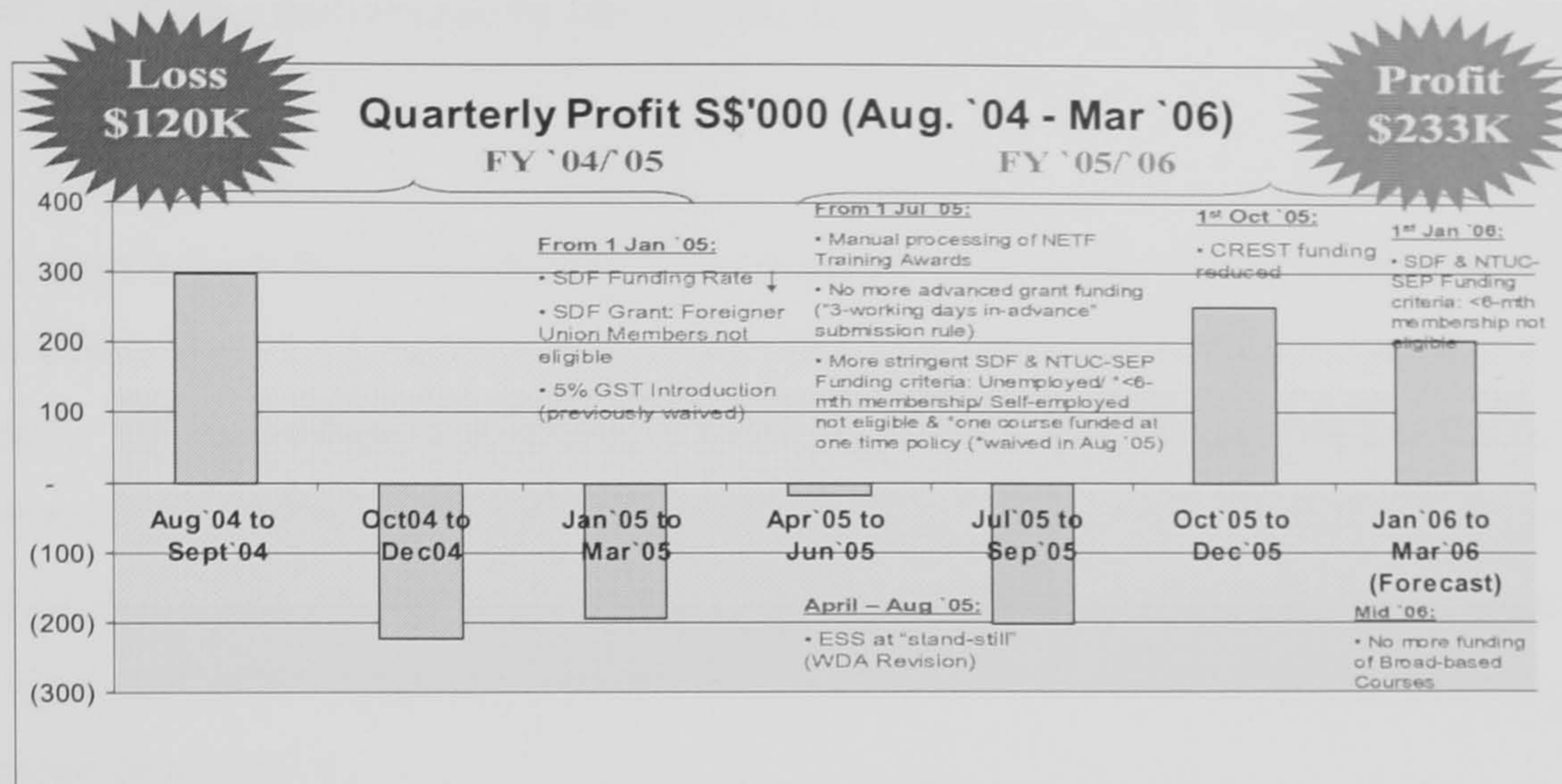
A Senior Manager was employed to oversee this initiative. The target set is to go beyond ISO 9001:2000 and move towards ISO9004:2000, then business excellence in the form of the Singapore Quality Class Award, the Singapore equivalent of Malcolm Baldrige Business Excellence Award (see Figure 3.2).

**Figure 3.2 - ISO 9000 and Business Excellence**



Ever since then, LHub's business progress has been spectacular. From a loss of \$120k in FY 04/05, it made a profit of \$233k in FY 05/06, despite continued market shocks especially in the area of reduced government funding (see Figure 4.19). The prospect is even brighter for FY 06/07 as LHub was able to make profit every month since the inception of the FY in April 06 (see Figure 4.20) and the expected profit for FY 06/07 is more than \$2.5m.

**Figure 3.3 - LHub's Quarterly Profit for FY04/05 and FY05/06**



In the context of this case study and based on the extended research question mentioned in the previous section, the hypothesis is as follows:

*H1a: From July 2005 to July 2006, LHub has moved towards being a LO by adopting the Singapore Quality Award (SQA) business excellence approach.*

*H1b: By embarking on LO and business excellence journey, LHub's sales revenue, customer and employees' satisfaction level will increase from July 2005 to July 2006*

### 3.5 Chapter Summary

It is difficult, but nevertheless essential, to attempt to determine best practice in the field of organisational learning. The development of a model of best practice allows one to make reliable recommendations to organisations about the value of business excellence and for that matter, LOs.

This chapter is organised into five sections. First, it introduces the concept of organisational performance excellence through a literature review and attempt to determine the best practice. Against this background, organisational performance

excellence has been conceptualised as a goal, based on corporate culture, values and belief systems, underlined by an integrated framework and fundamental strategic determinants.

The second section of the chapter states how these strategic determinants provide the foundation for the 7 dimensions of the Malcolm Baldrige National Quality Award, namely, (i) leadership, (ii) strategic planning, (iii) customer and market focus, (iv) measurement analysis, and knowledge management; (v) workforce focus; (vi) process management; and (vii) business results. These criteria can be used by organisations of all kinds for self-assessment and training and as a tool to develop performance and business processes.

The third section of this chapter highlighted a few shortcomings of the Baldrige model, namely, (i) it could be seen as simply a strategic audit tool rather than intrinsically linked with strategy; (ii) the lack of a predictive element that would help identify new customers and markets; (iii) it is an audit tool of what is already happening and does not indicate best or preferred practice in an organisational context; (iv) remains rather complicated and bureaucratic for the workforce to understand; (v) definition of leadership and criteria used may not be appropriate in all business circumstances; (vi) remains as a detached tool and does not show how business processes can be identified or improved; and finally, (vii) it takes no account of how organisations may be a partial process–functional structure rather than completely process based.

Despite these limitations, quality and business excellence awards that recognise excellent organisational performance have emerged as a significant component of the productivity and quality promotion strategies of many countries. There is also a lot of similarities between LO and business excellence concepts. Comparing the Baldrige model with those developed by Peddler et al (1990), Senge (1991) and Marquardt (1996), it can be seen that the fundamental philosophies are not very much different. These include acceptance of responsibility by the top management, customer

orientation, high level of employee participation, open and effective communication, fact-based management and strategic quality planning.

However, the full impact of these model frameworks on improving organisational performance must still be ascertained. This leads to the fourth section of the chapter, where a literature review is done on the relationship between the LO/business excellence and a firm's financial performance, which is also subject of interest in this study. Research indicates that business excellence delivers competitive advantage. A few of the research studies question the principles of some of the frameworks, and not all the studies are in agreement. The central message is that the framework chosen and the method of implementation should meet the needs of the organisation. One point to note is that although a number of different methods have been used to conduct the research, most of the research has been focused on the US Baldrige framework. Perhaps it is time for more extensive studies in other parts of the world.

The final section of this chapter introduces a case study. This Malcolm Baldrige Model as a proxy of LO framework has been adopted by NTUC LearningHub (LHub) as part of its plan to move towards Singapore Quality Class (SQC) Award status. It is treated as one major effort to turn around LHub's business. Henceforth, the progress of LHub has been used as a basis for an empirical study in this research to gauge its impact on sales, customer and employees' satisfaction. The next chapter will further elaborate the different strategic determinants found in the Malcolm Baldrige model, explain their relationship with LO concepts, and briefly touch on what LHub has done in this respect.

## **Chapter 4 – Strategic Determinants of Business Excellence and Learning Organisation**

The previous chapter introduced the Malcolm Baldrige Business Excellence framework and stated the similarities of its 7 strategic determinants, or dimensions, with selected popular LO models. It was mentioned that the Baldrige model will be used as a proxy for a LO to answer the third process question of this research - ‘Why is the Malcolm Baldrige Business Excellence framework being treated as a LO proxy and does adopting such a framework improve business performance?’

The literature review on the benefits that may be achieved from implementing Malcolm Baldrige came out with compelling evidence that it does deliver benefits to organisations, though it is also clear that it does not work for everyone. The pivot lies in choosing the right method of implementation to meet the needs of each organisation.

This chapter will go further by answering the third process question of this research – ‘How are the strategic determinants or variables found in the Malcolm Baldrige Business Excellence framework related to LO?’

Surprisingly, little empirical work has been done to test the structures of the various business excellence models. One such study is done by Pannirselvam and Ferguson (2001) who attempted to assess the relationship within the Baldrige model by studying 69 organisations, aiming their research specifically at answering the questions through expert opinions:

- 1) Are the proposed relationships between the categories in the framework valid?
- 2) What is the strength of the relationship between the different quality management constructs prescribed by the Baldrige criteria?

The researchers concluded that their analysis provided evidence to confirm the validity of the Baldrige criteria. They also noted that there had been changes to the Baldrige criteria since 1993, which was the year on which the analysis was based. They felt, however, that the conclusion is still valid.

This chapter will elaborate each of the strategic determinant, or dimension, of the Malcolm Baldrige model, namely, (i) Leadership, (ii) Strategic Planning, (iii) Customer and Market Focus, (iv) Measurement, Analysis and Knowledge Management, (v) Workforce Focus, and (vi) Process Management. It will then take the opportunity to highlight some of the findings in Pannirselvam and Ferguson's (2001) study. Essentially, the discussion of each dimension will be structured in the following manner:

- (a) Definition;
- (b) Its relation with the LO concept;
- (c) Application in LHub

#### **4.1 Leadership**

The term leadership means different things to different people. Researchers usually define leadership according to their individual perspective and the aspect of the phenomenon of most interest to them (see Table 4.1). Leadership has been defined in terms of individual traits, behaviour, influence over other people, interaction patterns, role relationships, occupation of an administrative position, and perception by others regarding legitimacy of influence. However, most definitions of leadership reflect the assumption that it involves a social influence process whereby intentional influence is exerted by one person over other people to structure the activities and relationships in a group or organisation.



**Table 4.1 - Different Definitions of Leadership**

- 1) The behaviour of an individual when he is directing the activities of a group toward a shared goal (Hemphill and Coons, 1957);
- 2) Interpersonal influence, exercised in a situation, and directed, through the communication process, toward the attainment of a specific goal or goals (Tannenbaum, Weschler, and Massarik, 1961);
- 3) The initiation and maintenance of structure in expectation and interaction (Stogdill, 1974);
- 4) The influential increment over and above mechanical compliance with the routine directives of the organisation (Katz and Kahn, 1978);
- 5) The process of influencing the activities of an organised group toward goal achievement (Rauch and Behling, 1984);
- 6) Leaders are those who consistently make effective contributions to social order, and who are expected and perceived to do so (Hosking, 1988).
- 7) A process of giving purpose (meaningful direction) to collective effort, and causing willing effort to be expended to achieve purpose (Jacobs and Jaques, 1990);

#### *4.1.1 Leadership and LO*

Various authors have considered the new roles that will be required of leaders in LOs (Senge, 1990; Rolls, 1995; Marquardt, 1996; Guns, 1996). The work of two of the most prominent authors is shown in Table 4.2 vis-à-vis the role championed by the Baldrige model.

Looking specifically at the leadership roles stipulated by Baldrige (NIST, 2007), Senge (1990) and Marquardt (1996) in Table 4.2, it can be seen that leaders who wish to create a LO will need to adopt a change approach. This will allow him or her to cultivate an environment of constant questioning and risk-taking, and frequent reinvention of business practices and products. However, elements of the other approaches, particularly the expertise and human assets approaches, are required as well.

**Table 4.2 - Comparison of Leadership between Baldrige (2007), Senge (1990) and Marquardt (1996)**

<b>Baldrige, 2007</b>	<b>Senge, 1990</b>	<b>Marquardt, 1996</b>
Visionary leadership to set direction, create a customers focus, and establish clear and visible values and high expectations	<i>Designer</i> to create vision, purpose and values of the organisation	
Provide a framework for achieving excellence, ensure development and deployment of strategies and a system for achieving excellence, stimulating innovation, and building knowledge and capability	<i>Designer</i> to create an environment in which learning can flourish	<i>Architect and designer</i> to design new techniques, structures and processes and integrate these into a system that will be successful in the organisation's competitive environment  <i>Knowledge managers</i> to motivate and assist colleagues in the collection, storage, and distribution of knowledge within and outside the unit.
Inspire and motivate the entire workforce and encourage all employees to contribute, to develop and learn, be innovative and creative	<i>Steward</i> to advocate purpose story - explaining why the leader acts in the way that he or she does; how and why the organisation needs to go forward; and how and why that progress is part of something larger	<i>Advocate and champion for learning</i> processes and projects.  <i>Co-learner and model for learning</i> to encourage, motivate and help workers to improve their learning skills.
Serve as role models and reinforce the values through their ethical behaviour. Personally involved in developing the organisation's future leadership capability, reviewing organisational performance, and employee recognition.	<i>Teacher</i> in helping people achieve more accurate, more insightful, and more empowering views of reality. To understand instinctively the reasons for change and the strategic direction of the company, but also to communicate, to teach, to conceptualise these insights so that they become widely understood.	<i>Co-learner and model for learning</i> to perform as devoted learners to demonstrate a love of learning.  <i>Coordinator</i> of people's work in order to allow them to perform at their best.

This observation is very close to Guns' (1996) observation that the best leaders for the LOs are characterized as stimulating. They are able to change the levels of challenge and support they provide, depending on the needs of individual employee in particular situations. Such support could be manifested in several ways such as by providing required resource-based, connection or obstacle-removal assistance; effectively exercising interpersonal skills and offering any required emotional support; and supporting employees' decisions. When a mistake occurs, the leader should follow up immediately to help the employee learn from that mistake.

As seen above, although there are a number of leadership roles which may be necessary for the successful creation and maintenance of a LO, it is unclear whether these roles are necessarily unique to LOs. Only a few of the proposed roles required of leaders in LOs deal directly with learning; the others may be equally appropriate within any organisation. For example, the role of the leader as the designer of the organisation must be equally important whether or not the leader chooses a design that is appropriate to promote LO. He or she could – and perhaps is more likely to – choose from a range of alternative designs, each of which would be an important factor in the organisation's success. However, the roles required for the creation of a LO are sufficiently distinct for their elucidation to be valuable.

Leaders who draw on broad behavioural repertoires and vary the application of behaviours in their repertoires depending on whether they interact with their subordinates, peers, or superiors perform more effectively (Hooijberg and Schnieder, 2001). For example, leaders must be able to communicate visions, establish goals, monitor progress, and motivate subordinates to achieve results. Consequently, leaders need to demonstrate flexibility in dealing with others by adjusting to the demands of the social environment (Mumford et al, 2000). In other words, implementation of plans occurs within a social context. The senior management of NTUC LearningHub Pte Ltd (LHub) uses this approach (see case study below).

#### *4.1.2 Leadership Case Study (LHub)*

This section will touch briefly on a real life situation of LHub and examines the extent to which the company has grasped the opportunity that LOs represents. The purpose of highlighting this is that LHub is the subject of interest in this research work and there will be empirical study done in its performance in the area of sales, customers and employees' satisfaction from the research period of July 2005 to July 2006. Details of this will be discussed in Chapter 5 on research methodology.

In 2004, the year of incorporation, LHub was basically supported by three main product lines, namely Information Technology (IT), Continuing Education and Training (CET) with a few English literacy programmes and critical enabling skills courses, and an assessment centre (CertCentral). Its sales revenue was about S7m, with IT contributing to the lion's share. However, despite IT's great contributions to total revenue, it was actually operating at a loss after deducting all operating expenses. To make matters worse, the immediate prospects for the current product offerings were poor for the following reasons:

- 1) IT – Declining long term demand for generic computer training as almost all new entrants to the workforce are computer literate, while many of the matured workers have either been trained or retired. Also, there has been a significant reduction in government subsidies in 2005 for IT courses, which would impact on more than 85% of LHub's courses.
- 2) Certification – A large extent of its business was tied to the IT business and it was operating in a mature market facing a threat of long term decline.
- 3) CET – BEST and WISE English literacy courses were also facing long term decline with reasons similar to that of IT's above as the Singapore workforce has become more literate. Its contents were also outdated and the Workforce Development Agency (WDA) had indicated that it would phase out these two programmes, which were at least two decades old, in a few years time. As for CREST, the programme was basically outsourced to a third party training provider and CET basically played the role of a Marketing agent.

Facing such a stark and worrying situation, the management felt an urgent need to instil change in the organisation. It quickly called for a strategic planning session with all the senior staff to chart out the future direction of the organisation in November 2004, three months after the date of incorporation. After the session, LHub came out with a

mission, vision and values (See Table 4.3). The senior management team then communicated them to all staff, shareholders, key suppliers and partners:

**Table 4.3 - Mission, Vision and Values of LHub**

Mission	Vision	Values
<ul style="list-style-type: none"> <li>➤ Improve the lifelong employability of Singapore workers by providing innovative, high quality and affordable learning</li> <li>➤ Provide a challenging and rewarding career for our staff and trainers</li> <li>➤ Provide a fair return on investment to our shareholders</li> </ul>	<ul style="list-style-type: none"> <li>➤ LearningHub is the “FairPrice” and “Income” of Continuing Education and Training               <ul style="list-style-type: none"> <li>▪ 5% of entire CET market</li> <li>▪ At least 50% market share in target segments</li> <li>▪ Leader in product innovation with shortest time-to-market</li> </ul> </li> <li>➤ Brand is a household name               <ul style="list-style-type: none"> <li>▪ Synonymous with quality and customer focus</li> <li>▪ “No one got fired for hiring LearningHub”</li> </ul> </li> <li>➤ Set market benchmarks for the best combination of price, product quality and customer service: no competitor should beat us in all three dimensions</li> <li>➤ Foundation laid for a strong international business               <ul style="list-style-type: none"> <li>▪ 20% revenues from overseas</li> <li>▪ Employer of first resort in the training and education industry</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>➤ Stay focused on the Vision</li> <li>➤ Integrity               <ul style="list-style-type: none"> <li>▪ What do you want your mother to read about you in The Straits Times?</li> </ul> </li> <li>➤ Customer focus: must be real</li> <li>➤ 80/20               <ul style="list-style-type: none"> <li>▪ “Elephants, not bunnies”</li> <li>▪ “Is this a \$1000 decision or a \$10 decision?”</li> <li>▪ “3 things, not 10”</li> </ul> </li> <li>➤ Know your enemy, know yourself</li> <li>➤ Good execution more important than good strategy               <ul style="list-style-type: none"> <li>▪ Plan, Do, Check, Act</li> <li>▪ What is measured will be done</li> </ul> </li> <li>➤ Play to win, or don’t play</li> </ul>

After communicating this vision, mission and values to stakeholders, the senior management went on to create the kind of strategies, structures, cultures processes, procedures and relationship that make this possible.

The key challenge is to change the old Computer Training Centre’s (the predecessor of LHub before incorporation) “not-for-profit” mentality, where many things were looking at an administrative perspective rather than customer-centric perspective. Careful steps were taken in the area of target setting, rewards allocation, selection and dismissal process, role modeling, communication of values during management and staff meetings, and reactions to crisis as the emotionality surrounding them increases potential for learning about values and assumptions.

In the Malcolm Baldrige Award, the criteria representing leadership is the driving force that influences all other elements of quality management. The results from the research of Pannirselvam and Ferguson (2001) partially validated this, indicating that leadership significantly directly or indirectly affects all of the systems components except for strategic quality planning and information management, which was not tested in the model.

## **4.2 Strategic Planning**

Planning is the process of establishing objectives and choosing the most suitable means for achieving these objectives prior to taking action (Goodstein et al, 1993). As noted by Ackoff (1981), “Planning....is anticipatory decision-making. It is a process of deciding....before action is required.”

In contrast, strategic planning is the process by which an organisation envisions its future and develops the necessary procedures and operations to achieve that future (Goodstein et al, 1993). This vision of the future state of the organisation provides both a direction in which the organisation should move and the energy to begin that move. The basic steps of the strategic planning process include (i) information gathering and analysis; (ii) identification of critical issues facing the organisation; (iii) development of a strategic vision, mission review/revision; and (iv) the development of strategic goals and strategies (Thompson and Strickland, 1992).

In short, strategic planning needs to answer three basic questions for an organisation (Gup, 1979):

- 1) Where are you going? – Without a clear sense of direction, ie. without a mission statement, clarity about the scope of operations, and a set of specific goals and objectives; an organisation is adrift.

- 2) What is the environment? – In answering this question the organisation is forced to take a hard, objective look at itself, its external environment, its competitors and the threats and opportunities that these pose. Furthermore, the organisation must measure the gap between its goals or objectives and its capacity to attain those goals or objectives.
- 3) How do you get there? – That is, what are the specific business models that can enable the organisation to reach its goals and how do the organisation's resources need to be allocated to make these models work?

How these questions can be truthfully answered in a way that positively impacts the fate of an organisation is important.

#### *4.2.1 Strategic Planning and LO*

Using Gup's (1979) three basic questions above as a point of reference, one can again find similarities in this strategic planning process if one compares the Baldrige (NIST, 2007), Senge (1990) and Marquardt (1996) ideas on strategic planning (see Table 4.4).

Here learning is of strategic value, it is collected and distributed, designed into work processes and informs all business dealings and transactions. It can be seen from the comparison above that building a LO do need a well-orchestrated strategic plan and commitment on the part of many people in the organisation. It is important to create a stimulating climate for organisational learning that will in return provide the critical set of conditions under which employees can unfold, transform, grow, and flourish in uncertainty. In order to encourage learning, an organisational culture must be created that will sustain an environment that values various and often conflicting points of view and considers many options.

**Table 4.4 - Comparing Strategic Planning between Baldrige (2007), Senge (1990) and Marquardt (1996)**

<b>Gup, 1979</b>	<b>Baldrige, 2007</b>	<b>Senge, 1990</b>	<b>Marquardt, 1996</b>
<p><i>Where are you going?</i></p> <p><i>What is the environment?</i></p>	<p><i>Strategy development</i> to examine how organisation sets strategic direction, and how it determines key planning requirements for enhancing competitive position and overall performance improvement</p>	<p><i>Systems thinking</i> to comprehend the big picture</p> <p><i>Mental models</i> to critically question old assumptions</p> <p><i>Shared vision</i> to arrive at a collective purpose</p>	<p><i>Scanning imperative</i> as sound learning cannot continue without a solid awareness of the environment in which they are functioning</p> <p><i>Systems perspective</i> to keep a broad perspective and thinks in terms of the interdependency of organisational variables</p> <p><i>Experiment mindset</i> as learning comes through experience, so the more an organisation can plan guided experiences, the more it will learn</p>
<p><i>How do you get there?</i></p>	<p><i>Strategy deployment</i> focusing on how the strategies are converted into plans and describe how key business drivers are translated into action plan</p>	<p><i>Personal mastery</i> to do one's job well</p> <p><i>Team learning</i> to work together collaboratively</p>	<p><i>Operational variety</i> in realising that there are more ways than one to accomplish business objectives and work goals</p>

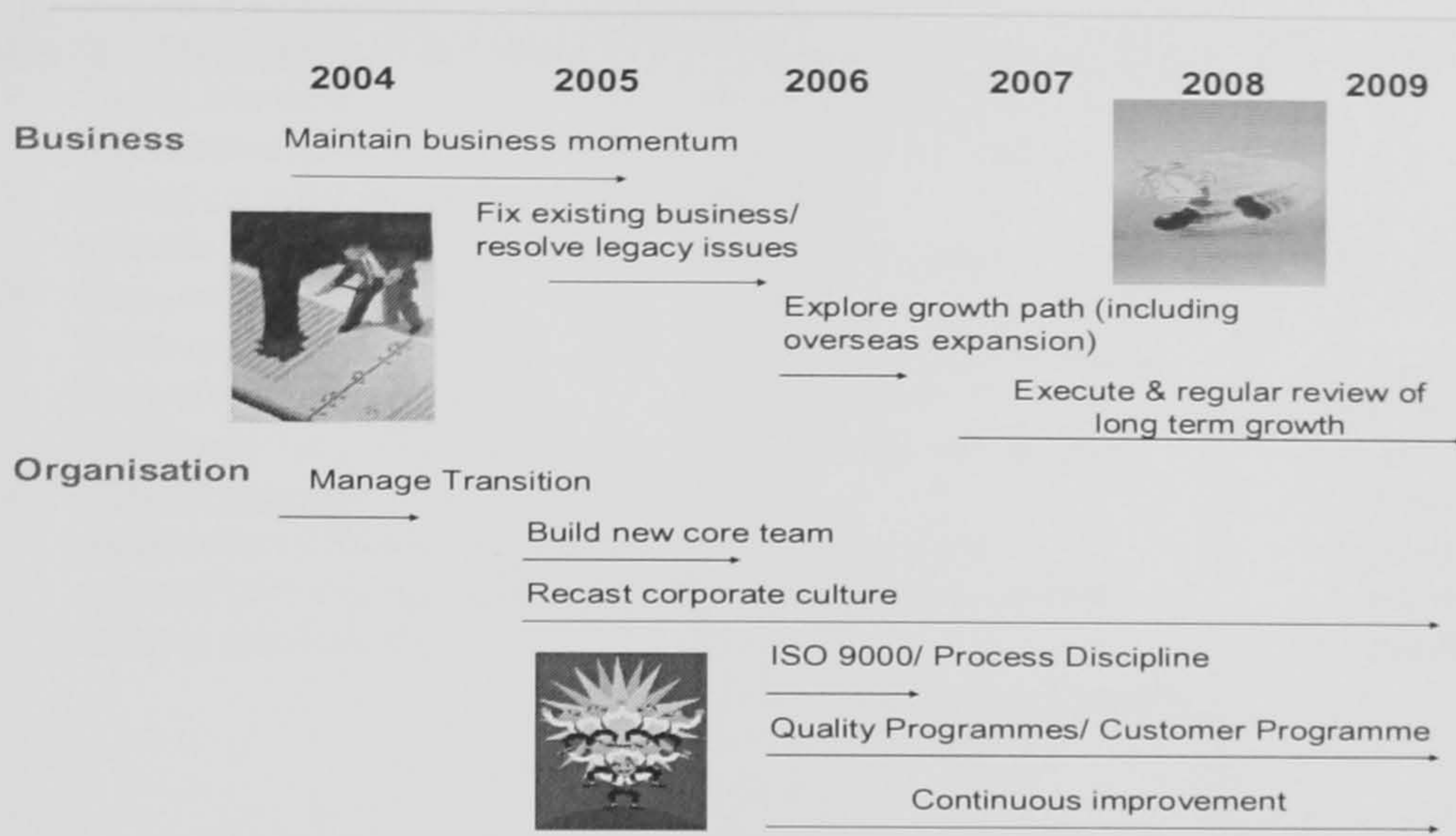
#### 4.2.2 Strategic Planning Case Studies (LHub)

The immediate priority during LHub's incorporation at 2004 to 1<sup>st</sup> Quarter of 2005 was to stabilize the core IT and CET businesses, before exploring new growth path in the 2<sup>nd</sup> Quarter of 2005 and beyond, ie. to diversify the current product mix (see Figure 4.1).

In the area of organisation development, the attention was to build teamwork and recast corporate culture to a customer-centric and profit-oriented one, before embarking on the ISO 9000 project.



**Figure 4.1 - LHub's Business Growth Path**



The next stage of strategy development involves taking actions to develop the skills and capabilities needed to achieve competitive advantage. The aim is to build LHub's competence in one or more core activities crucial to strategic success and then use the core competence as a basis for winning a competitive edge over rivals. After a brainstorming session, the management came to a consensus that all commercial training providers in Singapore rely on at least one of the following core competencies, viz. (i) Marketing, (ii) Content/Product Development; or (iii) Training Fulfillment, and each core competency differs in its profile of rewards and risks.

After careful deliberation on LHub's own internal strengths and weaknesses, it was decided that LHub's circumstances dictate that it should focus on fulfillment, followed by marketing capabilities. The build-up would be done in phases, until the final phase of content/product driven capabilities (see Table 4.5).

**Table 4.5 - LHub's 3-Phase Plan**

<b>Phase 1 Fix and Strengthen Fulfillment</b>	<b>Phase 2 Beef up Marketing</b>	<b>Phase 3 Strengthen content delivery</b>
<ul style="list-style-type: none"> <li>➤ Strong frontline registration/CRM system</li> <li>➤ Strong course delivery and operational support system</li> <li>➤ Comprehensive Strategic Business Units (SBU) and Strategic Functional Units (SFU) policies and processes</li> <li>➤ <u>Desired outcome</u> – (i) greater scale efficiencies; (ii) reduced cost; (iii) increased revenue and cash flow</li> </ul>	<ul style="list-style-type: none"> <li>➤ Strong market positioning</li> <li>➤ Timely market intelligence information</li> <li>➤ Strong brand equity and high visibility</li> <li>➤ High volume of advertising and promotion</li> <li>➤ Strong media network and relation</li> <li>➤ Positive messages</li> <li>➤ Recommend new growth areas</li> <li>➤ Return on Investment reports (media and activities analysis)</li> <li>➤ <u>Desired outcome</u> – (i) positive brand supported by strong CRM; (ii) increased revenue</li> </ul>	<ul style="list-style-type: none"> <li>➤ Improve courseware</li> <li>➤ Higher quality trainers</li> <li>➤ Adopt variety of effective teaching tools</li> <li>➤ Improve facilities</li> <li>➤ Innovate delivery methods</li> <li>➤ <u>Desired outcome</u> – (i) high quality trainers and courseware; (ii) innovative training; (iii) increased customers satisfaction; (iv) increased revenue</li> </ul>

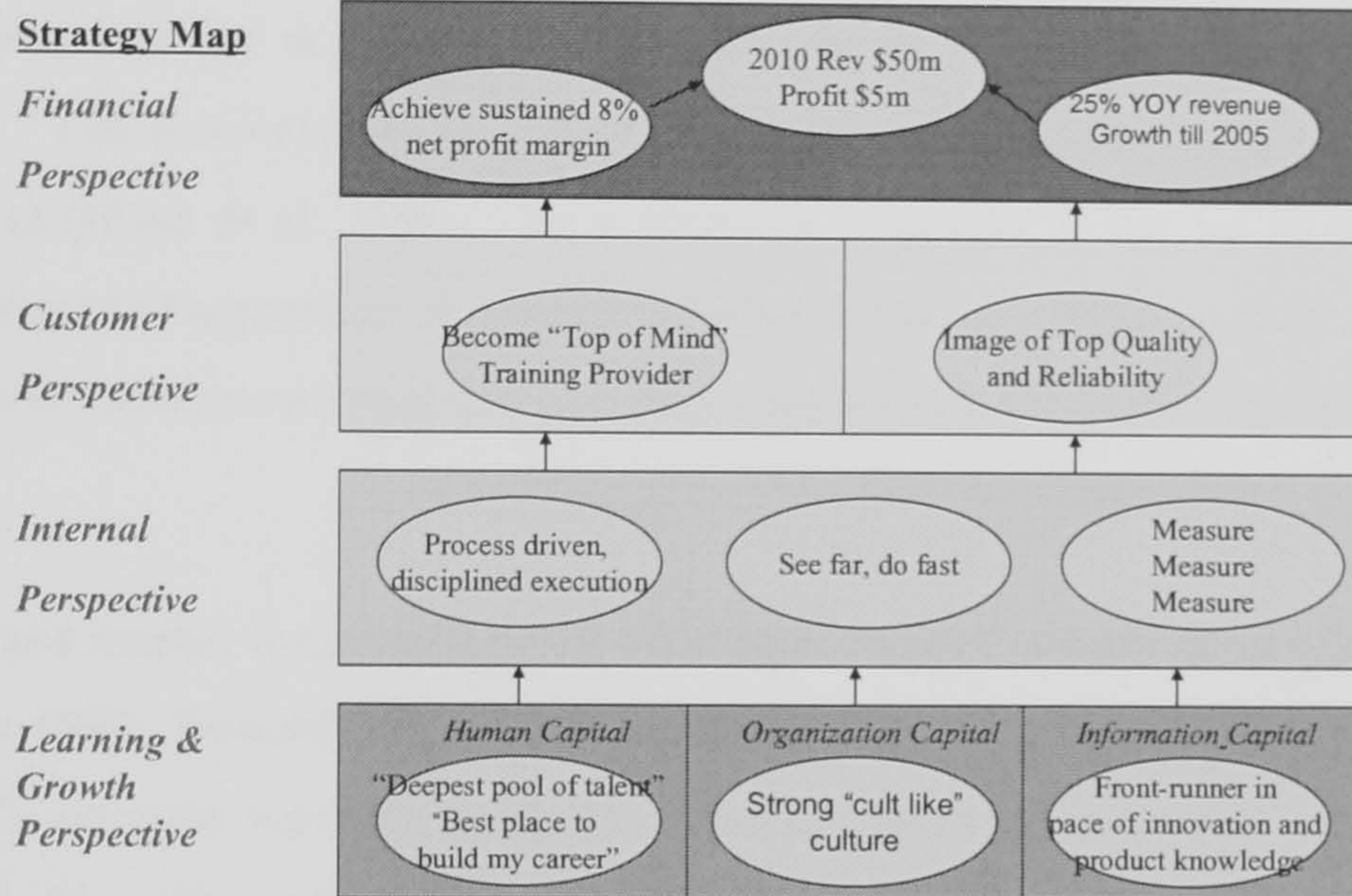
Finally, the expansion plans were being formulated to grow beyond Fiscal Year (FY) 05/06 (See Table 4.6).

**Table 4.6 - LHub's Expansion Plan**

<b>Short Term (~\$0.5M, FY06/07) Offer existing products into new market segments</b>	<b>Mid Term (~\$1M, FY06/07 locally) Expand product lines, first locally, then regionally</b>	<b>Long Term World-class Institution of learning (position as regional learning hub)</b>
<ul style="list-style-type: none"> <li>➤ Increase BEST /WISE market share</li> <li>➤ Offer English for foreign workers in manufacturing sectors</li> <li>➤ IT literacy trainings for foreign workers</li> <li>➤ Animation related courses</li> </ul>	<ul style="list-style-type: none"> <li>➤ Workplace Chinese &amp; Business Chinese Language &amp; Culture Trainings</li> <li>➤ Trade Conferencing</li> </ul>	<ul style="list-style-type: none"> <li>➤ Workplace Safety &amp; Health Institute</li> <li>➤ Security Institute</li> <li>➤ Logistic Institute</li> <li>➤ Etc.</li> </ul>

LHub's long term goals is to achieve an annual turnover of \$50 million in 2010 (see Figure 4.2 for Balanced Scorecard).

**Figure 4.2 - LHub's Balance Scorecard**



To conclude, the notion of strategy development as a deliberate undertaking enveloped much of the early theoretical conceptualizations of strategic management (Andrews 1971; Ansoff 1965; Chandler 1962; Hofer and Schendel 1978; Learned, et al. 1965). These classic frameworks generally portrayed the strategist as scanning the external environment for opportunities and threats, assessing the firm's internal resources and capabilities for strengths and weaknesses, and determining a strategic plan that exploited external-internal matches in the context of the firm's objectives. Indeed, researchers who have examined the historic content of strategy research extracted common themes of environmental analysis, resource utilization, and goal attainment from the strategic management literature (Barney 1997; Bracker 1980).

In this case study, it can be seen that LHub focuses on the development of company strategy and its implementation, and has attempted to address how strategy is developed by taking into consideration (i) the competitive environment; (ii) 1 to 5 years projections of company performance; and (iii) company operational and human resource capabilities.

### 4.3 Customer and Market Focus

The term 'market' has acquired many meanings over the years. In its original meaning, a market was a physical place where buyers and sellers gathered to exchange goods. To an economist, a market describes all the buyers and sellers who transact over some good or service. The economist is interested in the structure, conduct and performance of each market (Hoon et al, 1996). To a marketer, a market is the set of all actual and potential buyers of a product. A market is the set of buyers, and an industry is the set of sellers (Kotler and Armstrong, 1991). This section will adopt this last definition of a market.

Customer and market focus has been a traditional domain of marketing scholars (Aaker 1988; Day 1990; Howard 1983; Levitt 1960, 1969). McKitterick (1957) argued that marketing's purpose was "to make the business do what suits the interests of the customer." Biggadike (1981) added that the marketing discipline stressed customers as the focal point of strategy. The concept of customer focus and its underlying constructs has gained attention among marketing researchers (Kohli and Jaworski 1990; Narver and Slater 1990; Jaworski and Kohli 1993; Day 1994). An important notion in these emerging investigations has been the importance of gathering intelligence from the market environment, and of its subsequent use by the organisation (Kohli and Jaworski 1990).

In earlier times, companies could understand consumers through the daily experience of selling to them but the growth in the size of firms and markets has removed many decision makers from direct contact with customers (Churchill, 1991; Dibb et al, 1994). Increasingly, managers have had to turn to consumer research for answers to the most important questions about any market, called the seven Os of the marketplace (Kotler, 1991):

1. Occupants – Who constitutes the market?
2. Objects - What does the market buy?
3. Objectives – Why does the market buy?

4. Organisations - Who participates in the buying?
5. Operations – How does the market buy?
6. Occasions – When does the market buy?
7. Outlets – Where does the market buy?

Market analysis focuses therefore on market dynamics and the understanding of specific conditions within the respective industry. Michael Porter's Five Forces (1985) is a well-suited model to systematically provide or analyse market intelligence. Beside the two main forces 'industry competition' and the 'power of buyers' (consumers), Porter suggested examining the possible threat of three additional forces, namely 'substitute products' and new 'market entrants' as well as the 'power of sellers' (suppliers). Last but not least, the research step should also include a diligent analysis of the company's own strength and weaknesses as well as its core competences, ie. strategic business capabilities that provide the company with a marketplace advantage.

#### *4.3.1 Customer and Market Focus and LO*

The importance of customer and market scanning has been one of the Malcolm Baldrige's Criteria for Performance Excellence (CPE) requirement since its inception. This historic emphasis can be traced to the criteria's foundation in total quality management - listening to customers and satisfying their needs constituted an essential message of the popular quality theorists (Crosby 1979; Deming 1986; Juran 1989). In a company that is focused on total quality management (TQM) and strives for continuous improvement there is a constant desire to do better. For this reason, such a company has much in common with a LO.

Understanding, building up relationship and learning from customers are also popular with proponents of LO (Revan, 1982; Garratt, 2000). For learning to occur, it is of vital importance that both the organisation and its clients to know themselves and each others' organisations well. It is only possible to learn when there is sufficient self-knowledge (Revan, 1982). This requires the commitment of both parties and also often demands concrete collaboration, including development and customisation projects. in

which both parties participate. According Garratt (2000), one benefit of relationships is that they intensify the learning of organisations. In some cases, it is even possible to speak of mutual training on the conditions of the relationship.

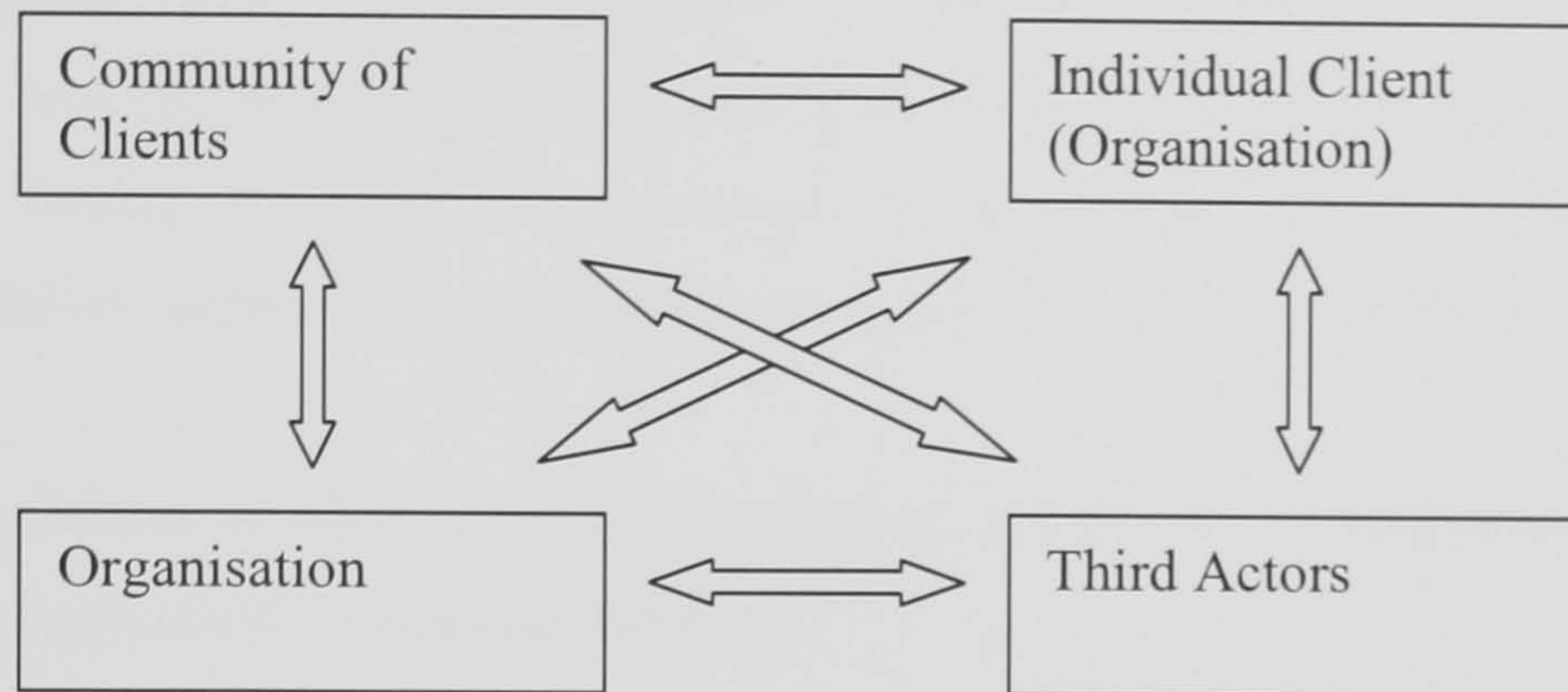
The Malcolm Baldrige's CPE also emphasizes on market focus. This interface between the firm and its market environment has always been the focus of classic scholarly work in consumer theory (Hicks 1946; Jevons 1879; Lancaster 1966; Marshall 1920; Ricardo 1891; Samuelson 1948; Smith 1812). In fact, the importance of the market environment was noted prior to the popular quality movement. Simon (1947) argued that to survive, an organisation must have an objective that appeals to customers, and that the objectives of customers were constantly changing. Such arguments are very similar to the emphasis given by Revans (1982), a pioneer of the concept of organisational learning, who stresses that learning must be equal to or greater than environmental change for reason of survival.

Levitt and March (1988) commented that there are two processes that make up organisational learning: internal learning (the learning within organisations) and external learning (the learning between organisations). In practice, the two learning process are often intertwined. Marleen and Heico (1998) depict the various actors in the field in which organisations learn from others (see Figure 4.3). A "community of clients" refers to a group of real or potential clients or customers of the organisation; "third actors" refers to all the relevant actors besides consumers or customers of the organisation, eg. government, supplier organisations, competitors, cooperating organisations, etc.

With the arrows, the figure refers to the various (reciprocal) ways in which knowledge is exchanged within the field. Arrows pointing to an organisation, refer to an organisational learning process in which the organisation learns from actors within the environment: external learning. An organisation learns from an individual client for example when it learns from a consumer his/her purchase habits and preferences. The organisation learns from a third party for example when it imitates a competitor within the field which is changing its portfolio. The organisation learns from a community of

clients when it reacts to the responses of, for example, their behaviour to the different pricing strategies.

**Figure 4.3 - External Learning**



In short, there are similarities between Malcolm Baldrige CPE and LO's theories in their emphasis on quality, customer and market focus. The typically incremental nature of TQM, a philosophy ingrained in business excellence framework, means that it is naturally akin to LO. TQM requires everyone in the organisation to be continually learning to perform more effectively, something very close to the key ideas of LO. On market focus, a LO recognises that its external environment is forever changing. As the rate and magnitude of this change increase, so market awareness becomes more and more important. Choosing the environmental target means selecting the part of the environment with which the organisation will interact and learn. Lawrence and Lorsch (1967) observed that attention to customers became paramount when environmental uncertainty was high. Rather than employing market research agencies and other consultancies, the LO involves all its people, especially those in the frontline with regular customer, supplier and outside contacts, in scanning the external world for important information (Pedler et al, 1997).

#### *4.3.2 Customer and Market Focus Case Studies (LHub)*

LHub management understood the importance of having a direct, close and individual link between LHub and its customers. However, this relationship needs time to develop, and this needs to be supported by customer friendly processes and system as well as having the right organisational set-up in the areas of staff motivation, accountability, empowerment, CRM implementation, reward system, etc.

While the above enablers were rather company-internal, the management also adopted three core processes for successful CRM:

- 1) Initiation, or identify and source for the right customers;
- 2) Retention, or retain, win back profitable customers, and eliminate those unprofitable ones; and
- 3) Expansion, or increase shares of customers, ie. getting the most out of key customers.

The plan is to fully focus on the customers by concentrating on the processes of ‘initiating’ and ‘retaining’ good customer relationships, followed by ‘expanding’ the business together with key customers in order to increase the value of the customer base. Put simply, it is to get, keep and grow customers.

Upon understanding the buying behaviour of existing clients, the management then decided to differentiate LHub’s services from the competition by positioning itself as follows:

- 1) Providing quality training, at a reasonable price;
- 2) Introducing a wider range of training programmes;
- 3) Focusing on skills training that enhances employability; and
- 4) Being innovative in teaching and adult learning methodology.



To improve the service and satisfaction level for LHub's main group of walk-in customers, common problems faced by clients were discussed and several initiatives were taken:

- 1) Outsource customer service hotline to an external professional Call Centre, CC1, to reduce wait times and dropped calls – a common complaint among existing clients;
- 2) Engaged a full time Customer Relationship Manager to oversee all customer service matters;
- 3) Increased staffing, both perms and temps, during peak times for faster registration;
- 4) Operating additional express lanes during peak times for those who did reserved booking online and came to the counter for payment;
- 5) Introduce online credit card payment for courses that do not require upfront government funding;
- 6) Introduce friendly monthly competitions for speed and accuracy among frontline staff, with token rewards for winners and all participants;
- 7) Refresher training sessions for all frontline staff on product knowledge, efficient course registration procedures, and customer communication skills, with follow up sessions every quarter.

The goal is to (i) achieve 60% sales increase from existing active customer and each customer to take up an average of 2 new courses in year 2005; and (ii) 40% sales from new customers and each customer to take up 2 new courses in year 2005.

For existing corporate clients, new initiatives were also taken:

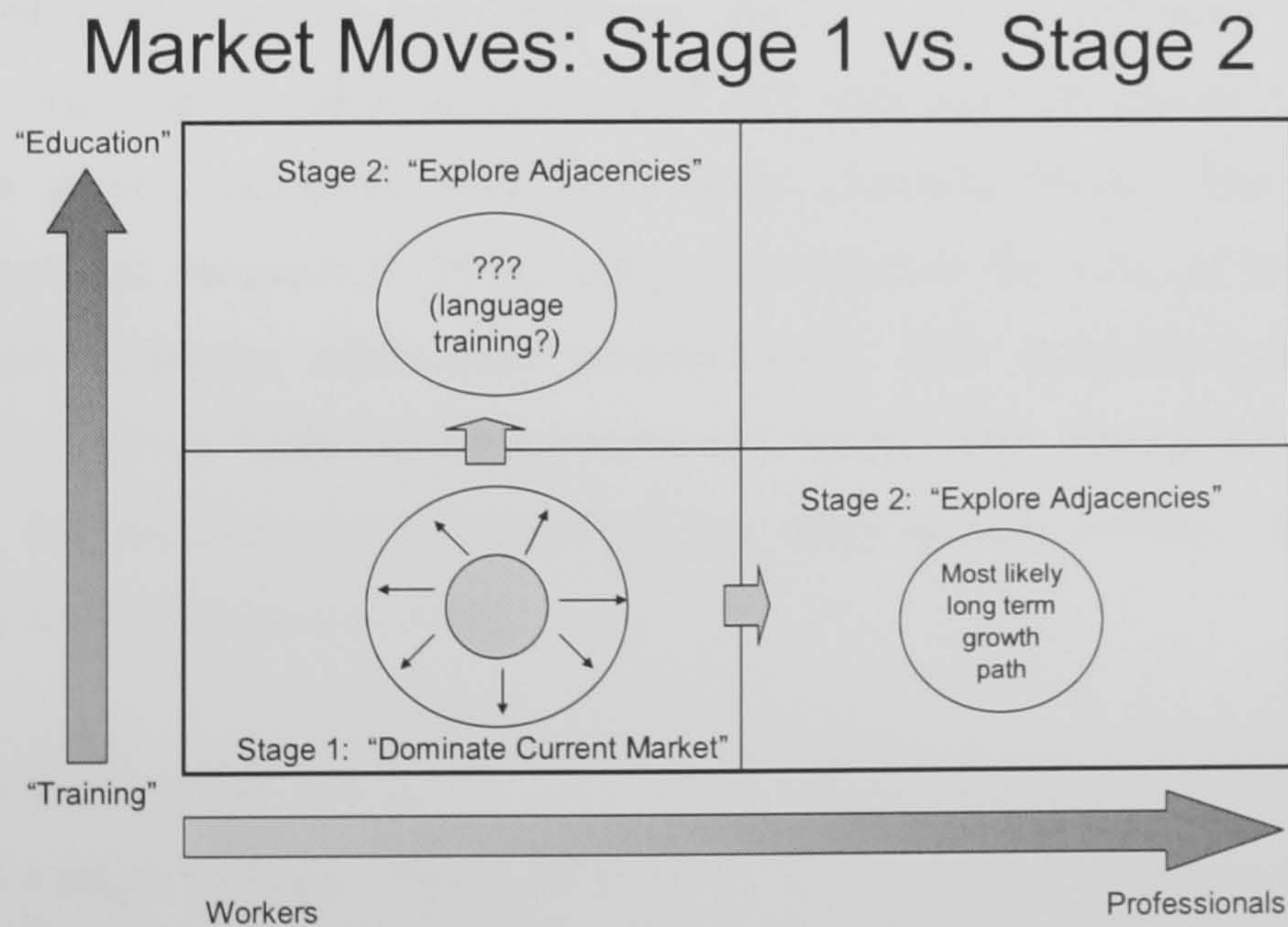
- 1) Special privileges to corporate clients in terms of quantity discounts;
- 2) Awards in the form of free Training Vouchers for different levels of business attained;

- 3) Employ Sales and Account Managers, where they could be reached directly, to service the corporate clients;
- 4) Longer credit terms given to major corporate clients when they received their bills;
- 5) Offer the clients special advance information and sneak previews of new products.

The ultimate goal, however, is to expand the existing pool of corporate clients.

LHub certainly did not wish to remain status quo in the low end/horizontal market. The plan is to expand the business further by not only expanding the current market share to dominate the market, but also moves into “adjacencies”, offering courses at the education and professionals domain (see Figure .4.4).

**Figure 4.4 - Market Moves: Stage 1 vs Stage 2**



The following strategic moves were brainstormed and agreed:

- Reach Out/Pull In
  - Build corporate sales team
  - Fix/expand sales channels
  - Exploit union base
  - Forge sales partnerships
  - Fix customer issues
- Become a “One Stop Shop”
  - Flesh out soft skills range
  - Refresh IT line-up
- Become Lowest Cost Player
  - Drive down trainer cost
  - Leverage class size and run rates
  - Eliminate expensive/inefficient business practices

In the Malcolm Baldrige framework, the greatest determinant of organisation performance, in the market and internally, is customer focus and relationship management (Pannirselvam and Ferguson, 2001). This component examines the actions an organisation takes to understand and anticipate its customers’ needs and maintain a good relationship with its existing customer base. The results from Pannirselvam and Ferguson’s (2001) analysis underscore the value of customer focus and effective customer relationship management. This component had the most significant effect on both business results and emphasized throughout the Baldrige criteria in its planning and execution of the other quality management constructs (Pannirselvam and Ferguson, 2001).

As can be seen, LHub has made considerable effort to make customer and market orientation a major strategy. Shortly after incorporation, it took measures to improve on its customer service standards and adopt customer friendly processes. It also attempted to intensify customers contact through market segmentation, positioning, individual attention and set out basic rules of behaviour towards customers.

#### 4.4 Measurement, Analysis and Knowledge Management

The measurement of business performance has become one of the most important business needs today as companies face increasing pressures to demonstrate financial returns across the organisation from shareholders, investors, senior managers and board of directors. There is no single measure that can determine if a company's strategy is effective. However, many new frameworks and techniques have been developed in the last 10 years or so to measure a company's performance (see Table 4.7).

**Table 4.7 - Frameworks and Techniques to Measure a Company's Performance**

Measurement Tools	Definition
<b>Value-based Management (VBM) (Young, 2001)</b>	A return to economic values in assessing the performance of the firm and places the concerns of shareholders above others
<b>Activity-based costing (ABC) (Baker, 1998)</b>	The focus is on the activities and processes within an organisation and is based on the principle that by controlling the activities that consume resources, costs can be controlled at source
<b>Activity-based management (ABM) (Baker, 1998)</b>	Makes use of information from ABC through value analysis and performance measures which support strategic and operational decision-making
<b>Balanced Scorecard (Kaplan &amp; Norton, 1996)</b>	A tool to translate vision and strategy into objectives and measures across four balanced perspectives: financial, customers, internal business processes and learning and growth
<b>Benchmarking (Camp, 1989)</b>	A way of identifying potential improvements in effectiveness and efficiency, in current operations and also in considering future strategy, by looking at how the organisation's performance compares with others
<b>Strategic Enterprise Management (SEM) (Fahy, 2001)</b>	Empowering people to run an organisation as efficiently as it can be run in the present by providing a systematic use of quantitative and qualitative measurement and logical tools for analysing and solving problems
<b>Six Sigma (Pande et al, 2000)</b>	Measure of enterprise's performance against a standard of three variations per million opportunities, which equates to getting things right 99.999 per cent of the time
<b>The Performance Prism (Neely et al, 2002)</b>	A set of questions to reflect the need for organisations to consider the requirements of all stakeholders in the development of a performance measurement framework, looking from the angle of (i) stakeholder satisfaction, (ii) strategies, (iii) processes, (iv) capabilities, and (v) stakeholder contribution.

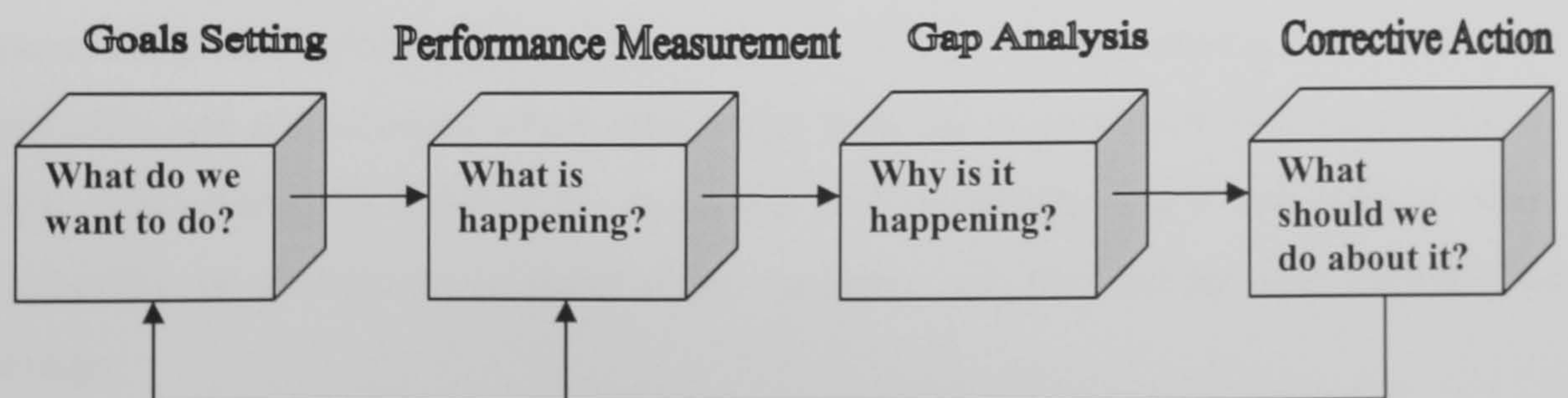
These frameworks and techniques are changing the way organisations are managed and their performance measured. They integrate the company's strategic direction with various processes, and standards or key performance indicators (see Table 4.8) are established against which company performance is compared to determine the magnitude of the differences and incentive pay.

**Table 4.8 - A Sampling of Performance Measures (Milkovich and Newman, 2002)**

<i>Customer-Focused Measures</i>	<i>Financial Focused Measures</i>
<b>Time to Market Measures</b> <ul style="list-style-type: none"> <li>• On-time delivery</li> <li>• Cycle time</li> <li>• New product introductions</li> </ul> <b>Customer Satisfaction Measures</b> <ul style="list-style-type: none"> <li>• Market share</li> <li>• Customer satisfaction</li> <li>• Customer growth and retention</li> <li>• Account penetration</li> </ul>	<b>Value Creation</b> <ul style="list-style-type: none"> <li>• Revenue growth</li> <li>• Resource yields</li> <li>• Profit margins</li> <li>• Economic value added</li> </ul> <b>Shareholder Return</b> <ul style="list-style-type: none"> <li>• Return on invested capital</li> <li>• Return on sales/earnings</li> <li>• Earnings per share</li> <li>• Growth in profitability</li> </ul>
<i>Capability-Focused Measures</i>	<i>Internal Process-Focused Measures</i>
<b>Employee satisfaction</b> <ul style="list-style-type: none"> <li>• Turnover rates</li> <li>• Total recruitment costs</li> <li>• Rate of progress on developmental plans</li> <li>• Promotability index</li> <li>• Staff mix/head-count ratio</li> </ul> <b>Other Asset Capabilities</b> <ul style="list-style-type: none"> <li>• Patent/copyrights/regulations</li> <li>• Distribution systems</li> <li>• Technological capabilities</li> </ul>	<b>Resource Utilization</b> <ul style="list-style-type: none"> <li>• Budget-to-actual expenses</li> <li>• Cost-allocation rations</li> <li>• Reliability/rework</li> <li>• Accuracy/error rates</li> <li>• Safety rates</li> </ul> <b>Change Effectiveness</b> <ul style="list-style-type: none"> <li>• Programme implementation</li> <li>• Teamwork effectiveness</li> <li>• Service/quality index</li> </ul>

The process begins with a careful analysis of strategic objectives for both the corporation and all of its divisions. Then, leaders of all the strategic business units are challenged to identify measures that best reflect the directions being taken by the business. This leads to a constellation of measures such as customer satisfaction, employee development, quality and financial measures, which indicate exactly where a company is succeeding and what needs to be improved (see Figure 4.5).

**Figure 4.5 - Performance Measurement and Gap Analysis Process**



The above measurement, gap analysis and problem solving process will trigger a recursive set of activities - a learning process - by which an individual (and an organisation) transforms its experiences into knowledge (Kolb, 1984; Dixon, 1999). Learning and the attendant competitive gain involves not only the sharing of integration knowledge from organisational members in one tangible setting, such as an office building, but also the exchange and integration of knowledge from members across departments, business units and national boundaries. Knowledge management, defined simply by Davenport (1994) as the act of capturing, distributing and effectively using knowledge, has helped in taking better decisions, reducing time taken to make decisions, making cost savings and assisting training (Cashmore and Lyall, 1991).

#### *4.4.1 Measurement, Analysis, Knowledge Management and LO*

Organisations acquire knowledge at birth, through experiences, through competitive intelligence units (which collect information on other organisations), by searching the environment, and by hiring new skills (grafting) (Huber, 1991). Searching can be for solutions to hitherto unsolved problems or for already identified solutions to known problems. Organisations will acquire and store information only if such information is of any significance to them. This means recognising that the information is meaningful, which requires some preliminary interpretation of information as well as measurement and analysis of its potential value to the organisation. Learning occurs within the organisation as a result of the firm's interaction with the environment and this can be achieved through information processing, proper measurement or benchmarking. Information processing reduces uncertainty and hence increases learning (Mason, 1993).

Huber (1991) stated that organisational learning occur when organisations undertake sense-making and information interpretation activities. Organisations are faced with uncertainty and equivocality when interacting with the environment (Daft and Lengel, 1986). Uncertainty is reduced by acquiring and processing more information while equivocality or ambiguity is reduced by carrying out discussions and face-to-face meetings.

From the LO school, Brown and Woodland (1999) and Wikstrom and Norman (1994), claimed simply that learning is the process of acquiring knowledge whilst Allee (1997), from the Knowledge Management (KM) school suggested that each aspect of knowledge has a corresponding learning activity that supports it. Taking a broader view, knowledge creation is the final result of the learning process and conversely, learning occurs when one talk about creating, sharing and using knowledge. This makes a very clear link between knowledge and the learning process, at least at an individual level. However, in order to establish a relationship between the LO and KM, it is necessary to look at the learning and knowledge generation processes at the organisational level.

By raising the level of learning and knowledge generation within an organisation to that of the total environment within which the organisation operates, the synergies between the LO and KM become clearer. While the LO generates new knowledge, the organisation that is skilled in KM efficiently and effectively manages the knowledge that has been created. If a LO wishes to continue learning then it most certainly needs to effectively manage the knowledge that it creates. Conversely the organisation that is focused on managing its knowledge must maintain support for the environment that generates it and must ensure that all new knowledge generated is properly codified, organised and made available for optimal use by all those that need it.

Sierhuis and Clancey (1997) added that an important aspect of KM is improving an organisation's learning capability as well as its propensity. An organisation can only sustain itself if its people act, collaborate, learn and evolve as an entity in action. In accepting this proposition, it can thus be said that the LO and KM disciplines must become mutually self-supporting; one concept simply cannot operate without the other. As Allee (1997) put it, 'In order to be a high-performing learning organisation, work processes must incorporate conscious and deliberate attention to every aspect of knowledge'.

If the discipline of KM operates in such a way as to improve an organisation's learning capability, it thereby improves the capacity for the organisation to generate new knowledge and thus systematically expands the knowledge base of the organisation. For this cycle to operate effectively, organisational learning and knowledge generation need to be fully integrated into every mission critical business process that the organisation is involved in. This is more a cultural than a technological challenge.

#### *4.4.2 Measurement, Analysis and Knowledge Management Case Study (LHub)*

Having established the strategic plans and growth targets, the next step for LHub is to derive a sensitive, accurate measuring technique to assess the company's progress, decide where changes are needed and to determine if the corrections do what was intended for them to do. Management prioritised the information needed for such control purposes and came out with the following:

- 1) Business results – revenue growth and operating profits
- 2) Customer satisfaction – overall satisfaction and delivery performance
- 3) People satisfaction – overall satisfaction and staff turnover
- 4) Impact on society – training places for Low Wage & Low Skilled Workers in enhancing overall employability of the workforce

As a start off, in the first strategic management workshop held in Nov 2004, all the Strategic Business Units (SBU) and Strategic Functional Units (SFU) were told to adopt the Balance Scorecard templates of Financial, Customer, Internal, as well as Learning and Growth perspectives. Each month, during management meeting, the senior management makes it a point to communicate LHub's priorities, values, and concerns.

One year later, in 2005, LHub decided to work towards ISO 9000 certification and derived three quality policies with specific measurable quality objectives in (i) Products, (ii) Fulfillment, (iii) Marketing and (iv) Infrastructure arena. Each business unit and



department was able to derive specific measurable targets aligned to corporate goals. Quarterly incentives are given to business units who achieved these targets.

In the area of information system (IS), LHub has inherited the Training Admin System (TAS) from NTUC during incorporation, and the Operations departments and business units have been using this as a main IT system to handle day-to-day operations issues like registration, transfer/cancellation of classes, class scheduling, customer satisfaction survey, etc. In addition, ACCPAC and Human Resource Information System (HRIS) were used by the Finance and HR departments. The available IT systems were able to support LHub in terms of business operations and managerial decision making via the proper upkeep of sales, service, billing, credit, customers and employees records.

However, more than one year after incorporation, management felt that it is necessary for information systems to play a more strategic role than merely a service for processing transactions and keeping the books of LHub. It has to be a strategic tool and act as a supplier of information and tools for decision making. The idea is for the new IS to help LHub develop competitive weapons that use information technology to meet challenges from competitive forces that confront the organisation through:

- 1) Devising a knowledge-enabled Customer Relationship Management (CRM) strategy
- 2) Helping to plan effective metrics
  - a. For knowledge management
  - b. For customer satisfaction
  - c. For measuring “share of the customer”
  - d. Planning product development and related financial allocations
  - e. Building competitive relationship capital
- 3) Building an enterprise wide architecture for Knowledge Management (KM)
  - a. Developing an IT system to implement the architecture
- 4) Leveraging on LHub’s people assets and employee-owned tacit knowledge

- 5) Controlling of corporate ebbing in the form on competitive failure, earning shortfalls, employee dissatisfaction and customer defection, and financial overruns
- 6) Catching-up with competitors who are currently ahead on the knowledge curve
- 7) Providing a focus for company-wide learning
- 8) Planning product/service line diversification and new market entry strategies

Management decided to invest in a whole new IS to support LHub in the crucial areas of marketing, sales and service support (see Table 4.9).

**Table 4.9 - Investments in Marketing, Sales and Service Support**

	<b>Marketing</b>	<b>Sales</b>	<b>Service and Support</b>
<b>Product &amp; service delivery</b>	Product management Lifecycle management Segmentation Promotion Cross-selling Up-selling	Sales planning Sale analysis Sales force management Web support management	Service planning Defect reporting Technical support
<b>Business process coordination</b>	Sales coordination Promotion design Promotion delivery Profile linking Market research	Web order placement Call process management Order confirmation Activity reporting	Service coordination Scheduling Channel integration
<b>Transaction management &amp; knowledge creation</b>	Profiling Service “assembly” Product configuration Knowledge application Cross-sell offer generation Business-rules management	Clickstream analysis Account management Customer profile analysis Data mining Knowledge application	Warranty claim management Contractual issues Complaint resolution

Developing strategic information systems has been most challenging, involving considerable amount of cost, manpower, time and money. By end 2006, LHub was able to make some progresses.

The Baldrige criteria emphasize that access to and use of company and industry information (through benchmarking) is essential to setting quality goals and allocating resources to achieve these goals (NIST, 2007). Information management is essential to effective planning and execution of the plans. The research done by Pannirselvam and Ferguson, (2001) provided strong support for this theory through the significant relationships between information management and the other infrastructure, core management practices, and performance constructs. Since its incorporation, LHub has worked towards establishing a proper control mechanism to measure and analyse business results. It has also invested in information and communication system to enhance management productivity.

#### **4.5 Workforce Focus**

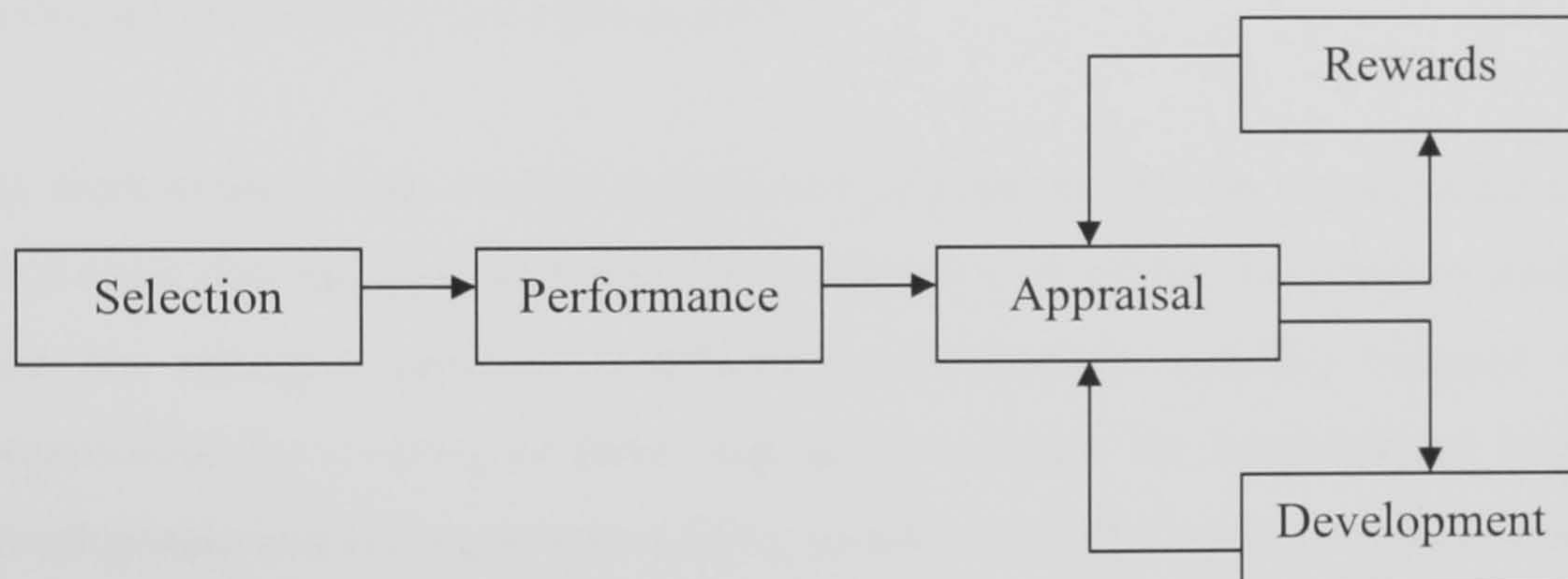
At one time, employees were considered just another input into the production of goods and services. What perhaps changed this way of thinking about employees was research, referred to as the Hawthorne Studies, conducted by Elton Mayo from 1924 to 1932 (Mayo, 1933). This study found employees are not motivated solely by money and employee behaviour is linked to their attitudes (Dickson, 1973). The Hawthorne Studies began the human relations approach to management, whereby the needs and motivation of employees become the primary focus of managers (Bedeian, 1993). There are a number of features which can be said to characterise a HRM approach and these are described below (Armstrong, 1992):

- 1) It entails top-management driven activities;
- 2) The performance and delivery of HRM is a line management responsibility;
- 3) It emphasizes the need for strategic fit – the integration of business and personnel strategies;
- 4) It involves the adoption of a comprehensive and coherent approach to employment policies and practices;
- 5) Importance is attached to strong culture and values;
- 6) It places emphasis on the attitudinal and behavioural characteristics of employees;

- 7) Employee relations are unitarist rather than pluralist, individual rather than collective, high trust rather than low trust;
- 8) Organizing principles are organic and decentralized with flexible roles and more emphasis on teamwork;
- 9) Rewards are differentiated according to performance, competence or skill.

These features may characterize a stereotyped HRM system, but the extent to which HRM is applied, and how it is applied, will vary considerably according to the type of organisation and the environment in which it operates. However, it is possible to devise a model of the HRM cycle which describes broadly how it operates (Tichy et al. 1982), as seen in Figure 4.6 below:

**Figure 4 6 - The Human Resource Cycle**



The four generic processes in this model which take place in all organisations are selection, appraisal, rewards and development. These human resource elements are designed to impact on performance at both the individual and organisational levels. The model therefore indicates that performance is the key variable which HRM processes are intended to effect. This is achieved by selecting people who are best able to perform the jobs defined by the structure, appraise their performance, motivating them with appropriate rewards and developing them for the future.

#### *4.5.1 Workforce Focus and LO*

People are a company's most important asset, and HR is the strategic asset for effecting change and managing human capital. Strategic human resources management requires systems thinking, emphasizing interrelationships of the HR and the company's strategy (Armstrong, 1992).

HR's role in implementing a LO involves investing in its people, cultivating working relationships, creating a supportive atmosphere, promoting teamwork and monitoring metrics (Denton, 1998). In other words, human resources management that increases or sustains the motivation and learning capacity of individual employees as well as the capacity of employees to work together in teams or project groups, ie. that supports the organisational disciplines systems thinking, personal mastery and team-learning – helps create a LO (Swanson and Holton, 2001).

As work environment is a key determinant of learning culture, management needs to (i) find work that matches well with the employee's expertise, his creative thinking skills and his strongest intrinsic motivations; (ii) promote learning cultures within the organisation by creating positive, supportive climates for development, both for self-development and for organisation development; and (iii) create a work environment that downplays the obstacles and fosters the stimulants to learning and creativity (Porter et al, 2003). Hence, it is necessary for companies to 'make space' in meetings, workshops and conferences, so that people can reflect on what they have learned and need to learn.

However, what needs to be learned cannot always be taught. Prasad (2004) argued that firms which incorporate learning into HR - whether it be peer reviews as part of the appraisal process, or encouraging a self-directed development programme as part of a training program; organisations that literally make learning part of HR - will eventually create learning driven culture. In other words, learning cannot be left to chance and effort should be made to:

- 1) encourage people to identify and satisfy their own learning needs;
- 2) provide individuals with regular reviews of performance and learning needs;
- 3) provide feedback on performance and achieved learning;
- 4) provide new experiences from which people can learn; and
- 5) facilitates the use of training on the job.

Human resource development programmes therefore helps people to learn from their experience, creates space for people to question, think and learn, as well as constantly reframes the world and their part in it (Swanson and Holton, 2001). This is very similar to Handy's (1989) description of a LO as one that both learns and encourages learning in people.

#### *4.5.2 Workforce Focus and Case Study (LHub)*

During the first corporate planning workshop in December 2004, LHub management came out with the goal of driving organisational and people capability to inspire breakthrough performance as well as the following strategic direction:

- To help build a high-performance, strategy-focused organisation
- To work with line manager in the effective management of strategic human resources
- To enhance LHub's capability to adapt to change and leverage change
- To recognize and competitively reward individual and team contributions
- To develop current and future leaders and continuously expand LHub's core competencies
- To champion LHub's values

As the organisation is new and there were many new recruits, one of the urgent tasks was to gel together new and existing staff. A teambuilding event was organized at Costa Sands Resort Sentosa on February 2005 to bring everyone together, established common goals and inculcate a culture of (i) working as a team; (ii) can do spirit; (iii) be "at cause" where solving problems; and (iv) making the workplace fun.

A Total Company Training Plan (TCTP) was also worked out at the organisation, job and individual level. At least 50% of the training budget was committed to LHub's core competencies of (i) Leadership and visioning; (ii) customer service; (iii) total quality management; (iv) creative thinking and innovation; and (v) teamwork.

Over a six-month period in 2005, one Saturday each month was being set aside for training, plus weekdays if the course is more than 1 day:

#### Staff Training (Group)

- Participative QC for me (May)
- Customer Service (June)
- Quality Awareness & Reducing the Cost of Quality (July)
- Sales and Marketing (Aug)
- Cost Reduction through 5S (Sep)
- The Creative Learner (Oct)

#### Staff Training (Individual)

- Management and Leadership related courses
- ISO 9000 and People Developer Standards related courses
- Relevant seminars and workshops

To encourage staff to come forward with ideas, a Staff Suggestion Scheme was introduced, with the suggestions on increasing sales revenue, enhancing customer satisfaction, improving operational efficiency and employees satisfaction being rewarded. Points were being awarded by a Staff Suggestion Committee for the different types of suggestions, doubling for those who submitted the suggestions in the name of QC. Awards were also being given to staff with (i) the best effort for enthusiasm and (ii) outstanding suggestion for Quality. Contributions would be recorded in the annual Performance Appraisal Exercise.

In mid 2005, HR conducted a self assessment, using the questionnaires found in the People Developer Standards (PDS) as benchmark. The following results were obtained:

- Learning Needs Analysis – 42/100
- Career Development – 14/40
- Resource Allocation – 22/60
- Communication – 8/100
- Induction – 32/120
- Monitoring – 60/160
- Evaluation – 0/100
- Improvement – 84/320
- Total – 262/1000

This result was anything but good. As a response, management took a decisive move towards the following directions:

- 1) CEO establishing strategic learning direction;
- 2) A proper career development plan for all staff;
- 3) Structured induction programme for existing staff that were given new jobs;
- 4) Informing the managers and supervisors on their staff's performance in training;
- 5) Establishing a feedback loop to improve people development processes;
- 6) Setting up a system to learn from the best to improve people development programmes and process; and
- 7) Implementing innovative people's development programmes in the organisation

One of the Baldrige criteria is an emphasis on the need for good human resource practices and employee involvement in order for an organisation to make substantial progress in its quest for quality. Through the 2.5 years since incorporation, LHub's senior management took up the responsibility to own and drive HR policy, while line managers were responsible for its performance and delivery. HR Department, on the other hand, played a vital role in assisting in the implementation of various HR

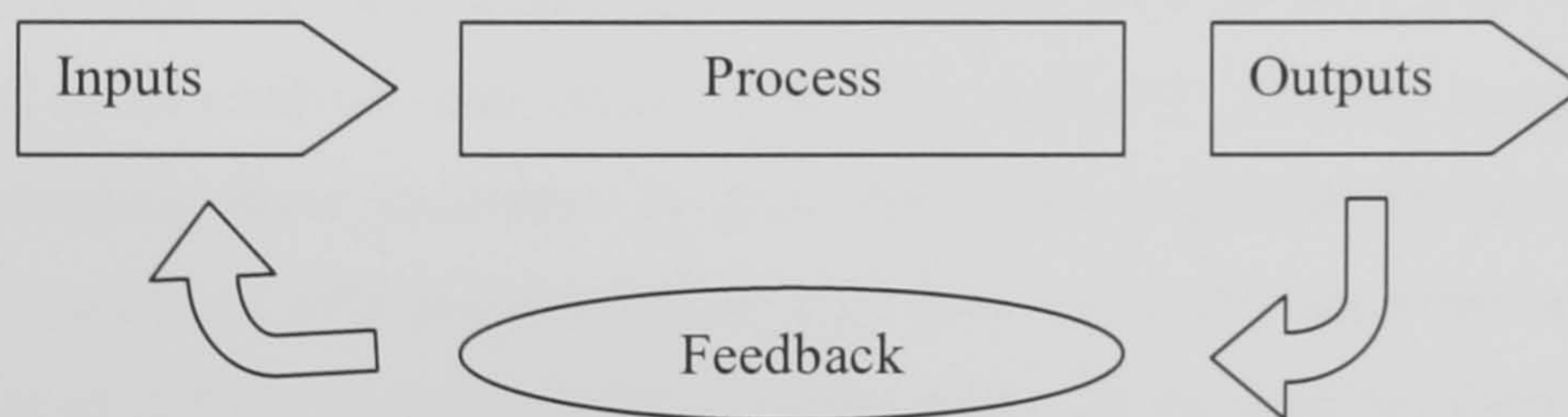


programmes, suggesting innovations and providing guidance and support. Human resource management has played an important role in contributing to LHub's progress as it determines the effectiveness of LHub's products, process management as well as customer focus and relationship management efforts.

#### **4.6 Process Management**

A process is a chain of coupled activities directed toward producing a particular output. Regan (1995) defines it simply as a systematic series of steps designed to accomplish a goal. In its simplest form a process has an input and an output and is made up of a sequence of individual tasks through which this input passes to become an output. The process itself can be anything which transforms, transfers or merely looks after the input and delivers it as output (Scheer, 1998). In the case of a business process, this output is either one of the enterprise's products or an intermediate component of one. In a process chain, the output of any process is an input for another. In a system approach of process model, a feedback loop is included (see Figure 4.7).

**Figure 4.7 - A System Approach Process Model**



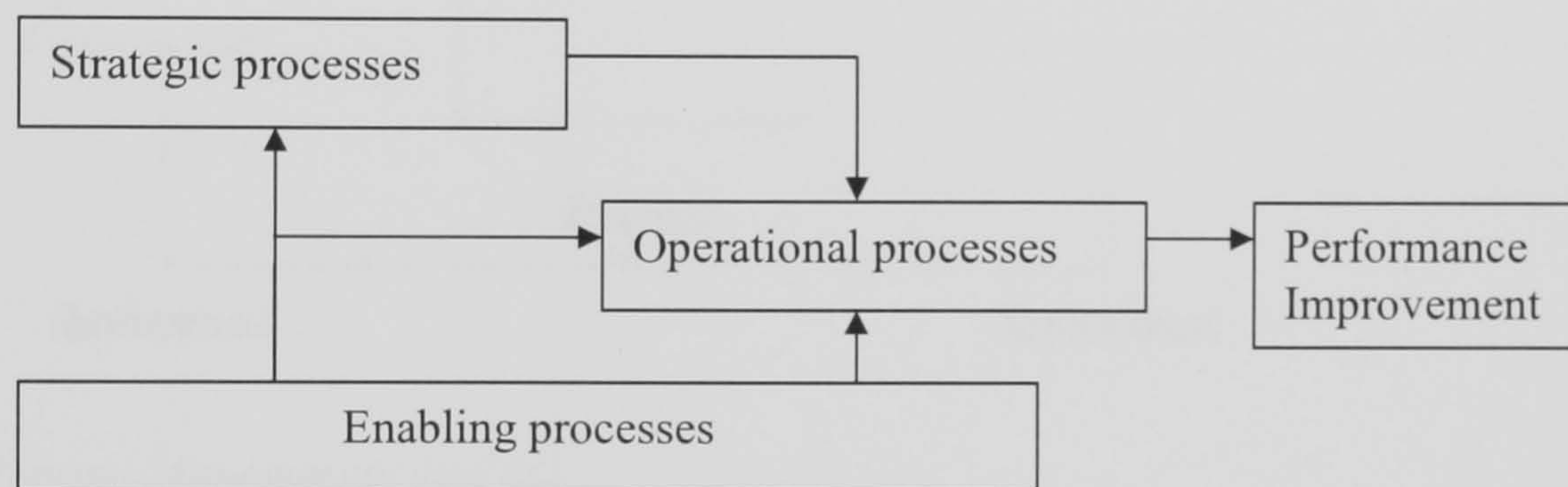
In examining organisational processes, Peppard and Rowland (1995) classified a basic set of high-level processes which they believed could apply to all organisations:

- 1) Strategic processes are those processes by which the organisation plans for and develops its future. Included here are Strategy Planning, Product/Service Development and New Product Development processes;

- 2) Operational processes are those by which the organisation carries out its regular day-to-day functions, such as 'winning' the customer, satisfying the customer, supporting the customer, cash and treasury management, financial reporting;
- 3) Enabling processes are those which enable strategic and operational processes to be carried out, such as human resource management, management accounting and information systems management.

Figure 4.8 illustrates this classification.

**Figure 4 8 - High Level Organisational Processes**

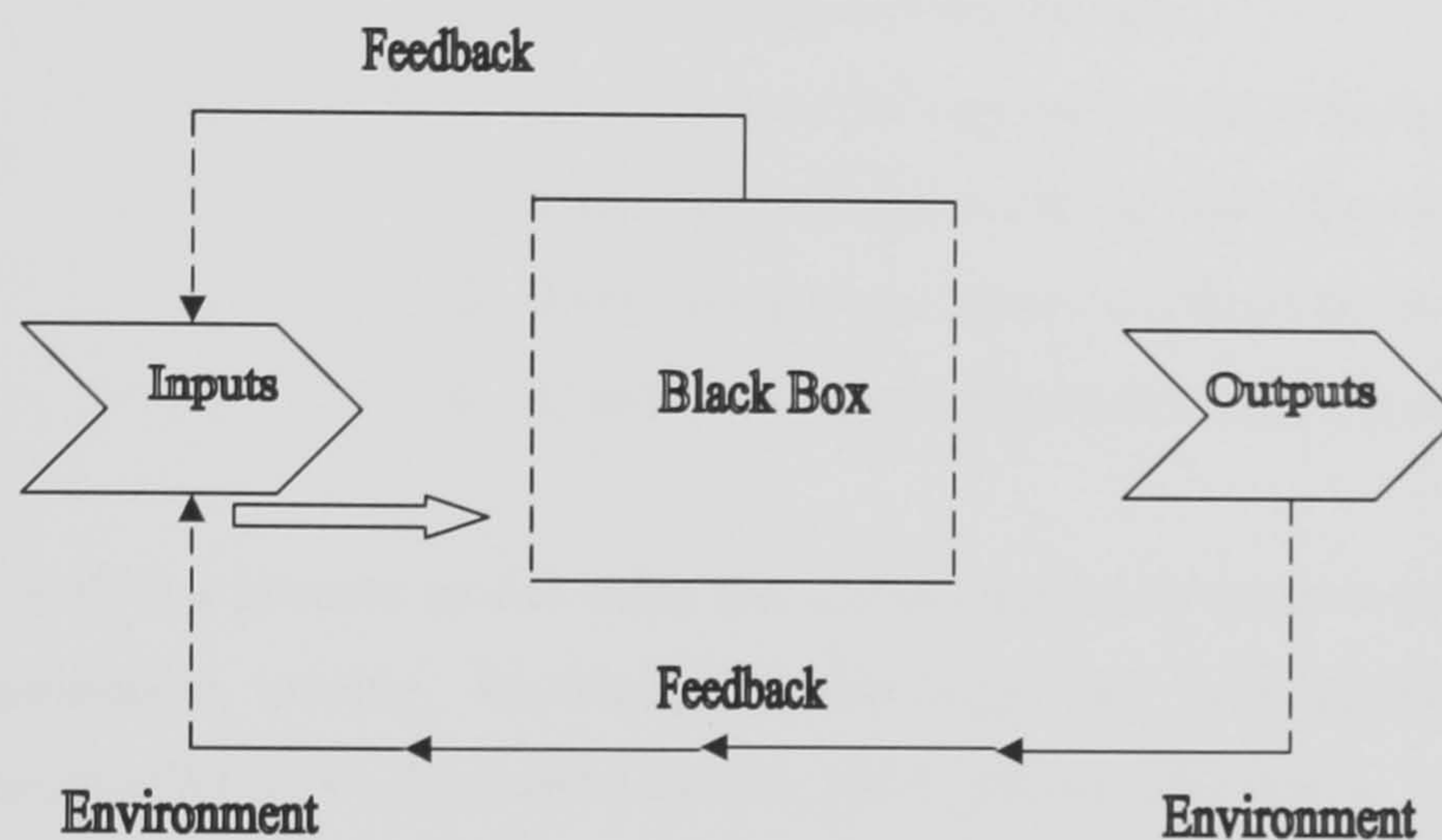


These three types of organisational processes can be broken down into more detailed sets of processes. These processes in turn can also be broken down into further level of detail and so on until we reach the level of individual task. Process management is all about managing these processes to gain significant improvements in performance. Infact, management of a process can be visualised as the management of a black box (Espejo et al, 1996). It consists of a control loop. In its simplest form, such a loop contains the following elements (See Figure 4.9):

- 1) Inputs – raw materials, human resources, energy, information, money;
- 2) The black box – the site of all regulatory activity and transformational processes in the system;
- 3) Outputs – products, services, energy, growth and so on;

- 4) Feedback – information relating to the extent to which outputs have been utilised or absorbed by the environment and to the current state of any aspect of the system’s environment;
- 5) Environment – other systems that interact with the system in focus.

**Figure 4.9 - The Black Box Model**



#### 4.6.1 Process Management and LO

Many different models of LOs have been developed (Senge, 1990; Pedler et al, 1991; Watkins and Marsick, 1993; Marquardt, 1996), and while each has its different nuances, at the core most are really quite similar. Most theories of a LO appear to focus on the values of continuous learning, knowledge creation and sharing, systemic thinking, a culture of learning, flexibility and experimentation, and finally a people-centred view (Gephart et al. 1996).

Marquardt’s (1996) definition of a LO sums it up neatly, stating that it is “an organisation which learns powerfully and collectively and is continually transforming itself to better collect, manage, and use knowledge for corporate success. It empowers people within and outside the company to learn as they work. Technology is utilised to optimise both learning and productivity.”

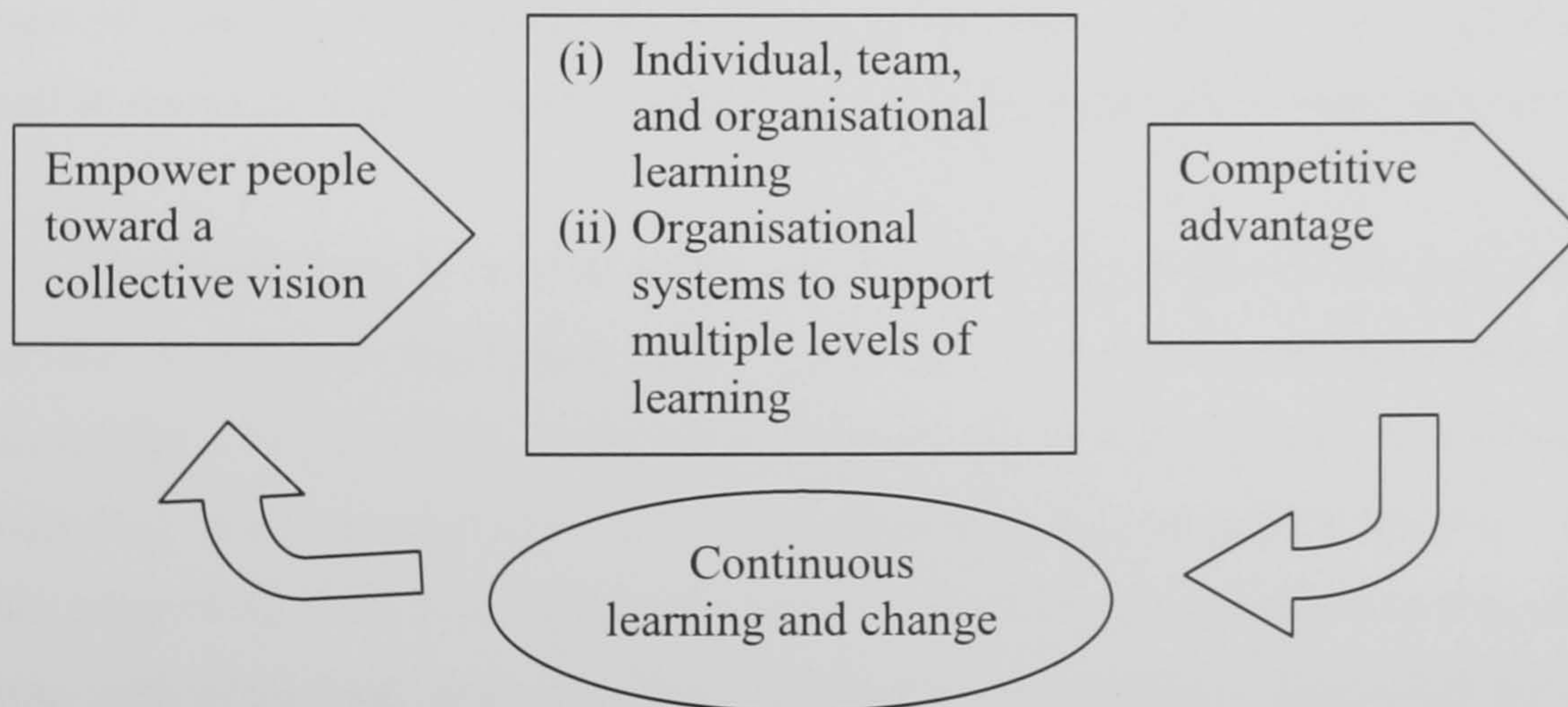
Similarly, Walkins and Marsick (1993) suggested that learning is a constant process and results in changes in knowledge, beliefs, and behaviours. They also believed that, in a

LO, the learning process is a social one and takes place at the individual, group, and organisational levels. They proposed six imperatives that form the basis for the organisational strategies recommended to promote learning:

1. Create continuous learning opportunities;
2. Promote inquiry and dialogue;
3. Encourage collaboration and team learning;
4. Establish systems to capture and share learning;
5. Empower people toward a collective vision;
6. Connect the organisation to its environment.

Figure 4.10 is a process model using the system approach to show the interrelationship of organisation, people, knowledge, technology and learning as championed by proponents of LOs (Walkins and Marsick, 1993; Marquardt, 1996).

**Figure 4.10 - LO Process in a System Approach Process Model**



The management of process involves, firstly, empowering people to move toward a common vision; then design and support learning actions in the individual, team and organisation level to create and maintain a primary transformation process; and finally, create the capacity to observe outcomes and assess possibilities. Each primary process

is a learning process in its own right, for which learning obstacles need to be sorted out, and changes be made.

Watkins and Marsick (1993) offers a unique definition of change that speaks to the means by which change occurs: “Change is a cyclical process of creating knowledge (the change or innovation), disseminating it, implementing the change, and then institutionalizing what is learned by making it part of the organisation’s routines”. This definition reminds us that change always involves learning. “Learning and change processes are part of each other. Change is a learning process and learning is a change process” (Beckhard and Pritchard, 1992). This fundamental relationship points out why change is one of the core constructs of the discipline of organisational development (OD), and the most common method used for creating a LO is via OD.

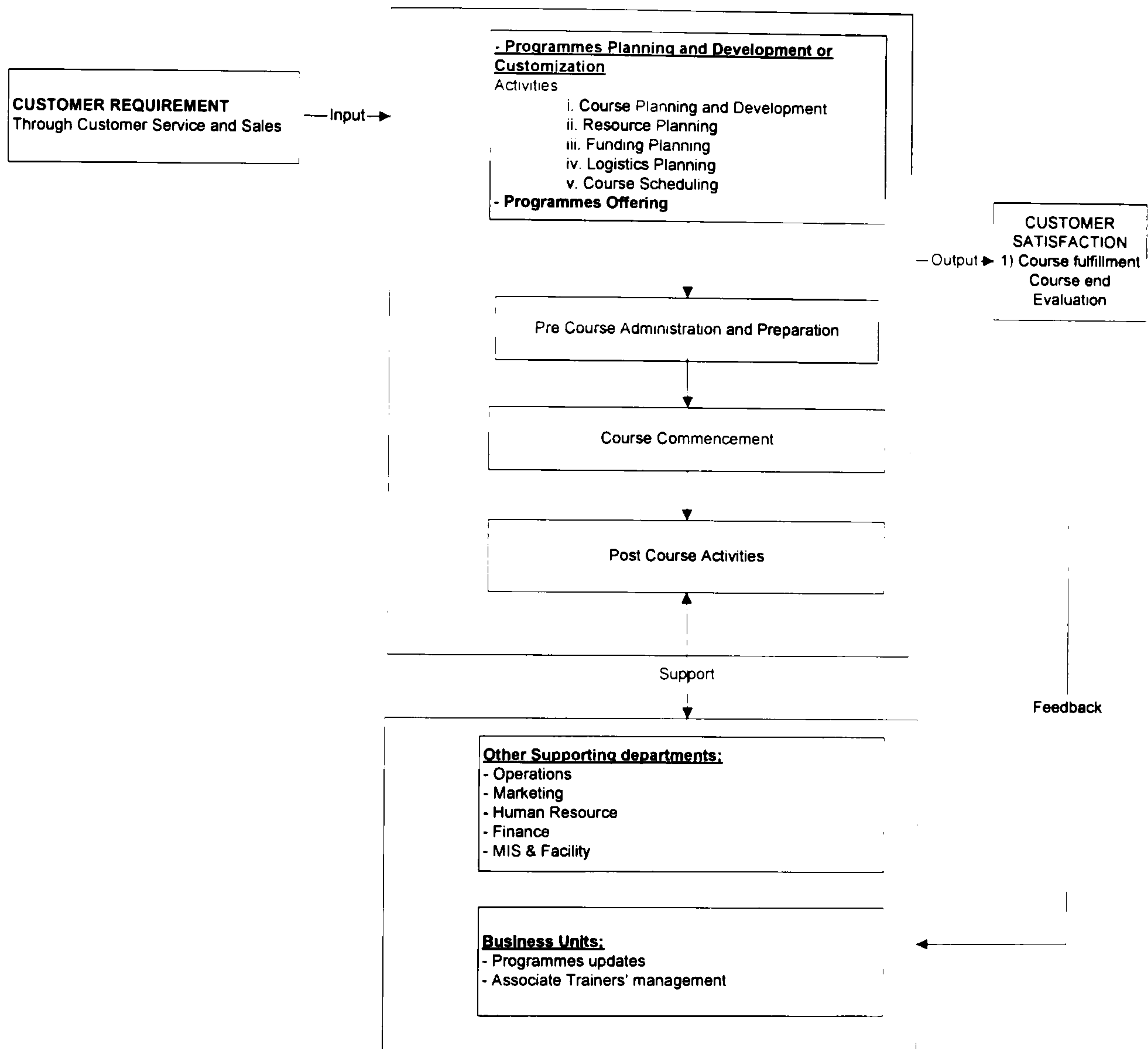
#### *4.6.2 Process Management and Case Study (LHub)*

The key process map of LHub is shown in Figure 4.11. Basically, customers specify their needs through the sales channel and customer service counter, and the operations team will ensure its fulfillment through courseware development, course scheduling as well as resource, logistics and funding planning, before the actual course delivery.

The operations team is in turn being supported by the business units and corporate services teams in its fulfillment work. To elaborate, to sell an intangible product like knowledge, the business units need to provide quality trainers (knowledgeable, engaging), training materials, training facilities/refreshments and certificates. Behind this, supporting work like marketing/promotional materials, campaigns/events, approval from authorities and invoicing from Marketing and Finance. There will be a post-course evaluation at the end of it to assess customer satisfaction level.

**Figure 4.11 - Key Process Model of LHub**

**Key Process Map of LHUB**



While the process looks easy enough, since incorporation, LHub was faced with key challenges in terms of intra- and inter-departments coordinating work. After the corporate planning seminar in 2005, the task given to the Operations Department was to look into the following process related matters:

- 1) Streamline internal processes that are knotted with external funding process;
- 2) Allocate limited resources between maintaining service level against strategic project needs (like process redesigning, ISO 9000);
- 3) Balance between speed of service and quality of service;

- 4) Design LHub's operations services for easier execution and higher effectiveness;
- 5) Handle variations of workloads over the years;
- 6) Ensure that controls are available to avoid high error rate; and
- 7) Improve the consistency of LHub's operations process.

Much progress was made over the year 2005. In 2006, LHub decided to embark on a ISO 9000 journey and use the ISO 9000 framework as a vehicle for business improvement. The management felt that the process of assessing LHub for conformance to a Quality Management System like ISO 9000 and the review process are important elements in the process of continuous improvement. The ultimate goal is to:

1. Achieve a better understanding and consistency of all quality practices throughout LHub;
2. Ensure continued use of the required quality system year after year;
3. Improve documentation;
4. Improve quality awareness;
5. Strengthen LHub as an organisation and improve customer confidence and relationship;
6. Yield cost savings and improve profitability;
7. Form a foundation and discipline for improvement activities within the quality management system.

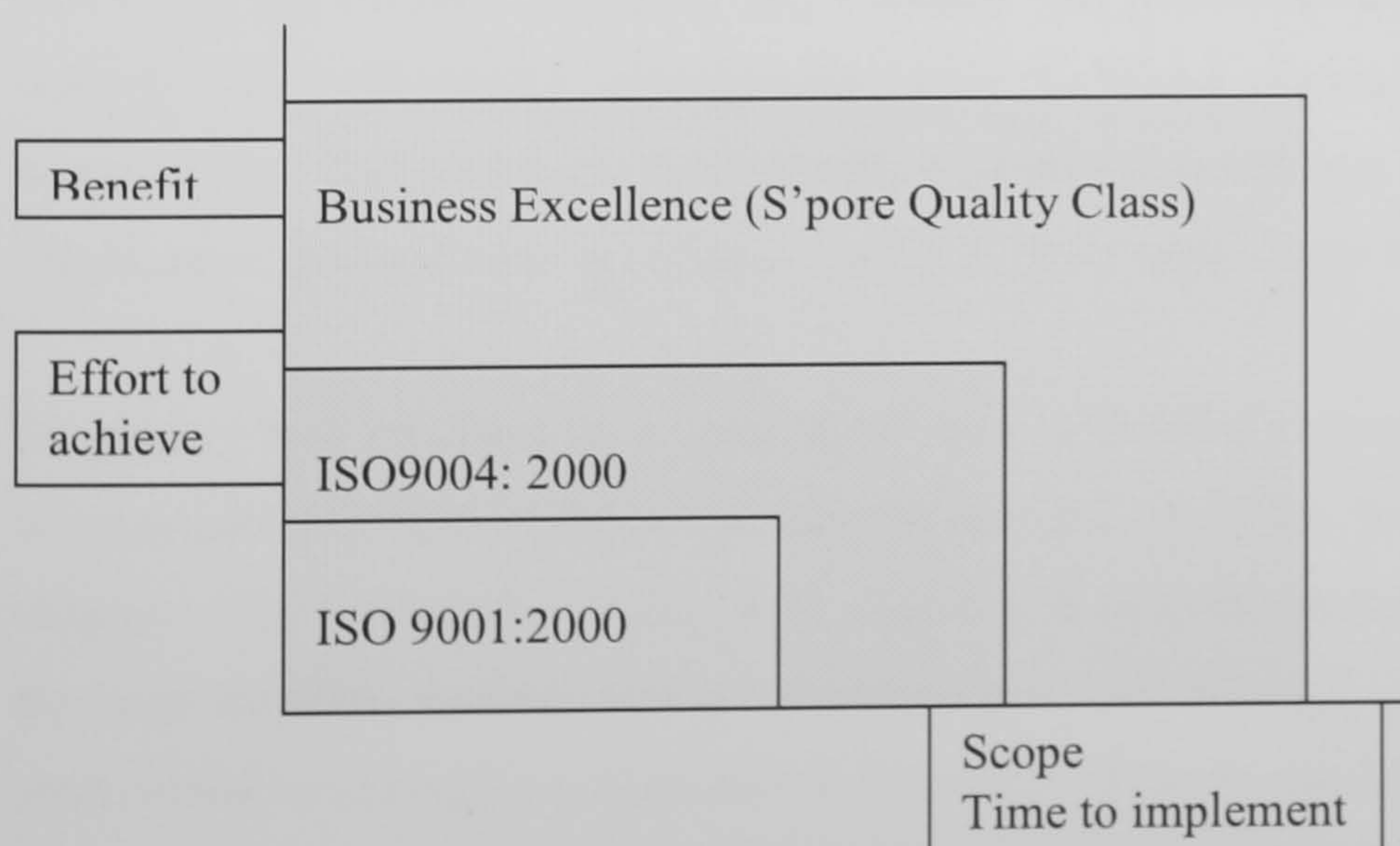
A lot of effort was being put in by all levels of staff in the different departments and after 50 improvements (see Table 4.10), including process streamline and process standardization, LHub eventually attained ISO 9001:2000 status in November 2006.

**Table 4.10 - Number of Improvements due to ISO 9000 Project**

Department	No. of improvements	
	During process review	During Internal Audit
HR	1	2
Finance	13	2
Sales	1	5
Marketing	5	-
MIS & Facility	5	1
Operation	7	1
Business Unit	3	4
<b>Total</b>	<b>35</b>	<b>15</b>

Despite this achievement, management felt that there was still room for improvement and in January 2007, a Senior Manager was employed to oversee 3 departments, namely Operations & Quality, MIS & Facility, and Customer Service, to focus on (i) Ops processes and systems; (ii) Customer services interaction point to backend (BU); (iii) Backend (BU) interaction to Finance; and (iv) MIS application system. The target set is to go beyond ISO 9001:2000 and move towards ISO9004:2000, then business excellence in the form of Singapore Quality Class Award (see Figure 4.12).

**Figure 4.12 - ISO 9000 and Business Excellence**





## **4.7 Chapter Summary**

In the previous chapter, it was stated that the Malcolm Baldrige Criteria for Performance Excellence (CPE) are designed to help organisations enhance competitiveness through the delivery of ever-improving value to customers and improvements of overall organisational performance and capabilities. There is also a section discussing the framework's linkages with business results.

However, despite a high level of practitioner attention, theoretical and empirical research that focuses on the CPE has been minimal. Baldrige Award-specific research in other scholarly disciplines has been virtually nonexistent. This is somewhat surprising, since the content of the CPE touches a variety of traditional academic disciplines, such as marketing, information systems, human resources, leadership, and strategic management, in addition to operations management. This lack of scholarly coverage casts a shadow on the theoretical validity of the CPE.

In this chapter, it is argued that by viewing the CPE as an integrative model of organisational effectiveness that encompasses a number of cross-functional disciplines, a large body of research related to the CPE framework actually does exist. In this respect, the concepts and scholarly studies related to 6 of the 7 dimensions, or strategic determinants, of the Malcolm Baldrige model was dealt at length, namely, (i) leadership, (ii) strategic planning, (iii) customer and market focus, (iv) measurement, analysis, and knowledge management; (v) workforce focus; and (vi) process management. These strategic determinants provide the foundation stones on which an organisation, committed to excellence, can build its strategic competitiveness.

To discuss best practices in a meaningful way, a detailed rationale for each of the determinants and their relationships with the concepts of LO has been developed in the chapter. As a summary, Table 4.11 lists the 6 strategic determinants (excluding Business Results), together with a short description of each and an explanation of its contribution to LO and organisational performance. It can be seen from Table 4.11 that to achieve the status of a LO is demanding for any organisation.

**Table 4.11 - The 6 Dimensions of LO**

<b>Strategic Determinants</b>	<b>Description</b>	<b>Contributions to LO and organisational performance</b>
<b>Leadership</b>	Senior executives to guide the organisation, addresses its responsibilities to the public and practices good citizenship	Communicate visions, establish goals, monitor progress, and motivate subordinates to achieve results. Flexibility in dealing with others by adjusting to the demands of the social environment.
<b>Strategic Planning</b>	Organisation to set strategic directions and determine its key action plans	Identification of future marketing threats and opportunities, elicits an objective view of managerial problems, creates a framework for internal communication, promotes forward thinking, and encourages a favourable attitude to change.
<b>Customer and Market focus</b>	Organisations to determine the expectations of customers and markets, builds relationships with customers, and acquires, satisfies and retains customers	Emphasis on quality, customer and market focus. Requires everyone in the organisation to be continually learning to perform more effectively. Market awareness as it recognises that organisation's external environment is forever changing.
<b>Measurement, Analysis and Knowledge Management</b>	Management, effective use, analysis, and improvement of data and information to support key organisation processes and performance management system.	Provide objective information for managers to judge how well the organisation is performing in comparison to strategic targets, and to signal the need for corrective action.
<b>Workforce Focus</b>	Organisation enabling its workforce to develop its full potential and aligning them with the organisation's objectives.	Actively encouraged behaviours and practices that are involved in continuous development, such as staff empowerment, exchange of ideals, action learning, etc. Provide environmental conditions that nurture creativity and support individual motivation to work towards innovation and organisational goals.
<b>Process Management</b>	Design, manage, and improve key production/delivery and support processes.	Installing processes that meet customer needs; gets work done effectively and efficiently. A value chain, with each step adding value to the preceding steps.

Using LHub as a case study to illustrate their applications, this chapter elaborated on the key initiatives taken by LHub after it adopted the business excellence approaches to improve its business results. The progress of LHub's business results has been spectacular ever since its incorporation. It is hard to pinpoint any single factor that contributed to this success. However, strong leadership, good strategic planning, having a clear customer and market focus, establishing measurement, analysis and knowledge management system, being workforce focused and process management oriented have probably played a significant role in LHub's transformation. Essentially,

LHub's management has practised the Plan-Do-Check-Act (PDCA) in its journey towards business excellence (see Table 4.12).

**Table 4.12 - LHub's Plan-Do-Check-Act Business Practices**

<b>Plan</b>	<ol style="list-style-type: none"> <li>1. Top down commitment to set the tone for the entire service process (Leadership)</li> <li>2. Helping to establish creditability with the staff (Leadership)</li> <li>3. Determine what customers value (Customer and Market Focus)</li> <li>4. Chart out strategic direction and seek future opportunities for the organisation (Strategic Planning)</li> <li>5. Set measurable standards, and write them down (Measurement, Analysis and Knowledge Management)</li> </ol>
<b>Do</b>	<ol style="list-style-type: none"> <li>1. Providing the momentum required to change the company culture (Leadership)</li> <li>2. Inspiring the staff to give their best in support for the service improvement initiative (Leadership)</li> <li>3. Make achieving standards part of the culture (Leadership)</li> <li>4. Train people to achieve the standards (Workforce Focus)</li> <li>5. Decide which service to improve, improving processes (Process Management)</li> <li>6. Reward success (Workforce Focus)</li> </ol>
<b>Check</b>	<ol style="list-style-type: none"> <li>1. Measure regularly (Measurement, Analysis and Knowledge Management)</li> <li>2. Inform employees of the organisation's collective progress (Measurement, Analysis and Knowledge Management)</li> </ol>
<b>Act</b>	<ol style="list-style-type: none"> <li>1. Reevaluate the standards (Measurement, Analysis and Knowledge Management)</li> </ol>

At this stage, it is good to recap the extended research questions and hypotheses of LO developed:

*Will an organisation that adopts the Malcolm Baldrige business excellence management approach be one step closer towards being a LO?*

H1a: From July 2005 to July 2006, LHub has moved towards being a LO by adopting the Singapore Quality Award (SQA) business excellence approach.

*Will an attempt to change an organisation into a LO by using the Malcolm Baldrige business excellence approach have a positive effect on business results in the area of sales revenue, customer satisfaction and employees' satisfaction?*

H1b: By embarking on LO and business excellence journey, LHub's sales revenue, customer and employees' satisfaction level will increase from July 2005 to July 2006

The development of LHub since its incorporation in August 2004 to end of 2006 and the research methodology and findings described in Chapter 5 and 6 respectively will shed new light on all the above research questions and hypotheses.

## **Chapter 5 – Research Methodology**

In the previous two chapters, the concepts and scholarly studies of the 7 dimensions of the Malcolm Baldrige business excellence framework were discussed, namely, (i) leadership, (ii) strategic planning, (iii) customer and market focus, (iv) measurement, analysis, and knowledge management; (v) workforce focus; (vi) process management; and (vii) business results. LHub was also used as a case study to illustrate their applications and form hypotheses. This chapter will move one step further by answering the fourth process question of the research: ‘For the purpose of this study, how then can we measure LO and what research methodology should we use?’ It describes in detail the research methodology in the areas of setting and participants, measurement, design and procedures.

### **5.1 Setting and Participants**

This section describes the population of interest, the sampling frame, the method for selecting the sample, and the sample itself. A brief discussion of external validity is also done.

The population of interest for this study is all full time employees of NTUC LearningHub Pte Ltd (LHub) of which there are 47 in July 2005, and the sample for this study consists of those who attended the Management-Staff Meeting on mid-July 2005. This is a monthly session where all Heads of Departments will share business performance results of the previous month as well as tactical plans for the next one to two months to staff. The author of this research was also involved in this particular meeting as one of the Head of Departments and hence part of the sample. Prior approval was obtained from the University of Durham School of Education, Chief Executive Officer, Chief Operations Officer and Human Resource Manager to conduct the research.

As seen in Table 5.1, most of the study participants were female (82.9%), from the 20-29 age group (46.3%) and slightly more than half are single (51.2%). About half are Diploma holders (53.7%), followed by graduates (39%). The majority of them are Chinese (78%) and about half of them have worked in the company for 6 months to 2 years, follow by more than 2 years, i.e. those longer service staff from pre-incorporation days (29.3%). Most of them are from the Continuing Education Department (19.5%) and Info-communication Training, Marketing and Finance departments have the same number of participants (17.1%). Please refer to Table 5.1 for the detailed demographic profile of respondents.

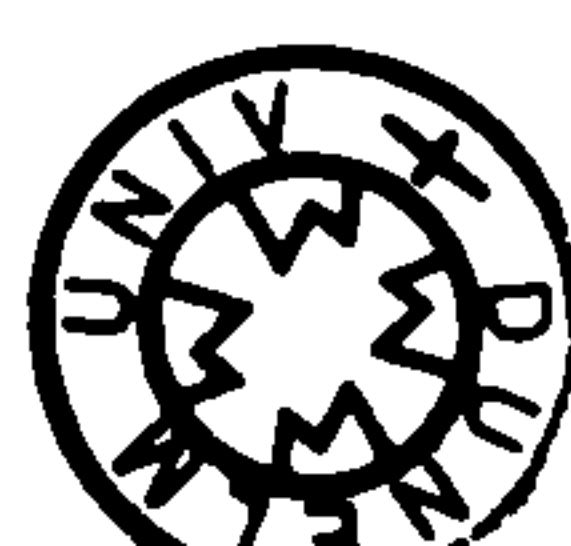
**Table 5.1 - Demographic Profile of Respondents**

Variable	Classification	Number of respondents	%
		N=41	
<b>Gender</b>	Male	7	17.1
	Female	34	82.9
<b>Age</b>	20 - 29	19	46.3
	30 - 39	11	26.8
	40 - 49	9	22.0
	50 or above	2	4.9
<b>Marital Status</b>	Single	21	51.2
	Married	20	48.8
<b>Ethnic Group</b>	Chinese	32	78
	Malay	4	9.8
	Indian	5	12.2
<b>Highest Education</b>	Secondary	1	2.4
	Diploma	22	53.7
	Degree	16	39.0
	Others	2	4.9
<b>Length of Service</b>	Below 6 months	12	29.3
	6 months to 2 years	21	51.2
	Above 2 years	8	19.5
<b>Business Unit/Functional Unit</b>	Infocom	7	17.1
	Continuing Education	8	19.5
	Operations	4	9.8
	Marketing	7	17.1
	Human Resource	2	4.9
	IT & Facilities	6	14.6
	Finance	7	17.1

The study sample is a good representative of the staff profile in LHub. As stated in Chapter 1, the major purpose of this study is to determine whether adopting the business excellence framework and LO concepts *could* work in an accessible context (i.e. LHub). As such, generalising this study was not a primary goal. Any effect of business results evident in this study might be generalized to small and medium business start-ups in Singapore that are similar to LHub in profile, have a similar clientele, and adopt a similar management approach. The external validity is therefore limited. The research is thus a case study, described by Hussey and Hussey (1997) and Easton (2000) as an extensive examination of a single instance of a phenomenon of interest (LO) and an example of phenomenological methodology. It is an account of problem situations and events that took place in LHub. This approach implies a single unit of analysis, in this instance LHub and its group of employees, and involves gathering detailed information about them over a period of one year, with a view to obtaining in-depth knowledge.

## **5.2 Case Background Information**

The case study of LHub has been discussed in previous chapters. LHub was aspiring to be a LO with some preliminary efforts in place to promote strategic learning in the areas of Leadership, Strategic Planning, Customer and Market Focus, Measurement, Analysis and Knowledge Management, Workforce Focus, and Process Management. Table 5.2 below summarises the various initiatives taken by LHub so far.



**Table 5.2 - Key Initiatives of LHub towards being a LO (July 05 to July 06)**

Strategic Determinants as in Baldrige model	LHub's Initiatives
<b>Leadership</b>	<p>Facing a declining business, the senior management of LHub recognised the urgent need to instil change in the organisation. It quickly called for a strategic planning session with all the senior staff to chart out the future direction of the organisation in November 2004, three months after the date of incorporation. It came out with a mission, vision and values, and communicated them to all staff, shareholders, key suppliers and partners.</p> <p>The senior management then went on to create the kind of strategies, structures, cultures processes, procedures and relationship that make this possible. Careful steps were taken in the area of target setting, rewards allocation, selection and dismissal process, role modeling, communication of values during management and staff meetings, and reactions to crisis.</p>
<b>Strategic Planning</b>	<p>The immediate priority during LHub's incorporation at 2004 to 1<sup>st</sup> Quarter of 2005 was to stabilize the core IT and CET businesses, before exploring new growth path in the 2<sup>nd</sup> Quarter of 2005 and beyond, ie. to diversify the current product mix. In the area of organisation development, the attention was to build teamwork and recast corporate culture to a customer-centric and profit-oriented one, before embarking on ISO 9000 project. This was followed by strategy development which involved taking actions to develop the skills and capabilities needed to achieve competitive advantage. The aim was to build LHub's competence in one or more core activities crucial to strategic success and then use the core competence as a basis for winning a competitive edge over rivals.</p> <p>After careful deliberation on LHub's own internal strengths and weaknesses, it was decided that LHub's circumstances dictated that it should focus on fulfillment, followed by marketing capabilities. The build-up would be done in phases, until the final phase of content/product driven capabilities. Finally, the expansion plans were being formulated to grow beyond Fiscal Year (FY) 05/06. LHub's long term goals is to achieve an annual turnover of \$50 million in 2010.</p>
<b>Customer and Market focus</b>	<p>For a direct, close and individual link between LHub and its customers, LHub introduced customer friendly processes and system as well as gearing towards the right organisational set-up in the areas of staff motivation, accountability, empowerment, CRM implementation, reward system, etc. The plan was to fully focus on the customers by concentrating on the processes of 'initiating' and 'retaining' good customer relationships, follows by 'expanding' business together with key customers in order to increase the value of the customer base.</p> <p>Upon understanding the buying behaviour of existing clients, LHub then differentiated its services from the competition by positioning itself as a quality training provider selling its wide range of courses at a reasonable price; focusing on skills training that enhance employability; and being innovative in teaching and adult learning methodology. Initiatives like outsourcing of customer service hotline, engaging a full time Customer Relationship Manager, special privileges to corporate clients in terms of quantity discounts etc, were taken. LHub's plan was to expand the business further by not only expanding the current market share in the low end/horizontal market, but also moving into "adjacencies" offering courses at the education and professionals domain.</p>



<p><b>Measurement, Analysis and Knowledge Management</b></p>	<p>Management prioritised the information needed for control purposes and came out with Key Performance Indicators (KPIs) in the areas of business results, customer satisfaction, employee satisfaction and impact on society. As a start off, in the first strategic management workshop held in Nov 2004, all the Strategic Business Units (SBU) and Strategic Functional Units (SFU) were told to adopt the Balance Scorecard templates of Financial, Customer, Internal, and Learning &amp; Growth perspectives. In 2005, LHub decided to work towards ISO 9000 certification and derived three quality policies with specific measurable quality objectives in the (i) Products, (ii) Fulfillment, (iii) Marketing and (iv) Infrastructure arena. Each business unit and department was able to derive specific measurable targets aligned to corporate goals. Quarterly incentives are given to business units who achieved these targets.</p> <p>Information systems in LHub also played a more strategic role and acted as a supplier of information and tools for decision making. The idea is for the new IS to help LHub develop competitive weapons that use information technology to meet challenges from competitive forces that confront the organisation through devising a knowledge-enabled Customer Relationship Management (CRM) strategy; helping to plan effective metrics and building an enterprise wide architecture for Knowledge Management (KM), etc. An investment was made to develop a whole new IS to support LHub in the crucial areas of marketing, sales and service support.</p>
<p><b>Workforce Focus</b></p>	<p>LHub came out with the goal of driving organisational and people capability to inspire breakthrough performance. As the organisation is new and there were many new recruits, a teambuilding event was organized on February 2005 to bring everyone together, establishing common goals and inculcating desirable LHub culture. A Total Company Training Plan (TCTP) was also worked out at the organisation, job and individual level. At least 50% of the training budget was committed to LHub's core competencies of (i) Leadership and visioning; (ii) customer service; (iii) total quality management; (iv) creative thinking and innovation; and (v) teamwork.</p> <p>To encourage staff to come forward with ideas, a Staff Suggestion Scheme was introduced, with the suggestions on increasing sales revenue, enhancing customer satisfaction, improving operational efficiency and employees satisfaction being rewarded. Contributions would be recorded in the annual Performance Appraisal Exercise. In mid 2005, LHub began to move towards a HR system with a proper career development plan for all staff; structured induction programme for existing staff that were given new jobs; establishing a feedback loop to improve people development processes, etc.</p>
<p><b>Process Management</b></p>	<p>Since incorporation, LHub was faced with key challenges in terms of intra- and inter-departments coordinating work. The Operations Department was tasked to streamline internal processes that are knotted with external funding process; allocate limited resources between maintaining service level against strategic project needs (like process redesigning, ISO 9000); design LHub's operations services for easier execution and higher effectiveness; and ensure that controls are available to avoid high error rate.</p> <p>In 2006, LHub decided to embark on a ISO 9000 journey and use the ISO 9000 framework as a vehicle for business improvement. The ultimate goal is to achieve a better understanding and consistency of all quality practices throughout LHub; and form a foundation and discipline for improvement activities within the quality management system. LHub eventually attained ISO 9001:2000 status in November 2006. Despite this achievement, a new target was set to go beyond ISO 9001:2000 and move towards ISO9004:2000, then business excellence in the form of Singapore Quality Class Award.</p>

The case study of LHub documented for the purpose of this research can be described as explanatory, ie., existing theory is used to understand and explain what is happening. Yin (1994) identifies the following characteristics of case study research: the research aim is not only to explore certain phenomena (LO), but to understand them in a particular context (Business Result), and it uses multiple methods for collecting data, which may be both qualitative and quantitative. This research did not use any qualitative exploratory research tools like interviewing or focus group but relied primarily on a literature review, the conceptualisation of the research problem and quantitative descriptive research work like the questionnaire survey to measure the respondents' views of the situation in which they are working.

### **5.3 Measurement**

This section includes a description of the research's constructs and all measures that will be used to operationalize them. In addition, there is a discussion on the results of the reliability and validity tests for the measuring instruments used.

Goh and Richards (1997) argued that LO implementation has been hindered by the lack of a measurable approach. A review of the literature supports this view, providing only very few examples of progress assessment (Leitch et al., 1996; Gardiner and Whiting, 1997); there is a similar lack in even the measurement of learning activity (Allen, 1997; Benoit and MacKenzie, 1993; Bohlin and Brenner, 1995; Goh and Richards, 1997; Gardiner and Whiting, 1997). Evidence is even harder to come by of organisations linking learning to returns on investment (ROI) and to the kinds of results that might convince hard-headed business people to risk their money on a LO journey (Wills and Oliver, 1996; Boudreau and Ramstad, 1997).

In the absence of practical well-founded assessment approaches, even a preliminary exploration of means to substantiate a business case for a LO is precluded. The diagnosis tools analysed in this study vary a lot, and they seem to be more often products of consultants than of thorough scientific development and testing. There seems to be a remarkable gap between practical and scientific work in diagnosing LOs.

Also, there are altogether far too few measurement tools available regardless of their background or purpose.

Table 5.3 is organized according to some special interests. The first focus is on the way LOs are treated: archetype means that the LO is only one of several different types and the questionnaire is just meant for identifying if an organisation is a learning one or not. Holistic describes the capacity of the tool to cover the concept as widely as possible, e.g. strategic and operational aspects as well as structures and processes. Profound is meant to describe the comprehensiveness of the tool, i.e. whether it is profound or superficial, comprehensive or not. This could be characterised by the focus of the instrument; it may not cover all the possible aspects but only the most important features that are carefully chosen, concentrating on these. Tested means statistical testing, for example the testing of the validity and reliability of the instrument.

**Table 5.3 - Some Characteristics of LO Questionnaires**

<b>Name of the Instrument</b>	<b>Archetype</b>	<b>Holistic</b>	<b>Profound</b>	<b>Tested</b>
Pedlar et al. (1991; 1997): The Learning Company Questionnaire	-	Yes	-	-
Campbell and Cairns (1994): Behaviourally-Anchored Rating Scales (BARS)	-	Yes	-	-
Pearn (1995): The Learning Audit	-	-	Yes	-
Hill's (1996): Learning Culture Survey	Yes	-	-	-
Redding and Catalanello (1997): LO Capability Assessment	Yes	-	-	-
Appelbaum and Reichart (1998): LO's Orientation Model	-	-	Yes	-
Smith and Tosey (1999): Focus/Will/Capability-Performance (F/W/C-P) Model	-	-	Yes	-
Griego, et al. (2000): Predictors of LO	-	-	Yes	Yes
Moilanen (2001): LO Diamond	-	-	Yes	Yes

Two of the tools shown above merely attempt to identify whether an organisation is learning or not (Hill, and Redding and Catalanello). Two are more holistic than the rest (Pedler *et al.*, and Campbell and Cairnes), and the remaining concentrate more on encouraging or empowering learning (Pearn et al., Appelbaum and Reichart, Smith and

Tosey, Griego et al, and Moilanen). The process of developing the tools has not been explained, which means that the validity of the tools is hard to analyse and assess in most cases. Only minor empirical evidence has been reported, and only Griego et al (2000) and Moilanen (2001) have tested the reliability of their tools. Others do not report having tested their measuring instruments.

It can be seen that the tools are very different and the comparison is very hard to conduct. The purposes of the instruments do not match, nor do the scopes and the comprehensiveness of the tools. The most important criterion for the suitability of the instrument would be in its internal use in organisations and its benefits, but this aspect is almost impossible to analyse here, because it has not been made apparent in the articles and books analysed.

Presenting the instruments does not in itself shed light to the way in which they can be utilized. All instruments are developed for some purposes, and it is important that they are appropriate for those purposes. If the purpose has been to serve the organisations, that should have been clear from the context. Also, how the feedback was given to companies and how they could use the information should be explained. Because the process of giving feedback has not been described, it is not known whether the managers get any benefits from the diagnosing process.

In short, the contemporary discussion concerning the measurement of a LO does not focus on the purposes of measuring. Measuring is just measuring without any wider connections to theories or the needs of the measured organisations. Co-operation of scholars and combining existing knowledge are rare. The common ground for measuring is also missing. In addition, the feedback from the tool development process to more theoretical work is lacking.

Although the emphasis in this study has been on analysing the whole organisation, which is what some of the existing questionnaires do, there is an evident need for some other types of questionnaires, too. The first stage is to have some general information

of the whole organisation as a LO but, as soon as the organisation needs more specific information, the value of more specified and focused tools will grow. The ultimate focus of the tool for the internal use of the organisation is dependent on the needs of the company. Under such circumstances, for the purpose of this research, it was decided to use one diagnostic instrument to measure the level of change and the degree to which LHub has moved towards becoming LOs - a modified version of the existing Singapore Quality Award's Business Excellence for Continuous Improvement (BEACON) company audit questionnaire (see Appendix A).

### *5.3.1 Singapore Quality Award*

The Baldrige, EFQM, Australia, Canadian, and Singapore Business Excellence frameworks share a similar purpose, core values, concepts and criteria (Porter and Tanner, 2004). In short, they are to help organisations utilise an integrated approach to organisational performance that results in (i) delivery of ever-improving value to customers, contributing to marketplace success; (ii) improvement of overall organisational operational effectiveness and capabilities; and (iii) organisational and personal learning (NIST, 2007). The similarities between the various models far outweigh the differences (Porter and Tanner, 2004).

It should be noted that in all the award frameworks the categories are to an extent purely based on expert opinion, and have not been subjected to the rigorous empirical tests that are frequently used in the management sciences. Over the years, some Baldrige items have been moved between different categories as part of the process of clarifying and improving the model. The criteria or categories are weighted according to their relative importance, and this is also arbitrary, although it does represent the consensus of a significant group of important industry experts. In the case of the European model, the views of approximately 1,000 business leaders were sought in establishing the criteria weightings.

The Singapore Quality Award (SQA) is based on the Baldrige, EFQM and Australian models. It is administered by the Standards, Productivity and Innovation Board (SPRING) of Singapore. Launched in 1994, it is awarded to organisations based in Singapore that demonstrate the highest standards of business excellence. The business excellence model underpinning the SQA, the Singapore Quality Award Framework, is based on the best practice embodied in the Malcolm Baldrige Model, the EFQM Excellence Model and the Australian Business Excellence Framework. The aim of the award programme is to encourage organisations to strengthen their management systems, and enhance their capability and competitiveness. The SQA criteria form the basis for the evaluation and feedback to applicants on their performance. The criteria measure:

- Understanding of the requirements for business and organisational excellence
- Enhancement of organisational performance practices and capabilities
- Sharing of best practice information among organisations

The award criteria are built upon a set of core values and concepts. These values and concepts provide the foundation for integrating key performance requirements within the criteria framework (SPRING, 2007). They are:

- Visionary Leadership
- Customer-Driven Quality
- Innovation Focus
- Organisational and Personal Learning
- Valuing People and Partners
- Agility
- Knowledge-Driven System
- Societal Responsibility
- Results Orientation
- Systems Perspective

The core values are integrated into a comprehensive framework comprising seven categories which make up the SQA model, namely leadership, planning, information, people, processes, customers and results (see Table 5.4).

**Table 5.4 - Seven Categories of SQA Model**

1. <b><u>Leadership</u></b> :	which examines the organisation's leadership system, purpose, vision and values, and its responsibility to the community and the environment.
2. <b><u>Planning</u></b> :	which focuses on the organisation's planning process, how key requirements are integrated into the organisation's plans and how these plans are deployed, as well as how performance is tracked.
3. <b><u>Information</u></b> :	which focuses on the management of information and the use of comparative and benchmarking information to support decision-making at all levels of the organisation.
4. <b><u>People</u></b> :	which focuses on how the organisation taps the full potential of the workforce to create a high performance organisation, emphasising on the workforce training needs and career development, health and satisfaction, and performance and recognition, as aligned with the organisation's objectives.
5. <b><u>Processes</u></b> :	which focuses on the key processes the organisation uses to pursue its objectives and goals, including the innovation processes, production and delivery processes, and supplier and partnering management processes.
6. <b><u>Customers</u></b> :	which focuses on how the organisation determines customer and market requirements, builds relationships with customers, and determines their satisfaction.
7. <b><u>Results</u></b> :	which examines the organisation's performance and improvements in areas of importance to the organisation, as well as the organisation's performance levels relative to those of competitors and/or benchmarks.

These seven categories are very similar to Malcolm Baldrige's seven dimensions or strategic determinants mentioned in earlier chapters and will be the main measurement tool for testing of the various hypothesis mentioned. The details for these seven categories, or variables for the purpose of this research study, are found in the company audit questionnaire in Appendix A, together with their sub-variables (see Table 5.5).

**Table 5.5 - Sub-variables of the Singapore Quality Award vis-à-vis Malcolm  
Baldrige National Quality Award**

SQA Categories/Items		Malcolm Baldrige National Quality Award Description
<b>1</b>	<b>Leadership</b>	<b>Leadership</b>
1.1	Senior Executive Leadership	Examines how senior executives guide the organisation and how the organisation addresses its responsibilities to the public and practices good citizenship.
1.2	Organisational Culture	
1.3	Responsibility to Community and the Environment	
<b>2</b>	<b>Planning</b>	<b>Strategic Planning</b>
2.1	Strategy Development & Deployment	Examines how the organisation sets strategic directions and how it determines key action plans
<b>3</b>	<b>Information</b>	<b>Measurement, Analysis and Knowledge Management</b>
3.1	Management of Information	Examines the management, effective use, analysis, and improvement of data and information to support key organisation processes and the organisation's performance management system.
3.2	Comparison & Benchmarking	
<b>4</b>	<b>People</b>	<b>Workforce Focus</b>
4.1	Human Resource Planning	Examines how the organisation enables its workforce to develop its full potential and how the workforce is aligned with the organisation's objectives.
4.2	Employee Involvement & Commitment	
4.3	Employee Education, Training & Development	
4.4	Employee Health & Satisfaction	
4.5	Employee Performance & Recognition	
<b>5</b>	<b>Process</b>	<b>Process Management</b>
5.1	Innovation Process	Examines aspects of how key production/delivery and support processes are designed, managed, and improved.
5.2	Process Management and Improvement	
5.3	Supplier and Partnering Process	
<b>6</b>	<b>Customers</b>	<b>Market and Customer Focus</b>
6.1	Customer Requirements	Examines how the organisation determines requirements and expectations of customers and markets; builds relationships with customers; and acquires, satisfies, and retains customers.
6.2	Customer Relationship	
6.3	Customer Satisfaction	
<b>7</b>	<b>Results</b>	<b>Business Results</b>
7.1	Customer Results	Examines the organisation's performance and improvement in its key business areas: customer satisfaction, financial and marketplace performance, human resources, supplier and partner performance, operational performance, and governance and social responsibility. The category also examines how the organisation performs relative to competitors.
7.2	Financial and Market Results	
7.3	People Results	
7.4	Operational Results	



This audit questionnaire is called the Business Excellence Continuous Improvement (BEACON), which is a Singapore Quality Award's (SQA) criteria tool attempting to measure an organisation's improvement process and potential.

In terms of content validity, the BEACON questionnaire, with a complex award weighting and three-dimensional point awarding or scoring system of approach as well as deployment, was done by SPRING's SQA assessors and company's SQA trained internal auditors. In essence, BEACON is modelled after the self assessment questionnaires of Baldrige Model, the EFQM Excellence Model and the Australian Business Excellence Framework. It is approved by a Governing Council, supported by a Management Committee comprising of experienced assessors and business practitioners from Award members as well as past Award recipients from both the private and public sectors. The committee reviews the Award criteria, vetted the BEACON audit questionnaire, develops the system for training and certifying assessors, and shortlist award applicants.

To complete the BEACON instrument, organisations are required to rate themselves against all 100 statements addressing the 21 items grouped under the seven business excellence categories. While conducting the assessment, organisations need to identify and gather useful information to support their responses. Responses will be rated according to the three Assessment Criteria, namely Approach, Deployment and Results.

Statements on the first 6 dimensions address Approach and Deployment, while those in the Results dimension address results. Approach refers to how an organisation addresses the requirements in the BEACON statement, and Deployment refers to the extent to which the approaches are applied in the organisation. The "Results" criteria refers to an organisation's performance in key result areas. The time periods for improvement trends might span three years or more and may be shorter in areas where improvement efforts are new. Finally, a "Scoring Guidelines" is used in deciding the rating for each statement.

### *5.3.2 Modification of BEACON*

For the purpose of this study, the measurement items in the instrument were modified from BEACON to suit the sample group, ie. LHub staff, as they are not trained in SQA assessment methodology and due to time constraints (the questionnaire was conducted on the spot during the Management-Staff Meeting). The self-assessment questionnaire was modified as follows:

1. Save time – Instead of asking respondents to answer 86 questions (excluding those in the “Results” category) as in the BEACON company audit questionnaire, the questions found in each sub-variable were clustered into 17 items. The questions in each of these 17 items are exactly the same as the original 86 questions. Respondents were told to think how much LHub is like as per the descriptions created by the questions combined together and award points.
2. Reduce complexity – Instead of a three dimensional scoring system of “Approach”, “Deployment” and “Results”, the questionnaire was replaced with a simple rating scale. Respondents were asked to award 1 to 10 points for each description or item in a small bracket, 10 being the most resembled.
3. Substitute “Results” – Instead of using Questions 87 to 100 under the “Results” section, LHub’s own financial results, employees and customers’ satisfaction surveys from Jul 06 to Jul 07 were used. Operational results were dropped as there are too many business units within LHub with very different key performance indicators in this arena and it is also not the focus of this research.

Table 5.6 compares the items used in this study with those used in BEACON. The modified BEACON then becomes a measuring instrument for LHub’s staff for self assessment. A valuable aspect of such self-assessment is the ability to make year-on-year objective comparisons (Porter and Tanner, 2004). In fact, this is very common

among organisations that endorse business excellence framework practices and their primary motive is to drive self improvement (ECforBE, 1997).

**Table 5.6 - Comparison between BEACON and Current Study**

BEACON		Current Study			
Constructs	Measurement Items	Items Label	Clustering of Questions into Descriptions	Reduce Complexity of Scoring System	Substitute Results
<b>Leadership</b>	Senior Executive Leadership	LDR1	1 to 5	√	
	Organisational Culture	LDR2	6 to 10	√	
	Responsibility to Community & the Environment	LDR3	11 to 14	√	
<b>Planning</b>	Strategy Development & Deployment	PLN1	15 to 24	√	
<b>Information</b>	Management of Information	INF1	25 to 31	√	
	Comparison & Benchmarking	INF2	32 to 34	√	
<b>People</b>	Human Resource Planning	PPL1	35 to 37	√	
	Employee Involvement & Commitment	PPL2	38 to 42	√	
	Employee Education, Training & Development	PPL3	43 to 47	√	
	Employee Health & Satisfaction	PPL4	48 to 51	√	
	Employee Performance & Recognition	PPL5	52 to 55	√	
<b>Process</b>	Innovation Process	PRO1	56 to 65	√	
	Process Management & Improvement	PRO2	66 to 69	√	
	Supplier and Partnering Process	PRO3	70 to 74	√	
<b>Customers</b>	Customer Requirements	CUS1	75 to 78	√	
	Customer Relationship	CUS2	79 to 83	√	
	Customer Satisfaction	CUS3	84 to 86	√	
<b>Results</b>	Customer Results		87 to 89		√
	Financial & Market Results		90 to 92		√
	People Results		93 to 96		√
	Operational Results		97 to 100		

### 5.3.3 Questionnaire Description

The actual questionnaire is found in Appendix B. It consists of 2 parts. The first part investigates the general information of the LHub employees participating in the research. This include the age, gender, education, department, length of service, etc. The second part of the questionnaire explores the practical level of LO implementation in LHub by using the framework comprising six of the seven categories which make up

the SQA model, namely Leadership, Planning, Information, People, Process and Customers (“Results” has been excluded). In this part, respondents were asked to what extent each characteristics is currently being achieved – ‘how it is’; and how important they think it is for LHub to try to achieve that characteristic – ‘how it should be’. The scoring system ranges from 1 to 10 points. For “how it is”, if the respondents think LHub is very much like the picture created by the descriptions combined together in each of the items, then they will award higher points for that piece of the question in the small bracket. After this, they will proceed to “how it should be”, by doing the questionnaire a second time, asking themselves if what was awarded during the first round was how LHub is like at that moment, then how important it is for LHub to try to achieve that characteristic. The most important will be awarded 10 points.

The final results will be interpreted in the fifth part of the questionnaire. This instrument provides a measure of urgency or priorities for action by asking respondents to indicate “how it is” and “how it should be”. By summing up all the numbers that the respondents have indicated in the questionnaire in “how it is” and “how it should be”, a dissatisfaction index is calculated, given by:

$$\text{Dissatisfaction index} = 100 \times [(\text{how it should be} - \text{how it is}) / \text{how it should be}]$$

If the respondent is totally dissatisfied, the index will be 100. If the respondent is exactly satisfied, that is things are exactly as he or she would like them to be, the index will be zero. By summing up all the numbers that staff have indicated in the questionnaire, the extent each characteristics as well as the whole organisation is towards a company of business excellence can be measured (see last page of questionnaire in Annex B).

The above approach is modelled after Pedler et al. (1988) Learning Company Questionnaire that demonstrates examples of activities and styles of behaviour which indicated that companies had moved some way towards becoming LOs without perhaps having achieved complete learning company status (Leitch et al., 1996). It also

supports Burdett (1993) who posits that the LO is a journey rather than a destination, and measurement of this process should not fall into the danger of becoming over-complex and confused users.

#### **5.4 Design and Procedures**

This section states the name of the design that is used and tells whether it is a true or quasi-experiment. It also presents the design structure in X and O notation and a discussion of internal validity that describes the major likely threats in the study and how the design adopted have problems accounting for them. An overview of how the study will be conducted is also included, describing the sequence of events that is appropriate to the design.

A one-group pre-test-post-test design was used in this study. In notational form, the design can be depicted as:

EG: (N) O X O

where:

EG = experimental group (i.e. LHub staff)

N = the groups were non-equivalent

O = the measures (i.e. modified BEACON)

X = the intervention (i.e. implementing Business Excellence Framework management approaches)

In this research, staff who attended the Management-Staff meeting in July 2005 were used as an opportunity sample. In other words, as not all staff attended the meeting due to operational constraints, only those who attended were involved in the study, and 45 staff did. During the meeting, they were being briefed on the purpose of the study and reassured that all information provided will be kept confidential. In fact, the staff's

main and only task is just to fill up the questionnaire survey and to do it again in a year's time to track if there was any progress. In between this period, nothing was required from the staff and they can just perform their daily work as usual. Staff were then given a choice not to participate but none opted out of the study.

Out of the 45 staff present in the July 2005 meeting, 41 LHub staff were being treated as an experimental group. The remaining 4 NTUC CertCentral (NCC) staff who were present, though also participated in the survey, were not included in the experimental group. NCC is one of LHub's three Strategic Business Units (SBUs), and had just been hived off as a separate subsidiary one month before in June 2005. While the NCC staff shared the same pre-post incorporation experience as LHub's staff prior to this, their future experience will be very different from LHub's staff, e.g. LHub went ahead with its ISO 9000 project whereas NCC did not embrace this nor any other total quality management philosophy, which is a key ingredient found in the Business Excellence framework for organisational improvement. The management in NCC was still in the process of charting out its own strategic directions as a separate entity then. Their size was also too small to be treated as a control group.

As the actual survey form does not require the staff concerned to fill up their names, an attendance list for this July 2005 meeting was obtained from the Human Resource Department (HRD). The purpose was to find out the names of the respondents so that a similar survey could be conducted for this same group of employees in a year's time. In July 2006, LHub's employee size has already grown to around 83. However, with the assistance of the Human Resource Department, the original pre-test group of 41 staff were being informed to gather 30 minutes before the monthly Management-Staff meeting of July 2006 to fill up the same questionnaire again. A total of 32 staff from this pre-test group turned up and their attendance were taken by HRD. Those that did not turn up due to work exigencies or on leave were being mailed a set of the questionnaire through internal despatch by HRD. The author of this study then went personally to these remaining staff to pick up the questionnaire 3 days later.

This type of research design is termed as a Non-Equivalent One-Group Pretest-Posttest Design, a form of quasi-experimental design as distinguished by the form of control it affords the researcher. Whereas the experimenter could randomly assign treatments, he or she could not randomly select the test units, i.e. whereas it was possible to select the staff randomly by virtue of those who attended the July 2005 Management-Staff meeting, it was not possible to randomly assign the staff to the experimental group because this assignment is very much determined by whether those present were LHub or NCC staff. However, in this instance, the experimenter was able to control the 'when' (July 05 and July 06) and 'to whom' (LHub staff) of measurement, hence resulting in a quasi-experimental design (Churchill, 1991).

### **5.5 Psychometric Properties of the Constructs (Reliability and Validity)**

Before the analysis of the data could commence, it is important to test the reliability and validity of the questionnaire. Reliability is defined as a measuring instrument's ability to yield consistent measurement and validity is defined as the extent to which any measuring instrument measures what it is intended to measure (Flynn et al., 1994). Reliability relates to the consistency of the measures whereas validity is concerned with how well the concept is defined by the measures (Carmines and Zeller, 1979). This section will first discuss reliability analysis, follow by collinearity, content and construct validity tests.

#### *5.5.1 Reliability Analysis*

Reliability was measured through estimation of internal consistency. The reliability analysis of a measuring instrument determines its ability to yield consistent measurement (Flynn et al., 1994). In other words, reliability relates to the extent to which an experiment, test or any measuring procedure yields the same results on the repeated trials (Carmines and Zeller, 1979).

Internal consistency is an indicator of how well the different items measure the same concept (Saraph et al., 1989). The inter-correlation between items would be high if they

were indeed measuring the same concept. The internal consistency can be estimated using a reliability coefficient known as Cronbach's alpha (Nunnally 1978; Cronbach, 1951). Nunnally (1978) states that allowable alpha value can be somewhat lower for new scales, suggesting the use of minimum alpha value of 0.60, otherwise an alpha value of 0.70 is often considered the criterion for internally consistent established scale. The value of Cronbach's alpha 0.80 or more is very reliable.

The internal consistency of the elements in the pre and post-test questionnaires was tested by using SPSS reliability analysis procedure. This reliability test was undertaken to ensure that the research findings have the ability to provide consistent results in repeated incidences. Table 5.7 shows the Cronbach's alpha for different factors. The overall Cronbach's alpha of 0.878 for the pre-test in 2005 and 0.968 for the post-test in 2006 indicates that the instrument used has high internal consistency and therefore is highly reliable. In short, the items assigned to the constructs were generally reliable measures of the constructs.

**Table 5.7 - Cronbach's alpha Coefficients for Pre and Post-Test**

No. of Constructs	No. of Measurement Items	Cronbach's alpha (2005)	Cronbach's alpha (2006)
6	17	.878	.968

### 5.5.2 Collinearity

Multicollinearity occurs when two or more items measure the same entity and are therefore identical (Flynn et al, 1990). Highly collinear items can distort the results substantially or make them unstable and not generalizable (Hair Jr et al, 1998). To find out collinearity, the Pearson correlation coefficients are used. The essence of a correlation coefficient is that it is an index which ranges from +1 (the two variables are perfectly positively related – they both get larger together) to -1 (the two variables are perfectly negatively related; as one gets larger the other gets smaller). Table 5.8 and Table 5.9 below show the correlation, means and standard deviations of the various variables in July 05 and July 06 respectively. As can be seen in the two tables, none of



the inter-item Pearson correlation coefficients is greater than 0.9. Hence multicollinearity type problems did not appear to be present.

**Table 5.8 - Correlations (N=41) - July 05**

Item	LDR 1	LDR 2	LDR 3	PLN 1	INF 1	INF 2	PPL 1	PPL 2	PPL 3	PPL 4	PPL 5	PRO 1	PRO 2	PRO 3	CUS 1	CUS 2	CUS 3
LDR 1	1																
LDR 2	.154	1															
LDR 3	.159	-.005	1														
PLN 1	.421 (**)	-.052	.534 (**)	1													
INF1	.234	.130	.503 (**)	.392 (*)	1												
INF2	.358 (*)	.166	.523 (**)	.382 (*)	.489 (**)	1											
PPL 1	.393 (*)	.077	.255	.374 (*)	.297	.411 (**)	1										
PPL 2	.299	.004	.180	.222	.106	.546 (**)	.157	1									
PPL 3	.237	.126	.266	.126	.081	.340 (*)	-.028	.389 (*)	1								
PPL 4	.267	.125	.315 (*)	.152	.326 (*)	.551 (**)	.132	.391 (*)	.294	1							
PPL 5	.281	-.268	.256	.250	.141	.282	.023	.272	.114	.198	1						
PRO 1	.338 (*)	.140	.433 (**)	.307	.328 (*)	.690 (**)	.191	.584 (**)	.411 (**)	.566 (**)	.310 (*)	1					
PRO 2	.515 (**)	.091	.487 (**)	.541 (**)	.193	.425 (**)	.266	.281	.135	.244	.534 (**)	.451 (**)	1				
PRO 3	.402 (**)	.078	.034	.175	.249	.296	.152	.312 (*)	.374 (*)	.494 (**)	-.058	.421 (**)	.289	1			
CUS 1	.300	.184	.300	.309 (*)	.443 (**)	.494 (**)	.249	.462 (**)	.486 (**)	.378 (*)	.180	.646 (**)	.384 (*)	.568 (**)	1		
CUS 2	.320 (*)	.005	.207	.281	.067	.247	.088	.360 (*)	.426 (**)	.202	.210	.172	.278	.242	.262	1	
CUS 3	.269	-.044	.364 (*)	.313 (*)	.212	.466 (**)	.307	.402 (**)	.270	.594 (**)	.215	.426 (**)	.267	.286	.295	.465 (**)	1
Mean	6.90	6.59	6.22	6.56	6.59	5.90	6.76	6.37	6.73	6.85	6.34	5.24	6.22	5.98	6.10	6.66	6.41
SD	.917	.948	1.35	1.25	1.20	1.80	1.32	1.41	1.14	1.37	1.30	1.53	1.37	1.21	1.67	.990	1.18

\*\* Correlation is significant at the 0.01 level (2-tailed).

\* Correlation is significant at the 0.05 level (2-tailed).

**Table 5.9 - Correlations (N=41) - July 06**

Item	Ldr 1	Ldr 2	Ldr 3	Pln 1	Inf 1	Inf 2	Ppl 1	Ppl 2	Ppl 3	Ppl 4	Ppl 5	Pro 1	Pro 2	Pro 3	Cus 1	Cus 2	Cus 3
Ldr 1	1																
Ldr 2	.714 (**)	1															
Ldr 3	.690 (**)	.628 (**)	1														
Pln 1	.667 (**)	.639 (**)	.570 (**)	1													
Inf 1	.757 (**)	.603 (**)	.659 (**)	.589 (**)	1												
Inf 2	.508 (**)	.785 (**)	.512 (**)	.500 (**)	.561 (**)	1											
Ppl 1	.734 (**)	.806 (**)	.646 (**)	.627 (**)	.742 (**)	.755 (**)	1										
Ppl 2	.731 (**)	.814 (**)	.704 (**)	.752 (**)	.682 (**)	.720 (**)	.737 (**)	1									
Ppl 3	.794 (**)	.798 (**)	.589 (**)	.658 (**)	.706 (**)	.627 (**)	.759 (**)	.787 (**)	1								
Ppl 4	.776 (**)	.605 (**)	.654 (**)	.565 (**)	.718 (**)	.455 (**)	.731 (**)	.620 (**)	.756 (**)	1							
Ppl 5	.710 (**)	.643 (**)	.659 (**)	.664 (**)	.587 (**)	.550 (**)	.617 (**)	.700 (**)	.727 (**)	.673 (**)	1						
Pro 1	.580 (**)	.488 (**)	.686 (**)	.622 (**)	.668 (**)	.532 (**)	.641 (**)	.648 (**)	.588 (**)	.583 (**)	.658 (**)	1					
Pro 2	.559 (**)	.482 (**)	.853 (**)	.575 (**)	.687 (**)	.472 (**)	.582 (**)	.603 (**)	.498 (**)	.547 (**)	.568 (**)	.789 (**)	1				
Pro 3	.641 (**)	.637 (**)	.774 (**)	.552 (**)	.701 (**)	.659 (**)	.686 (**)	.703 (**)	.579 (**)	.547 (**)	.657 (**)	.683 (**)	.758 (**)	1			
Cus 1	.682 (**)	.605 (**)	.663 (**)	.797 (**)	.602 (**)	.518 (**)	.628 (**)	.731 (**)	.701 (**)	.592 (**)	.698 (**)	.740 (**)	.676 (**)	.657 (**)	1		
Cus 2	.628 (**)	.669 (**)	.617 (**)	.612 (**)	.588 (**)	.555 (**)	.734 (**)	.678 (**)	.690 (**)	.587 (**)	.555 (**)	.569 (**)	.588 (**)	.604 (**)	.770 (**)	1	
Cus 3	.557 (**)	.601 (**)	.607 (**)	.655 (**)	.500 (**)	.607 (**)	.655 (**)	.688 (**)	.616 (**)	.402 (**)	.587 (**)	.620 (**)	.688 (**)	.725 (**)	.728 (**)	.781 (**)	1
Mean	7.49	7.37	7.12	7.54	7.37	6.93	7.29	7.17	7.32	7.41	7.15	7.27	7.54	7.22	7.32	7.49	7.39
SD	1.75	1.36	1.50	1.61	1.39	1.51	1.25	1.30	1.51	1.40	1.37	1.40	1.57	1.35	1.44	1.12	1.26

\*\* Correlation is significant at the 0.01 level (2-tailed).

### 5.5.3 Content Validity

A measure has a content validity if there is a general agreement among the subjects and researchers that the instrument has measurement item that cover all the aspect of the variable being measured (Carmines and Zeller, 1979). The evaluation of content validity typically involves an organized review of the survey's contents to ensure that it includes everything it should and does not include any thing it should not. The main objective of the content validity is to ensure that selection of construct items extends past empirical issues and also include theoretical and practical considerations (Robinson et al., 1991).

In this study, the seven measures of quality management were based on Malcolm Baldrige/Singapore Quality Award (SQA) criteria. The questions found in each of the 17 sections of the modified BEACON are exactly the same as the original 86 questions in SQA's BEACON, the only difference is the instructions to informants were being converted from a passive to an active tone. The development of the measurement items in the modified BEACON questionnaire survey was evaluated by two academics – expert validation – and the items and constructs were reviewed against the literature to ensure that they are current and comprehensive. The pre-test subjects who comprised of LHub's management and staff had also indicated that the content of each factor was well represented by the measurement items employed. Therefore, the constructs and their associated items used in this study possess content validity.

#### *5.5.4 Construct Validity*

Construct validity measures the extent to which the items in a scale all measure the same construct (Flynn et al., 1994). Factor analysis can be used to evaluate the construct validity. The general purpose of factor analysis is to find a way of condensing or summarizing the information into a smaller set of new composite dimensions (factors) with a minimum loss of information (Hair et al., 1992). There are two forms of factor analysis, namely, exploratory factor analysis (EFA) and confirmatory factor analysis (CFA).

EFA is used to uncover the underlying structure of a relatively large set of variables and establishes links between the observed and latent variables which are unknown or uncertain. EFA helps to identify whether selected items cluster on one or more than one factors and thus unidimensionality of factors is assessed. CFA is used to test or confirm the relationship between the factors and the latent variables on the basis of pre-established theory and factor analysis is used to see if they load as predicted on the expected number of factors.

As quality management theory especially those that linked to Malcolm Baldrige, SQA or LOs is far from fully developed (Ahire and Goldhar, 1996), CFA could not be used for developing quality management constructs. Considering the characteristics of this study, EFA would have to be employed for construct validation. There are two basic models available for EFA – Principal component analysis (PCA) and Principal factor analysis (PFA).

PCA, the most common form of factor analysis, is used for summarizing most of the original information (variance) in a minimum number of factors for prediction purpose. In contrast, PFA is used primarily to identify underlying factors or dimensions that reflect what the variables share in common. For this research EFA was performed using PCA model for identifying constructs and afterwards for each construct separately. According to Hair et al. (1998), factor loadings greater than 0.30 are considered to meet the minimal level; loadings of 0.40 are considered more important; if the loading are 0.50 or greater, they are considered very significant. In this research, a factor loading of 0.60 was used as the cut-off point. Hair et al. (1998) describe three techniques for factor extraction, such as latent root criterion or eigenvalue; percentage of variance and scree test. Factors having eigenvalue greater than 1 are considered significant and all other factors with eigenvalue less than 1 are considered insignificant and are disregarded.

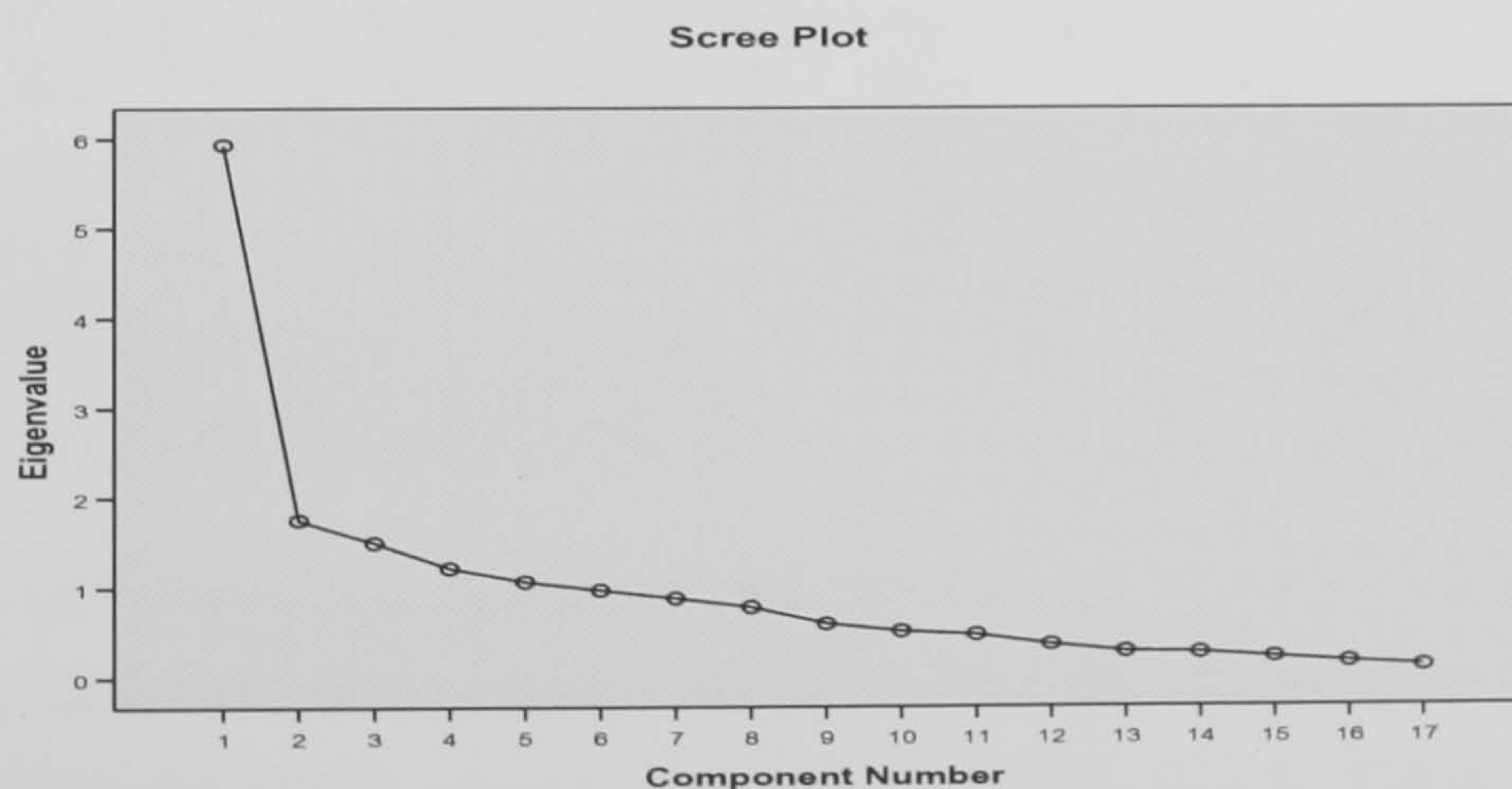
The principal components analysis (see Table 5.10) for the year 2005 survey shows that 5 factors account for about 67% of the variance among the inter-correlations of the 17 variables in the modified BEACON questionnaire (see also Scree Plot in Figure 5.1). This analysis disconfirms a situation where a single variable can accommodate almost all the LO descriptions stated in the questionnaire. Note that rotating the factors has not produced a different assessment of the importance of the 5 (unrotated) factors from the principal components analysis, though the value in the first factor has reduced significantly to 20.647% of variance (from 34.872%).

**Table 5.10 - Total Variance Explained - 2005**

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	5.928	34.872	34.872	5.928	34.872	34.872	3.515	20.674	20.674
2	1.748	10.281	45.153	1.748	10.281	45.153	2.734	16.080	36.755
3	1.495	8.795	53.948	1.495	8.795	53.948	2.168	12.753	49.508
4	1.209	7.114	61.062	1.209	7.114	61.062	1.588	9.344	58.851
5	1.062	6.247	67.309	1.062	6.247	67.309	1.438	8.458	67.309
6	.966	5.685	72.994						
7	.876	5.154	78.148						
8	.774	4.556	82.704						
9	.590	3.472	86.175						
10	.507	2.984	89.159						
11	.468	2.752	91.911						
12	.357	2.099	94.010						
13	.278	1.634	95.644						
14	.261	1.537	97.181						
15	.213	1.253	98.434						
16	.158	.931	99.365						
17	.108	.635	100.000						

Extraction Method: Principal Component Analysis.

**Figure 5.1 – Scree Plot - 2005**



In Table 5.11 (for year 2005 survey), all variables with loadings (i.e., correlations) of .60 or more with a factor are in boldface. In the right-hand table, all loading lower than .30 have been deleted to clarify the structure. The shaded matrix shows that the first 8 items all correlate above .60 with the principal component of the original correlation matrix. None of the item correlate above .60 with the next factor, which is unrelated to

the first. These findings disconfirm unidimensionality in the LHub's employees' questionnaire response in 2005. Rotation of the factor matrix shows that 11 of the 17 items breakdown into 3 clusters of mixed variables. However, they are not distinctive enough for any meaningful analysis.

**Table 5.11 - Component Matrix - 2005**

	Component Matrix (a)					Rotated Component Matrix (b)				
	1	2	3	4	5	1	2	3	4	5
INF2	.802	.020	.150	-.247	-.023	.714				
PRO1	.789	-.181	.008	-.249	.235	.713	.329			
CUS1	.720	-.275	.149	.003	.260	.702	.475			
PPL4	.654	-.296	.024	-.301	-.189	.679				
PRO2	.649	.400	-.127	.256	.346	.640				
CUS3	.637	-.053	-.191	-.115	-.574	.590	.434			.313
PPL2	.632	-.267	-.293	-.050	.005		.760			
LDR3	.605	.423	.100	-.352	-.025		.737			
PLN1	.586	.523	.065	.186	-.063	.490	.653			
PRO3	.551	-.463	.120	.268	.017	.316		.785		
INF1	.526	.219	.483	-.277	.012			.633	.493	
PPL3	.512	-.465	-.227	.044	.095		.454	.613		
CUS2	.477	-.106	-.430	.338	-.324		.444	.569		
PPL5	.408	.407	-.562	-.122	.343				.841	
LDR2	.132	-.314	.560	.214	.251	.340	.347			.733
PPL1	.424	.309	.428	.275	-.387	.361		.374		.579
LDR1	.589	.123	.026	.596	.071	.302				

Extraction Method: Principal Component Analysis.  
a 5 components extracted.

Extraction Method: Principal Component Analysis.  
Rotation Method: Varimax with Kaiser Normalization.  
b Rotation converged in 18 iterations.

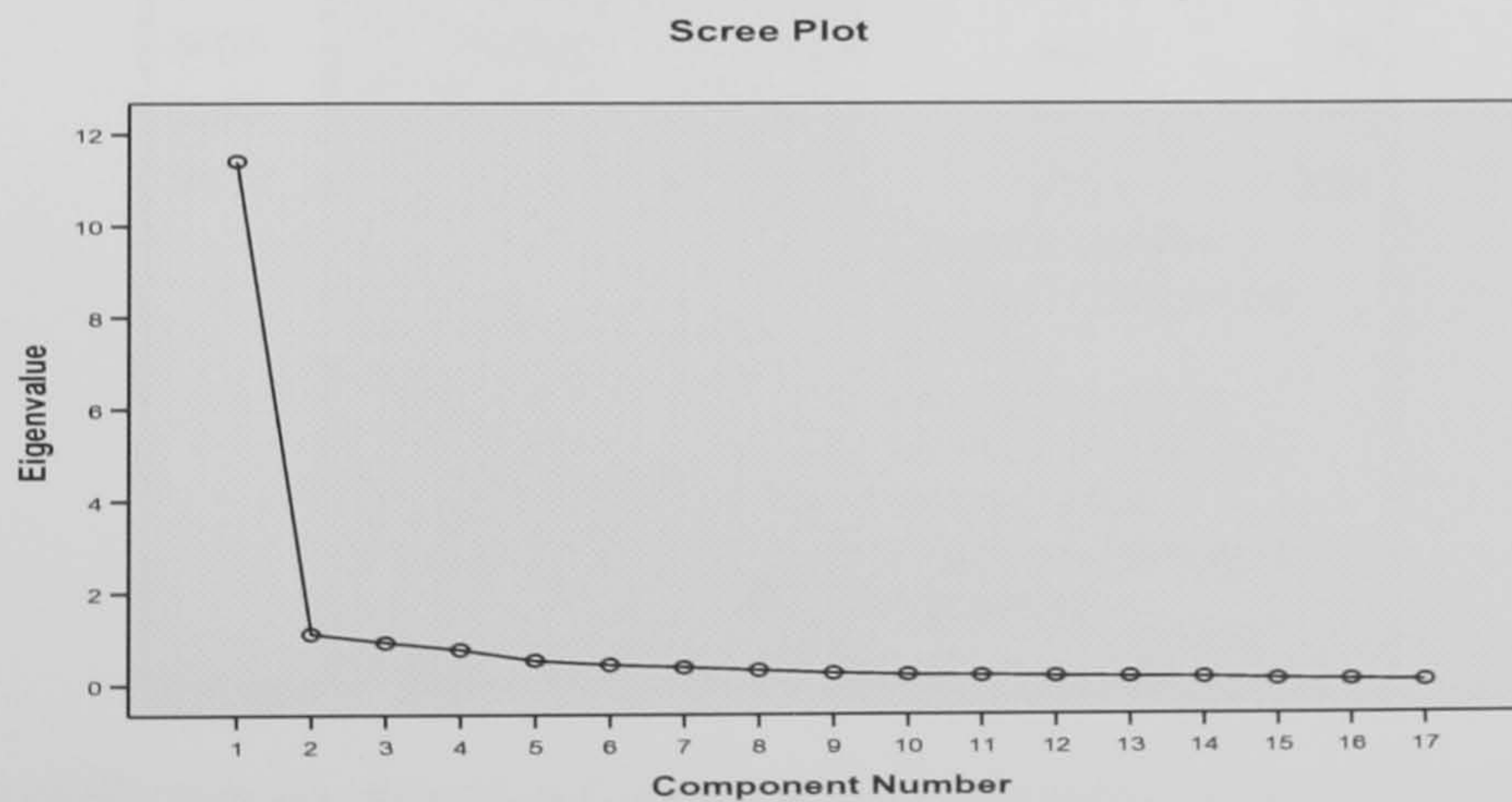
In the principal components analysis at Table 5.12 for the year 2006 survey, 2 factors account for about 74% of the variance among the inter-correlations of the 17 variables in the modified BEACON questionnaire (see also Scree Plot in Figure 5.2). This analysis disconfirms a situation where a single variable can accommodate almost all the LO descriptions stated in the questionnaire. Rotating the factors, however, produces a different assessment of the importance of the 2 (unrotated) factors from the principal components analysis. This draws attention, in particular, to the 2<sup>nd</sup> factor from the rotated analysis.

**Table 5.12 - Total Variance Explained - 2006**

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	11.398	67.045	67.045	11.398	67.045	67.045	6.773	39.840	39.840
2	1.103	6.489	73.534	1.103	6.489	73.534	5.728	33.694	73.534
3	.912	5.365	78.899						
4	.756	4.446	83.345						
5	.520	3.060	86.405						
6	.419	2.463	88.868						
7	.363	2.136	91.005						
8	.301	1.771	92.776						
9	.234	1.376	94.152						
10	.197	1.160	95.312						
11	.177	1.040	96.352						
12	.157	.923	97.275						
13	.145	.854	98.130						
14	.129	.761	98.890						
15	.084	.495	99.385						
16	.066	.389	99.774						
17	.038	.226	100.000						

Extraction Method: Principal Component Analysis.

**Figure 5.2 – Scree Plot - 2006**



In Table 5.13 (for year 2006 survey), all variables with loadings (i.e., correlations) of .60 or more with a factor are in boldface. All loadings in the right-hand table that are lower than .30 have also been deleted to clarify the structure. The shaded matrix shows that all the 17 items correlate above .60 with the principal component of the original correlation matrix. None of the items correlate above .60 with the next factor, which is unrelated to the first. These findings disconfirm unidimensionality in the LHub's

employees' questionnaire response in 2006. When factor matrix is rotated, 16 of the 17 items were broken down into 2 clusters of mixed variables, with the first cluster relating more to leadership and people matters and the second cluster, process and customers issues.

**Table 5.13 - Component Matrix - 2006**

	Component Matrix (a)		Rotated Component Matrix (b)	
	1	2	1	2
ppl2	.886	-.138	.874	.269
ppl1	.869	-.228	.861	.323
ppl3	.856	-.337	.798	.413
cus1	.848	.169	.755	.425
ldr1	.845	-.190	.750	.491
pro3	.831	.245	.715	.312
ldr2	.829	-.386	.706	.379
ldr3	.827	.295	.623	.518
inf1	.816	-.005	.609	.543
ppl5	.809	-.033	.606	.534
cus2	.807	-.010	.589	.533
pro1	.796	.362		.920
pln1	.794	.001	.348	.802
cus3	.791	.210	.417	.773
pro2	.783	.532	.452	.739
ppl4	.778	-.192	.516	.693
inf2	.740	-.248	.446	.686
	Extraction Method: Principal Component Analysis. a 2 components extracted.		Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization. b Rotation converged in 3 iterations.	

Overall, this study can be considered moderate with respect to internal validity. This is because without a control group, there are limitations with the usage of the Non-Equivalent One-Group Pretest-Posttest Design. The most notable limitation is its inability to assess whether or not differences in measurement results are due to the treatment or to other irrelevant variables (other things besides the treatment might have occurred between pre-test and post-test). For instance, if a historical event that is related to LHub's business results (i.e. the dependent variable), such as an increase in



governmental funding for training, intervenes between the pre-test and the post-test, its effects could be confused with those of the independent variables like leadership, strategic planning, etc.

Second, maturation changes in LHub's staff (i.e. the subjects) could also produce differences between pre-test and post-test scores. Their attitude or views towards certain issues might change as they grow older, become more experience in their work, become tired, etc. Third, there may be a differential non-random dropout between pre-test and post-test. In other words, different staff might drop out of the group. Post-test differences might then be due to the different types of dropouts (the selection-mortality) and not to the business excellence framework management approaches. In this study, the drop-out rate was nil for the treatment group (the turnover of staff are all new recruits who joined LHub after July 2006 and hence not included in the study).

## **5.6 Chapter Summary**

In this Chapter, we dealt with the research methodology used in our study. The population is all full time employees of NTUC LearningHub Pte Ltd (LHub) and the sample consists of those who attended the Management-Staff Meeting on mid-July 2005. The study sample (41 respondents) is a good representative of the staff profile in LHub (47 staff in July 2005).

In this study, the external validity is limited because the major purpose of the study is to determine whether adopting the business excellence framework and LO concepts *could* work in an accessible context (i.e. LHub). Hence, generalising it was not a primary goal. Any effect of business results evident in this study might be generalized to small and medium business start-ups in Singapore that are similar to LHub in profile, have a similar clientele, and adopt a similar management approach.

The self-assessment diagnostic instrument, a modified version of the existing Singapore Quality Award's Business Excellence for Continuous Improvement (BEACON) company audit questionnaire, is used to measure the level of change and the degree to which LHub has moved towards becoming LOs. This diagnostic tool has seven

categories of variables which are very similar to Malcolm Baldrige's seven dimensions or strategic determinants (see Table 5.14).

**Table 5.14 - Similarities between Singapore Quality Award and Malcolm Baldrige**

<b>Singapore Quality Award</b>	<b>Malcolm Baldrige National Quality Award</b>
Leadership	Leadership
Planning	Strategic Planning
People	Workforce Focus
Information	Measurement, Analysis and Knowledge Management
Processes	Process Management
Customers	Customer and Market Focus
Results	Business Results

Reliability, content and construct validity tests were being carried out on the survey instrument. It was found that the survey instrument used (i) is reliable as it has high internal consistency; (ii) does not appear to have multicollinearity type problems; (iii) possess content validity in the constructs and their associated items; and (iv) has findings that disconfirm unidimensionality in the questionnaire response of LHub's employees.

A one-group pre-test-post-test design was used in this study. Measurements were taken in July 05 and July 06. In between this period, nothing was required from the staff concerned and they can just perform their daily work as usual. However, as there is no control group in this study, internal validity is also limited, e.g. inability of the study to differentiate whether or not differences in measurement results are due to the treatment or to other irrelevant variables; maturation effect where the subjects' attitude or views towards certain issues might change as they grow older, become more experience in their work, become tired, etc.

The next Chapter deals with the research findings.

## **Chapter 6 – Research Results**

The purpose of this chapter is to address the fifth process question, ‘How can we test empirically the relationship between the business results and the other strategic determinants found in the Business Excellence framework?’ Hence, the hypotheses which were developed in Chapter 4 will be tested, thereby attempting to answer the overarching research question: whether an organisation that moves towards being a LO will have improved business results. In order to proceed, there is a need to ascertain two things:

1. Whether an organisation has moved towards being a LO;
2. Whether there is an improvement in business results after that.

Hence, this chapter is divided into 2 sections:

1. Findings for the Hypothesis that LHub has moved towards being a LO by adopting the Singapore Quality Award (SQA) business excellence approach;
2. Findings for the Hypothesis that there is an improvement in LHub’s business results in the areas of (i) sales revenue and profitability, (ii) customers’ satisfaction, and (iii) employees’ satisfaction after adopting the SQA business excellence approach.

Details of the statistical analysis and findings are presented next.

## **6.1 Findings for the Hypothesis that LHub has moved towards being a LO**

This section addresses the first research question:

*Will an entity that adopts the Malcolm Baldrige business excellence management approach be one step closer towards being a LO?*

It deals with the first hypothesis of the research study, that:

*H1a: From July 2005 to July 2006, LHub has moved towards being a LO by adopting the Singapore Quality Award (SQA) business excellence approach.*

In Chapter 3, the similarities between LO and business excellence characteristics were discussed. Both Excellence and LO models share a set of fundamental philosophies which include an acceptance of responsibility by the top management, customer orientation, high level of employee participation, open and effective communication, fact-based management and strategic quality planning (Senge, 1990; Pedler et al, 1991; Marquardt, 1996; Porter and Tanner, 2004).

A case study on LHub adopting the Singapore Quality Award, a Malcolm Baldrige Quality Award equivalent framework, was also presented in both Chapter 3 and 4. This section will ascertain whether LHub has moved towards being a LO (using the SQA framework as a proxy) in the year 2005 to 2006 by referring to the employees' self assessment results using the modified BEACON questionnaire described in Chapter 4.

### *6.1.1 Business Excellence/LO Self Assessment Results*

Table 6.1 below summarises the 'how it is' results of LHub's employees' Business Excellence/LO self assessment between July 2005 and July 2006.

**Table 6.1 - Results of Employees' Business Excellence/LO Self Assessment**

**("How it is")**

Items Label	Variables (n = 41)	Jul 05 Mean	Jul 05 SD	Jul 06 Mean	Jul 06 SD	Variance Mean
	<b>LEADERSHIP</b>	<b>6.6</b>	<b>.9155</b>	<b>7.3</b>	<b>1.4595</b>	<b>0.7 (+)</b>
LDR1	Senior Executive Leadership	6.9	.917	7.5	1.748	0.7 (+)
LDR2	Organisational Culture	6.6	.948	7.4	1.356	0.8 (+)
LDR3	Responsibility to Community & Environment	6.2	1.351	7.1	1.503	0.9 (+)
	<b>PLANNING</b>	<b>6.6</b>	<b>1.246</b>	<b>7.5</b>	<b>1.8990</b>	<b>0.9 (+)</b>
PLN1	Strategy Development & Deployment	6.6	1.246	7.5	1.614	0.9 (+)
	<b>INFORMATION</b>	<b>6.3</b>	<b>1.4493</b>	<b>7.2</b>	<b>1.4221</b>	<b>0.9 (+)</b>
INF1	Management of Information	6.6	1.204	7.4	1.392	0.8 (+)
INF2	Comparison & Benchmarking	5.9	1.800	6.9	1.506	1.0 (+)
	<b>PEOPLE</b>	<b>6.6</b>	<b>.8435</b>	<b>7.3</b>	<b>1.3641</b>	<b>0.7 (+)</b>
PPL1	Human Resource Planning	6.8	1.319	7.3	1.250	0.5 (+)
PPL2	Employee Involvement & Commitment	6.4	1.410	7.2	1.302	0.8 (+)
PPL3	Employee Education, Training & Development	6.7	1.141	7.3	1.507	0.6 (+)
PPL4	Employee Health & Satisfaction	6.9	1.370	7.4	1.396	0.5 (+)
PPL5	Employee Performance & Recognition	6.3	1.296	7.1	1.370	0.8 (+)
	<b>PROCESSES</b>	<b>5.9</b>	<b>1.1215</b>	<b>7.3</b>	<b>1.4817</b>	<b>1.4 (+)</b>
PRO1	Innovation Process	5.2	1.529	7.3	1.397	2.1 (+)
PRO2	Process Management & Improvement	6.2	1.370	7.5	1.567	1.3 (+)
PRO3	Supplier & Partnership Processes	6.0	1.214	7.2	1.351	1.2 (+)
	<b>CUSTOMERS</b>	<b>6.4</b>	<b>.9788</b>	<b>7.4</b>	<b>1.3589</b>	<b>1.0 (+)</b>
CUS1	Customer Requirements	6.1	1.670	7.3	1.439	1.2 (+)
CUS2	Customer Relationship	6.7	.990	7.5	1.121	0.8 (+)
CUS3	Customer Satisfaction	6.4	1.183	7.4	1.262	1.0 (+)
	<b>Total</b>	<b>108.5</b>		<b>124.3</b>		<b>15.8 (+)</b>
	<b>Mean</b>	<b>6.4</b>		<b>7.3</b>		<b>0.9 (+)</b>

As mentioned in Chapter 5, this self assessment is based on a rating scale where the staff involved were asked to award 1 to 10 points in a small bracket for each of the 17 descriptions or items found in the questionnaire, '1' being the least resembled and '10' being the most. Any mean values ( $\bar{X}$ ) greater than 5 indicates a positive inclination whereas those less indicates a negative tendency. For standard deviation (SD), a higher score suggests a greater divergence in perceptions among the respondents while a lower SD ( $s$ ) score means a higher degree of unanimity.

As can be seen in Table 6.1, all the 17 variables show a value increase in mean. This ranges from a positive 0.5 in “Employee Health and Satisfaction” to a positive 2.1 in “Innovation Process”. The total increase in value is 15.8 and average increase, 0.9. The statistical significance of this will be discussed in Section 6.1.2.

Table 6.2 shows the results of “how it should be”, ie. respondents doing the questionnaire a second time, asking themselves if what was awarded during the first round was how LHub is like at that moment, then how important it is for LHub to try to achieve that characteristic. The most important will be awarded 10 points.

**Table 6.2 - Results of Employees' Business Excellence/LO Self-Assessment**  
**("How it should be")**

<b>Category</b>	<b>Jul-05</b>	<b>Priority</b>	<b>Jul-06</b>	<b>Priority</b>
<b>LEADERSHIP</b>	6.5	6	7.4	6
<b>PLANNING</b>	7.4	2	7.9	4
<b>INFORMATION</b>	6.9	3	7.5	5
<b>PEOPLE</b>	6.7	5	8.3	3
<b>PROCESSES</b>	6.8	4	8.6	2
<b>CUSTOMERS</b>	7.6	1	9.4	1
<b>Total</b>	<b>41.9</b>		<b>49.1</b>	
<b>Average</b>	<b>7.0</b>		<b>8.2</b>	

As a category, “Processes” (PRO1, PRO2, PRO3) improve the most with a positive average value of 1.4 (see Table 6.1). LHub’s initiatives to move towards ISO 9000 certification might have contributed to this positive improvement. The ISO 9000 drive and the need to look into process improvement has apparently influenced the mindset of LHub’s employees so much so that “Processes” has become the number 2 priority for them in year 2006 as compared to number 4 in 2005 (see Table 6.2).

The second most improved category is “Customers” (CUS1, CUS2, CUS 3) with a 1.0 gain (see Table 6.1). This might have a lot to do with LHub’s management’s message of the importance of acquiring new customers and keeping existing ones during each management-staff meeting sessions. In addition, LHub also emphasized a lot on the

need to expand its customer's base (eg. from walk-ins to corporate customers), introduced more new product offerings to new market segment as well as beefing up the number of customer service staff and invested in Customer Relationship Management (CRM) system. As such, customer service, in the mindset of LHub's employees, remains as their number priority from year 2005 to 2006 (see Table 6.2).

There is a tied third placing between "Planning" (PLN1) and "Information" (INF1, INF2) with an increase of 0.9 (see Table 6.1). However, in terms of priority, "Planning" has dropped from 2 in year 2005 to 4 in 2006 (see Table 6.2). This might be due to management's initiatives after the Fiscal Year (FY) 05/06 and FY06/07 budgeting workshops, where it organised teambuilding sessions for all staff, reinforced/shared the company's long term direction, 5-year goals and annual strategic plan. So staff might have felt a less pressing need for LHub to come out with a short/mid/long term grand plan. As for "Information", its priority in the eyes of LHub's staff, has also dropped from 3 in 2005 to 5 in 2006 (see Table 6.2). LHub's establishment of key performance indicators (ie. having specific measurable quality objectives and business unit targets) as well as heavy investments in information to develop a whole new IS to support LHub in the crucial areas of marketing, sales and service support might have made the staff felt enough have been done in this area.

There is also a fourth placing tied between "Leadership" (LDR1, LDR2, LDR3) and "People" (PPL1, PPL2, PPL3, PPL4, PPL5) with a gain of 0.7 (see Table 6.1). Priority wise, "Leadership" maintains at 6<sup>th</sup> placing in year 2005 and 2006 (see Table 6.2). This reflected the staff's strong confidence in LHub's management team so much so that as far as they are concerned, it is the least important of all priorities. The priority for "People", however, has moved up to 3<sup>rd</sup> placing in year 2006 as compared to 5<sup>th</sup> placing in 2005. The rapid recruitment and addition of new staff into LHub over the year, the need to acquire new skills set to handle the expanded job scope and the assurance from management of linking reward to performance might have made many staff realise the importance of good human resource practices.

By looking at the results in Table 6.1 and Table 6.2, all these developments seem to indicate that LHub's SQA's effort has yielded some positive results. In order to study deeper into things, respondents were told to sum up all the numbers (ie. 1 to 10) that they have indicated earlier in the "how it is" and "how it should be" brackets in the final part of the questionnaire. This is to derive a dissatisfaction index, which is calculated by  $100 \times [(how\ it\ should\ be - how\ it\ is) / how\ it\ should\ be]$ . If the respondent is totally dissatisfied, this index will be 100. If the respondent is totally satisfied, the index is zero. As both the pre-test group in year 2005 and post-test group in 2006 are the same, for the purpose of this study, an average aggregate score of all the respondents is used to calculate the dissatisfaction index for each of the two years. It was found that in 2005, the index is 8.4% whereas in 2006, it is 10.4%.

This means that despite staff's perception that there is a seemingly positive show of results in the 6 strategic determinants of (i) Leadership, (ii) Planning, (iii) Information, (iv) People, (v) Processes and (vi) Customers in LHub from year 2005 to 2006, they are still unsatisfied with the current state of things as the dissatisfaction index has increased by 2% (please see Section 6.1.2 for significance testing). One explanation might be after one year of "brain washing" in quality and business excellence concepts by LHub's management, staff expectations of the standards to be achieved for themselves and the organisation have changed. They might have become more demanding. As Pedler et al. (1988) argued, even when a company has demonstrated certain activities and styles of behaviour which indicated that it had moved some way towards being a LO, it does not mean that it has achieved complete learning company status (Leitch et al., 1996). There are still a lot of areas for improvement. LO is a journey rather than a destination (Burdett 1993).

### *6.1.2 Significance Testing*

In Chapter 5, it was revealed that the overall Cronbach's alpha for the pre-test in 2005 is 0.878 and post-test in 2006 is 0.968 indicating that all scales had acceptable reliability at the points of measurement. Convergent and discriminant validity was supported by



factor analysis with varimax rotation. Inter-item correlations also supported convergent and discriminant validity. Next, data collected in 2005 and 2006 were being grouped into “Year 1” and “Year 2” respectively (as “Factor” in the SPSS programme). To determine if there were significant differences between groups, a One-Way ANOVA test is being carried out for each of the 17 variables, ie. “Senior Executive Leadership, Organisation Culture, etc. (as “Dependent List” in the SPSS programme). Those with p-value of 0.05 or less are considered significant.

**Table 6.3 - ANOVA Results of Employees' Business Excellence/LO Self Assessment**

Items Label	Variables (n = 41)	F	Sig.	Y/N
	<b>LEADERSHIP</b>	<b>9.963</b>	<b>.002</b>	<b>Y</b>
LDR1	Senior Executive Leadership	3.606	.061	N
LDR2	Organisational Culture	9.127	.003	Y
LDR3	Responsibility to Community & Environment	8.173	.005	Y
	<b>PLANNING</b>	<b>9.387</b>	<b>.003</b>	<b>Y</b>
PLN1	Strategy Development & Deployment	9.387	.003	Y
	<b>INFORMATION</b>	<b>9.991</b>	<b>.002</b>	<b>Y</b>
INF1	Management of Information	7.375	.008	Y
INF2	Comparison & Benchmarking	7.809	.007	Y
	<b>PEOPLE</b>	<b>8.703</b>	<b>.004</b>	<b>Y</b>
PPL1	Human Resource Planning	4.169	.044	Y
PPL2	Employee Involvement & Commitment	7.212	.009	Y
PPL3	Employee Education, Training & Development	3.932	.051	N
PPL4	Employee Health & Satisfaction	3.372	.070	N
PPL5	Employee Performance & Recognition	7.055	.010	Y
	<b>PROCESSES</b>	<b>33.593</b>	<b>.000</b>	<b>Y</b>
PRO1	Innovation Process	39.164	.000	Y
PRO2	Process Management & Improvement	16.424	.000	Y
PRO3	Supplier & Partnership Processes	19.224	.000	Y
	<b>CUSTOMERS</b>	<b>18.209</b>	<b>.000</b>	<b>Y</b>
CUS1	Customer Requirements	10.820	.001	Y
CUS2	Customer Relationship	12.606	.001	Y
CUS3	Customer Satisfaction	13.040	.001	Y

As seen in Table 6.3, other than Senior Executive Leadership, Employee Education, Training & Development and Employee Health & Satisfaction, all the other variables are tested significant.

To look at the overall significance, as the survey respondents are the same group in the pre- and post-test, a one-way ANOVA test was performed using the 2005 and 2006's (as "factor" in SPSS) aggregate score of all the 17 variables in each respondent (as "dependent list" in SPSS). The outcome reveals a significant effect of improvement in self assessment results from July 2005 to July 2006,  $F(1, 80) = 18.768, p < 0.05$  (please see Table 6.4).

**Table 6.4 - ANOVA (Aggregate)**

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	5216.049	1	5216.049	18.768	.000
Within Groups	22233.463	80	277.918		
Total	27449.512	81			

Separately, a paired samples t-test is used to compare dissatisfaction index of LHub's staff in July 2005 (pre-test) and July 2006 (post-test). The result in Table 6.5 shows that the significance level is 0.435. Since this is greater than 0.05, there is *no significant difference* between the dissatisfaction index of July 2005 and July 2006.

**Table 6.5 - Paired Samples T Test of Dissatisfaction Index**

		Paired Differences				t	df	Sig. (2-tailed)	
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	Dissatisfaction 05 - Dissatisfaction 06	-2.01667	5.82423	2.37773	-8.12882	4.09549	-.848	5	.435

Based on this, in the perceptions of the employees, LHub, by adopting the Singapore Quality Award, a Malcolm Baldrige Quality Award equivalent framework, moved towards being a LO from July 2005 to July 2006.

## 6.2 Findings for Hypotheses on Business Results

This section addresses the second research question:

*Will an attempt to change an entity into a LO by using the Malcolm Baldrige business excellence approach have a positive effect on business results in the area of sales revenue, customer satisfaction and employees' satisfaction?*

It deals with the second hypothesis of the research study, that:

*H1b: By embarking on LO and business excellence journey, LHub's sales revenue, customer and employees' satisfaction level will increase from July 2005 to July 2006*

This section will look at LHub's business performance in the area of sales, customers' satisfaction and employees' satisfaction.

### 6.2.1 Sales Performance

Figure 6.1 shows LHub's monthly sales from August 2004 to November 2006. The sales figures have been stagnant since LHub's incorporation in August 2004 until February 2006. The stagnation is in stark contrast with a backdrop of economic and productivity growth in Singapore - 8.4% and 6.6% respectively in 2004 (National Wages Council, 2005) as well as 6.6% and 1.9% respectively in 2005 (National Wages Council, 2006). The main reason for the stagnant sales is that during the initial year of incorporation, LHub was basically supported by three main product lines with poor immediate prospects, mainly Information Technology (IT), Continuing Education and Training (CET) with a few English literacy programmes and critical enabling skills courses, and an assessment centre (CertCentral). The prospects for these product offerings were poor for the following reasons:

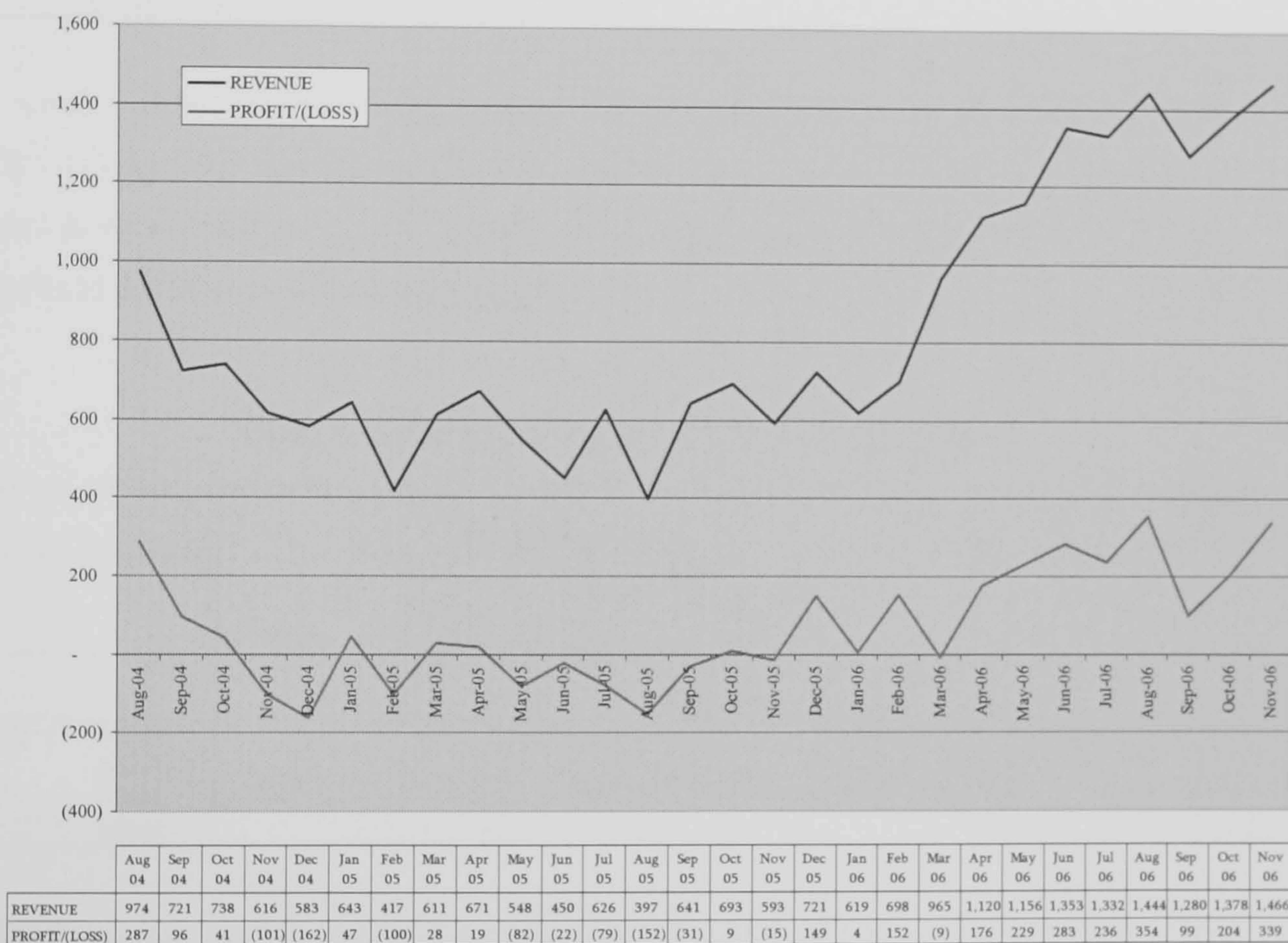
- 4) IT – Declining long term demand for generic computer training as almost all new entrants to the workforce are computer savvy, while many of the matured workers have either been trained or retired. Also, there is a significant reduction in government subsidies in 2005 for IT courses, which would impact more than 85% of LHub’s courses.
- 5) Certification – A large extent of its business was tied to the IT business and it was operating at a mature market facing a threat of long term decline.
- 6) CET – BEST and WISE English literacy courses were also facing long term decline with reasons similar to that of IT’s above as the Singapore workforce has become more literate. Its contents were also outdated and the Workforce Development Agency (WDA) has indicated that it would phase out these two programmes, which were at least two decades old, in a few years time. As for CREST, the programme was basically outsourced to a third party training provider and CET basically played the role of a Marketing agent.

Beyond products life cycle, LHub also faced an inherent high cost structure due to over-generous trainers’ remuneration and unwanted costs from legacy infrastructure like the seniority-based wage system, high maintenance cost of the Training Admin System (TAS) and rentals from centres located at unattractive locations.

However, since April 2006, LHub’s sales and profitability have been on the rise. Possible reasons might be both internal and external. Internally, LHub has re-organised itself, eg. charted out a new strategic direction, expanded product lines like the mandatory workplace safety and health training courses, beefed up the sales and marketing team, linked reward to performance, moved towards ISO 9000 quality standards, etc. Externally, LHub is riding on a buoyant Singapore’s economy and productivity growth rate of 7.9% and 1.2% respectively in 2006 (National Wages Council, 2007).

In July 2005, LHub's sales revenue was \$626,000 with a loss of \$79,000. Sales have since increased to \$1,332,000 with a profit of \$236,000 in July 2006. Month to month comparison between July 2005 and July 2006, this is a \$706,000 or 113% rise in sales, and a \$315,000 or nearly 400% increase in profitability.

**Figure 6. 1 - LHub's Monthly Sales and Profit from Aug 04 to Nov 06**



To establish the significance level, a paired samples t-test is used to compare the sales revenue of LHub from 1 August 2004 to 31 July 2005 (first year business results since incorporation in 1 August 2004) and the sales revenue from 1 August 2005 to 31 July 2006 (the period between pre-test and post test). Table 6.6 shows that the significance level is 0.085. As this is greater than 0.05, there is *no significant difference* between the sales revenue of August 2004-July 2005 and August 2005-July 2006.

**Table 6.6 - Paired Samples T Test of Sales Revenue**

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	Sales 04/05 - Sales 05/06	-224.167	409.865	118.318	-484.582	36.249	-1.895	11	.085

A similar paired samples t test was performed comparing the profit level of August 2004 to July 2005 and August 2005 to July 2006 (see Table 6.7) and the significance level is also  $> 0.05$  at 0.216. Hence, there is *no significant difference* between the profits of the two periods of comparison.

**Table 6.7 - Paired Samples T Test of Profit Level**

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	Profit 04/05 - Profit 05/06	-88.833	234.174	67.600	-237.621	59.954	-1.314	11	.216

**Based on the above result, it can be seen that LHub's sales revenue and profitability have indeed increased from July 2005 to July 2006 but not in a statistically significant degree and it is difficult to pinpoint that it is solely due to the effort of LHub's initiatives.** Growth in the Singapore's economy is also likely to have played a part in this. Having said that, LHub's ability to re-organise itself and ride on this external economic growth might well have played a key role in the entity's growth. This is because Singapore was also experiencing a high growth rate in the year 2004 and 2005 but LHub was making losses then.

### *6.2.2 Customers' Satisfaction*

Table 6.8 is an extraction from LHub's Training Administration System (TAS) of the customer satisfaction survey done in the months of July 2005 and July 2006. The satisfaction survey was given to trainees at the end of each course, and it was done either online for those who attended computer classes or shading in "bubble sheets" for those who attended soft skills courses. Either way, the data will be captured by LHub's TAS for monthly evaluation. Submission of completed survey forms by trainees is voluntary.

In the July 2005 survey, there were a total of 753 respondents whereas in July 2006, there were 1,056 respondents.

From Table 6.8, it can be seen that there is a net average loss of 0.45. Effectiveness of training programmes, trainers and course administration all reflect negative results. LHub's sense of urgency to diversify current product offerings and its subsequent rapid introduction of new training programmes into the market might have, to a certain extent, compromised the quality of training programmes, trainers and responsiveness in course coordination.

However, counter services and effectiveness of facilities in terms of training environment, teaching aids and class size have positive gains. This might be due to LHub's emphasis on customer service by engaging professional Call Centre services, engaging of a full time Customer Relationship Manager, increased staffing during peak times for faster registration, introduction of online registration/payment system etc., as well as heavy investment in training facilities for expansion purposes.

A paired samples t-test is used to compare the mean customer satisfaction ratings on July 2005 (pre-test) and July 2006 (post-test). Table 6.9 shows that the significance level is 0.032. As this is less than 0.05, there is a significant difference between the pre- and post-test customer satisfaction ratings.

**Table 6.8 - Average Points of Customer Satisfaction Survey (July 05 and 06)**

	Average Points in July 2005 (n=753)	Average Points in July 2006 (n=1,056)	Variance
<b>Effectiveness Of Training Programmes</b>	<b>20.47</b>	<b>20.11</b>	<b>0.36 (-)</b>
The course achieved its stated objectives	4.17	4.10	0.07 (-)
The coverage & depth of the course were adequate	4.10	4.01	0.09 (-)
The course materials & handouts were well designed & well organised	4.10	4.01	0.09 (-)
The concepts & skills presented will be useful & relevant to my work	4.14	4.08	0.06 (-)
The duration of the course was appropriate	3.96	3.91	0.05 (-)
<b>Effectiveness Of Trainers</b>	<b>21.87</b>	<b>21.78</b>	<b>0.13 (-)</b>
Trainer had good knowledge & practical understanding of the subject	4.51	4.47	0.04 (-)
Trainer was effective in communicating ideas & concepts.	4.43	4.38	0.05 (-)
Trainer was able to stimulate & maintain interest of the students	4.33	4.35	0.02 (-)
Trainer uses good illustrations, practical examples, case studies etc.	4.35	4.31	0.04 (-)
The trainer-to-trainee ratio was appropriate.	4.25	4.27	0.02 (+)
<b>Effectiveness Of Facilities</b>	<b>12.33</b>	<b>12.40</b>	<b>0.07 (+)</b>
The training environment was conducive for learning.	4.07	4.13	0.06 (+)
The teaching aids such as projectors were used appropriately.	4.13	4.12	0.01 (-)
The class size was appropriate for learning to take place.	4.13	4.15	0.02 (+)
<b>Course Administration</b>	<b>8.07</b>	<b>7.98</b>	<b>0.09 (-)</b>
The responsiveness of NTUC LHub course coordinators.	4.06	3.97	0.09 (-)
My overall rating of the course administration provided by NTUC LHub.	4.01	4.01	0.00
<b>Counter Service</b>	<b>11.81</b>	<b>11.83</b>	<b>0.02 (+)</b>
Service attitude (politeness, helpfulness, patience etc).	3.98	3.98	0.00
Ability to answer queries.	3.94	3.95	0.01 (+)
Waiting time (eg. waiting to served & processing time).	3.89	3.90	0.01 (+)
<b>Total</b>	<b>74.55</b>	<b>74.10</b>	<b>0.45 (-)</b>



**Table 6.9 - Paired Samples T-Test of Mean Customer Satisfaction Rating**

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	Evaluation 06 - Evaluation 05	-.02500	.04528	.01067	-.04752	-.00248	-2.343	17	.032

**Based on this result, it can be seen that overall customer satisfaction level has dropped from July 2005 to July 2006.** Deeper analysis revealed that there is a net gain in terms of counter services and facilities. However, the drop in ratings for the effectiveness of training programmes and trainers as well as course administration support have resulted in an overall net decrease in customer satisfaction ratings.

### 6.2.3 Employees' Satisfaction

Table 6.10 shows the ratings for the Employees Job Satisfaction survey conducted by LHub's HR Dept on July 2005 and July 2006 for the treatment group. The survey was done immediately before the informants filled in the modified BEACON questionnaire. There is an increase in overall satisfaction or "Contentment" from 3.6 to 3.9 (8%) over the year. As for the individual items, except for "Communication" that has a zero gain, the rest of them have seen an increase in ratings. Three areas that have made the most significant improvement are "Changes", "Challenging Work" and "Collaboration and Teamwork".

For "Challenging Work" and "Collaboration & Teamwork", the numerous opportunities given to staff to take on new positions or challenges arising from its fast expanding businesses as well as LHub's heavy investment in teambuilding programmes might have played a part. This outcome is also in congruence with the two most common items feedback from the employees on what they like most about LHub, viz. those related to (i) work flexibility and challenging job scope, and (ii) presence of fun,

friendly and helpful colleagues that work as a team as well as management and staff that got along well as a team.

**Table 6. 10 - LHub's Workplace Satisfaction Survey**

<b>Core Questions</b>	<b>n = 41</b>	<b>Jul-05</b>	<b>Jul-06</b>	<b>Variance</b>
Overall, things in LHub have improved since the day we incorporated.	<b>Changes</b>	3.5	3.9	0.4 (+)
We have a vision and direction that commits us to working hard.	<b>Commitment</b>	3.9	4.0	0.1 (+)
My work environment provides opportunity for celebration, fun, excitement, and openness.	<b>Culture</b>	4.0	4.2	0.2 (+)
I have a best friend at work.	<b>Companionship</b>	3.6	3.8	0.2 (+)
I enjoy open, candid, and frequent information-sharing with management/staff.	<b>Communication</b>	4.0	4.0	0
I am treated with dignity and differences are openly respected and shared.	<b>Concern for Individuals &amp; Due Process</b>	3.8	4.0	0.2 (+)
I am given challenging work that provides opportunities to learn new skills.	<b>Challenging Work</b>	3.6	4.0	0.4 (+)
At work, I control key decision-making process about how work is done.	<b>Control</b>	3.5	3.8	0.3 (+)
We work in teams to accomplish goals.	<b>Collaboration &amp; Teamwork</b>	3.8	4.2	0.4 (+)
We share gains for work accomplished.	<b>Compensation</b>	3.8	4.1	0.3 (+)
I have the skills to do my work well.	<b>Competencies</b>	3.8	4.0	0.2 (+)
I have access to and use of technology that makes my work easier.	<b>Computers &amp; Technology</b>	3.4	3.7	0.3 (+)
Overall, on a one-to-five scale, how satisfied are you with LHub as a place to work?	<b>Contentment</b>	3.6	3.9	0.3(+)
	<b>Total</b>	<b>48.3</b>	<b>51.6</b>	<b>3.3 (+)</b>
	<b>Average</b>	<b>3.7</b>	<b>4.0</b>	<b>0.3 (+)</b>

For “Changes”, the question relates directly to improvement in situation since LHub has incorporated. One reason for the good showing of rating might be due to LHub’s effort in re-organising itself since incorporation.

As for the zero increase in “Communication”, the result is somewhat surprising as there are monthly Staff-Management meetings to share company development and staff issues. One possible reason might be the lack of inter-department communication as reflected most commonly in the feedback by employees on what they dislike most about LHub.

A reliability test carried out for the 2005 and 2006 workplace satisfaction questionnaire conducted by LHub’s HR Department showed a result of a Cronbach’s Alpha value of 0.669 for year 2005 and 0.858 for 2006, meaning that internal consistency was not so high when the survey instrument was first used in year 2005, but it has a high internal consistency in 2006. Factor Analysis was also used to analyse the 2005 and 2006 questionnaire response of LHub’s employees and it was found that they did not have unidimensionality and multicollinearity type problems.

As the respondents are the same group in the two years of survey, a one-way ANOVA test was performed on the aggregate score of each of the 13 items in both years. The result reveals a significant effect on the improvement in LHub workplace satisfaction ratings from July 2005 to July 2006,  $F(1, 80) = 10.331, p < 0.05$  (please see Table 6.11). **Based on this result, employees’ satisfaction has increased from July 2005 to July 2006.**

**Table 6.11 - ANOVA (Aggregate)**

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	225.561	1	225.561	10.331	.002
Within Groups	1746.683	80	21.834		
Total	1972.244	81			

Since the workplace satisfaction survey and modified BEACON questionnaire were given to the same group of LHub employees at the same time during the management-staff meeting in July 2005 and July 2006 (and properly linked to each respondent), it is possible to find out more about the relationship between employees' satisfaction level and the 6 strategic determinants of the SQA framework. With the aid of SPSS software, a linear regression analysis was performed on the pre-test and post-test LHub questionnaire survey results using the employees' overall satisfaction, or "Contentment", as dependent variable and "Leadership", "Planning", "Information", "People", "Processes" and "Customers" as independent variables.

The overall model fit results in Table 6.12 for year 2005 shows an Adjusted R Square ( $R^2$ ) of 0.057 and the rough interpretation is that 5.7 percent of the variation in the dependent variable (ie. "Contentment") can be explained by variations in the independent variables of "Leadership", "Planning", "Information", "People", "Processes" and "Customers". That is not great. Note that this is an overall measure of the strength of association, and does not reflect the extent to which any particular independent variable is associated with the dependent variable. R-Square is also called the coefficient of determination.

**Table 6.12 - Model Summary for Overall Satisfaction (2005)**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.446(a)	.199	.057	.488

a Predictors: (Constant), Customers, Planning, Information, Processes, People, Leadership

b Dependent Variable: Overall Satisfaction 05

In Table 6.13 the ANOVA result for year 2005 reveals that the p-value is  $> 0.05$ , meaning that the group of independent variables does not show a statistically significant relationship with the dependent variable, or that the group of independent variables does not reliably predict the dependent variable. Note that this is an overall significance test assessing whether the group of independent variables when used together reliably predict the dependent variable, and does not address the ability of any of the particular independent variables to predict the dependent variable. The ability of each individual

independent variable to predict the dependent variable is addressed in the Table 6.14 where each of the individual variables is listed.

**Table 6.13 - ANOVA for Overall Satisfaction (2005)**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2.007	6	.334	1.405	.241(a)
	Residual	8.091	34	.238		
	Total	10.098	40			

a Predictors: (Constant), Customers, Planning, Information, Processes, People, Leadership  
b Dependent Variable: Overall Satisfaction 05

Table 6.14 is a typical coefficients table which takes the equation form  $Y = a + b_1X_1 + b_2X_2 - b_3X_3$  where Y is the dependent variable, a is a constant, the bs are the beta coefficients that indicate the degree of influence the corresponding independent variable has on variations in the dependent variable - the higher the value of b the more influential the independent variable. The sign (+ve, -ve.) indicates the nature of the relationship, ie. whether the independent variable and the dependent variable move together or in opposite directions. The Xs are the independent variables. Expressed in terms of the variables used in the 2005 study, the regression equation is:

$$\text{Contention Predicted} = 3.476 + (0.005*\text{Leadership}) + (-0.63*\text{Planning}) + (-0.086*\text{Information}) + (-0.212*\text{People}) + (0.135*\text{Processes}) + (0.256*\text{Customers})$$

This estimate tells the relationship between the independent variables and the dependent variable. In other words, it tells the amount of increase in employees' satisfaction (ie. "Contention") that would be predicted by a 1 unit increase in the predictors of "Leadership", "Planning", "Information", "People", "Processes" and "Customers". They are called unstandardized coefficients because they are measured in their natural units. This means that the coefficients cannot be compared with one another to determine which one is more influential in the model because they are measured on different scales.

As seen in Table 6.14, “Customers” has the highest beta coefficient 0.256. However, all the independent variables are statistically insignificant ( $>0.05$ ). As such, in the year 2005, none of the value of “Contention” (ie. Y variable) can be determined by the value of “Leadership”, “Planning”, “Information”, “People”, “Processes” and “Customers” (ie. X variables), and by changes in the value of X accordingly.

**Table 6.14 - Coefficients Table for Overall Satisfaction (2005)**

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	3.476	.725		4.791	.000
	Leadership	.005	.153	.008	.030	.976
	Planning	-.063	.080	-.157	-.787	.436
	Information	-.086	.079	-.249	-1.099	.280
	People	-.212	.161	-.356	-1.314	.198
	Processes	.135	.124	.300	1.089	.284
	Customers	.256	.136	.498	1.877	.069

a Dependent Variable: Overall Satisfaction 05

Table 6.15 shows the overall model fit result for year 2006. As can be seen, the Adjusted R Square ( $R^2$ ) of 0.612 has shown a big increase over the previous year's 0.057. This means 61.2 percent of the variation in “Contentment”, the dependent variable, can be explained by variations in the independent variables of “Leadership”, “Planning”, “Information”, “People”, “Processes” and “Customers”. This is a relatively high figure.

**Table 6.15 - Model Summary for Overall Satisfaction (2006)**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.819(a)	.670	.612	.555

a Predictors: (Constant), Customers 06, Information 06, Planning 06, Processes 06, Leadership 06, People 06  
b Dependent Variable: Overall Satisfaction 06

In Table 6.16 the ANOVA result for year 2006 reveals that the p-value is < 0.05, meaning that the group of independent variables show a statistically significant relationship with the dependent variable. In other words, the group of independent variables are able predict the dependent variable reliably. This result is different from year 2005's, which shows a statistically insignificant relationship ( $p > 0.05$ ). Note that this overall significance test does not address each particular independent variable's ability to predict the dependent variable.

**Table 6.16 - ANOVA for Overall Satisfaction (2006)**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	21.315	6	3.553	11.515	.000(a)
	Residual	10.490	34	.309		
	Total	31.805	40			

a Predictors: (Constant), Customers 06, Information 06, Planning 06, Processes 06, Leadership 06, People 06

b Dependent Variable: Overall Satisfaction 06

Table 6.17 shows the ability of each individual independent variable in predicting the dependent variable. Expressed in terms of the variables used in the 2006 study, the regression equation is:

$$\text{Contention Predicted} = 0.421 + (0.018 * \text{Leadership}) + (0.252 * \text{Planning}) + (-0.111 * \text{Information}) + (0.285 * \text{People}) + (-0.021 * \text{Processes}) + (0.036 * \text{Customers})$$

**Table 6.17 - Coefficients Table for Overall Satisfaction (2006)**

Model		Unstandardized Coefficients		Standardized Coefficients		Sig.
		B	Std. Error	Beta	t	
1	(Constant)	.421	.516		.816	.420
	Leadership 06	.018	.216	.029	.083	.934
	Planning 06	.252	.086	.537	2.939	.006
	Information 06	-.111	.145	-.177	-.765	.449
	People 06	.285	.262	.436	1.088	.284
	Processes 06	-.021	.137	-.035	-.153	.880
	Customers 06	.036	.164	.055	.218	.829

a Dependent Variable: Overall Satisfaction 06

As seen in Table 6.17, “People” has the highest beta coefficient 0.285, followed by “Planning) at 0.252. However, among all the independent variables, only “Planning” is statistically significant ( $<0.05$ ). As such, in the year 2006, only the value in “Planning” (ie. X Variables) can determine the value of “Contention” (ie. Y variable). In other words, those participants who answered positively that they belong to an organisation that emphasized strategic planning were most likely to assess their work environment as satisfactory. The various strategic planning workshops held by LHub’s management to discuss and share company’s mid to long-term plans to staff as well as the monthly Staff-Management meetings to disseminate short-term plans might have somewhat created an impact on the satisfaction level of staff. So, in the technical sense, every unit increase in “Planning” will predict a 0.252 unit increase in overall employees’ satisfaction (ie. Contention), holding all other variables constant.

All the above findings therefore only partially support Hypothesis 1b that by embarking on LO and business excellence journey, an entity’s sales revenue, customer and employees’ satisfaction level will increase. This is because out of the 3 dependent variables of (i) sales and profitability, (ii) customer satisfaction and (iii) employees satisfaction, only (i) and (iii) show signs of improvement, whereas there is a drop in overall satisfaction level for (iii). In addition, even for (i), it is not possible to attribute totally the improvement in sales and profitability to LHub’s sole efforts as external economic growth factors might have also played a part (in any case, the increase is not statistically significant).

### **6.3 Chapter Summary**

This chapter attempts to address the overarching research question of whether an organisation that moves towards being a LO will have improved business results. The first section deals with the hypothesis that LHub has moved towards being a LO by adopting the Singapore Quality Award (SQA) business excellence approach. The second section deals with the hypothesis that there is an improvement in LHub’s business results in the areas of (i) sales revenue and profitability, (ii) customers’ satisfaction, and (iii) employees’ satisfaction after adopting the SQA business



excellence approach. Statistical tools like ANOVA, Cronbach's Alpha, Paired Samples T Test, Linear Regression Analysis have been used to support the research findings.

From the findings in the first section on whether LHub has moved towards being a LO by adopting the Singapore Quality Award (SQA) business excellence approach, there is a seemingly positive show of results in the 6 strategic determinants of (i) Leadership, (ii) Planning, (iii) Information, (iv) People, (v) Processes and (vi) Customers in LHub from year 2005 to 2006 although dissatisfaction index has increased slightly. It appears that although LHub could not claim to "be" a LO, it might have moved towards becoming one in some respects.

In the second section to ascertain if there is an improvement in LHub's business results, the findings only partially support the hypothesis that there is an improvement in the areas of (i) sales revenue and profitability, (ii) customers' satisfaction, and (iii) employees' satisfaction after adopting the SQA business excellence approach. This is because only (i) and (iii) show signs of improvement and (ii) has a dropped in desired outcome. Moreover, for (i), the improvement is not statistically significant.

The mixed results that emerged from the study confirm the earlier literature review in Chapter 3 on the relationship between business performance and Baldrige winners. For instance, Powell (1995) stated that although business excellence can produce a competitive advantage for firms, it is not necessary a guarantee of success in every case. In fact, studies by American General Accounting Office (GAO, 1991) discovered that none of the companies reaped the benefits of their approach immediately, and Helton (1995) even found that a couple of the early Baldrige winners actually ran into financial difficulty within a few years of winning the award. Fisher et al (2001) also concluded that there may be a relationship between commitment to quality business practices and good results, but many other factors have an influence on the performance as well.

However, despite this, one conclusion is that business excellence's highest purpose and real contribution to businesses is its provision of a framework that helps firms to understand and acquire resources as part of an integral change programme (Powell, 1995). Allowing sufficient time for results to be achieved is as important as initiating a business excellence programme (GAO, 1991). Further implications of this research are discussed in the next, concluding chapter.

## **Chapter 7 – Conclusion**

This chapter concludes the whole study. It deals with the sixth and final process question of the research, ie. ‘What are the learning points and limitations of this research as well as the areas for future research?’

Since Senge’s (1990) work on the “Fifth Discipline”, discussion on the concept of LOs has grown exponentially. Crossan and Guatto’s (1996) study found remarkable publication growth in the literature on LOs. From the 1980s to the 1990s, they discovered a 636 percent growth in general publications and the literature and interest continues to grow. Roth and Kleiner (1995) have stated that over 150 books and articles were published about learning in organisations, or about the concept of a LO since they published their work.

Essentially, the literature on LO falls into two broad categories. First, that which treats the LO as a variable and something that can be designed into an organisation and which has significant influence on other organisational outcomes, eg. Senge (1990), as well as other authors, have studied the characteristics obligatory for organisations to achieve LO levels of success (Kline and Saunders, 1993; Marquardt, 1996; Marsick and Watkins, 1993). Second, that which treats the LO as a metaphor to describe an organisation (eg. Garvin, 1993; West, 1994). It basically views the organisation as culture and sees the LO as a particular variant of culture.

However, there appears to be an empirical research void on the topic of LOs. The vast majority of the literature on LOs is theoretical in nature. Little has been written about the link between LO and performance. The critical gap between the two could be due to a lack of conceptual and empirical exploration based on two possible scenarios. First, it is unclear whether behaviour changes in organisational members necessarily signify that learning has indeed taken place. Second, it is somewhat difficult to specify

the causal relationship brought about by organisational changes, as there might be other intervening factors at work.

This research focuses on the first category. It aims to answer the broad question of whether an attempt to change an entity into a LO will have a positive effect on business results in the area of sales revenue, customer satisfaction and employees' satisfaction. In short, does LO lead to enhanced organisational performance? To proceed, the broad question is split into two research questions, viz. (i) whether an organisation has moved towards being a LO; and (ii) whether this has an effect on improved business results in the areas of sales revenue, customer satisfaction and employees' satisfaction.

The study is broadly divided into three parts, covering in-depth the three Ms of meaning, management and measurement outlined by Garvin (1993). Below are some broad conclusions.

### **7.1 Part 1 - Meaning**

Part 1 of the research focuses on the first M of 'Meaning'. It covers the concepts, characteristics and behaviours inherent in a LO. While organisations by their very nature learn, some researchers like Daniels (1994) have contended that there is no shared meaning of what constitutes a LO. Others such as Calvert, Mobley, and Marshal (1994) contend there are no "true" LOs, but only organisations which exhibit certain attributes one might expect a LO to exhibit. Yet others like Senge (1990), Pedler et al (1991) and Marquardt (1996) provide a concrete definition of a LO.

This study does not intend to propose the definitive or an all-inclusive search of the multiple definitions that are available but would simply like to state a caveat about the definition of the LO. As seen in Chapter 2, the majority of the literature written about the LO tries to define its general characteristics which have produced a myriad of definitions that tend to focus on:

1. The importance of acquiring, improving and transferring knowledge;
2. Facilitating and making use of individual learning; and
3. Modifying behaviour and practices to reflect the learning.

Many questions remain, including:

1. whether an organisation itself can learn;
2. whether it does so through the individuals who constitute it;
3. whether responsibility for implementing the LO rests with leaders.

The debate is ongoing concerning how to initiate change process to move towards a LO. Is it possible or desirable to try to define such a dynamic entity as the LO?

It is important that these and other questions continue to be considered but it is equally important to realize that learning is culturally bound and that it is, therefore, difficult to adopt a generic definition which is capable of adaptation to the varying needs of organisation that can be adapted over time. No one definition of learning has been accepted as a standard. Multiple constructs and definitions abound in the study of learning.

## **7.2 Part 2 - Management**

Part 2 of the research focuses on the second M of 'Management'. It discusses in-depth the 7 dimensions of the Malcolm Baldrige Quality Award framework that is taken to assist in the management of the journey towards being a LO, namely (i) leadership, (ii) strategic planning, (iii) customer and market focus, (iv) measurement, analysis, and knowledge management' (v) workforce focus; (vi) process management, and (vii) business results.

The quest for a meaningful framework that will clearly depict a LO leads to the examination of relationship between Total Quality Management (TQM) and the LO (see Chapter 3, Section 3.3). TQM initiatives have improved the quality of products

and profits (Steven and Kassiech, 1998). Collman (1995) states that the LO philosophy has proved to be successful at Ford, Harley Davidson, Herman Miller, Federal Express and even in community (Kofman and Senge, 1993).

So how do TQM principles and the LO philosophy work together? Barrow (1993), Kim (1992) and Sohal and Morrison (1995) discovered both TQM and LO initiatives provide teamwork, a systematic approach, adapting to one's environment, and the ability to learn as an organisation. Barrow (1993) specifically states that TQM and organisational learning are inextricably linked. He supports his position by describing their cause/effect, and a system/process relationship. Both relationships allow organisations to examine how they systematically perform tasks, to develop and implement new sights, and transmit new knowledge throughout the organisation (Sohal and Morrison, 1995).

Caudron (1993) and Schein (1993) state that a supportive organisational culture is essential in promoting a LO. Advocating challenging work, open communication, trust, innovation, and cohesion among employees are essential attributes defining a supportive culture.

Following this, the research proceeds to look for an organisational development model that measures the relationship of a supportive culture and TQM principles on a LO. The Malcolm Baldrige Quality Award framework was discovered. The beauty of this framework is that it is both comprehensive and practical. It provides a systems view of practically all aspects of an organisation – and in a communicable language for practitioners. These are the fundamental strategic determinants or 7 dimensions of the Malcolm Baldrige National Quality Award, namely, (i) leadership, (ii) strategic planning, (iii) customer and market focus, (iv) measurement, analysis, and knowledge management; (v) workforce focus; (vi) process management; and (vii) business results. These criteria can be used by organisations of all kinds for self-assessment and training and as a tool to develop performance and business processes.

The Malcolm Baldrige Quality Award framework provides a system view of an organisation, assembling a group of inter-related elements towards a common goal of the success of the enterprise. The 7 dimensions are sufficient to describe a LO. In fact, they could be used to describe any type of organisation, but the purpose of this research is to focus specifically on the characteristics of a LO.

All the 7 dimensions suggest an important relationship between practices in the workplace and LO. Scholars have argued that LOs led to turnaround success stories in major corporations (Garvin, 1993; Edmondson and Moingeon, 1998). Moreover, researchers contend that such establishments developing LO practices result in increased organisational performance (Kline and Saunders, 1993; Kuchinke, 1995; Slater and Narver, 1995). Whatever the argument, researchers agree that LOs are consequential to success. However, the full impact of these model frameworks on improving organisational performance must still be ascertained.

Using Malcolm Baldrige Quality Award winners as a proxy to LO, a literature review on the relationship between these firms and their financial performance was carried out (see Chapter 3, Section 3.4). It was found that business excellence does deliver competitive advantage as many researchers have shown a link between quality activities and organisational performance. While receiving a Baldrige Award or any other award is not a guarantee of success, to win the award organisations must show continuous and major improvements. The approach for all the studies is essentially the same but it is apparent that the selection of the comparison or benchmark group makes all the difference in how impressive the results appear.

### **7.3 Part 3 –Measurement**

Part 3 discusses the third M of ‘Measurement’. It adopts a self-assessment diagnostic instrument, a modified version of the existing Singapore Quality Award’s Business Excellence for Continuous Improvement (BEACON) company audit questionnaire (see Appendix B), to measure the level of change and the degree to which a case study company, NTUC LearningHub Pte Ltd (LHub), has moved towards becoming a LO

(see Chapter 3, Section 3.5; Chapter 4, Sections 4.1.2, 4.2.2, 4.3.2, 4.4.2, 4.5.2 and 4.6.2).

On the face of it, simply measuring the extent and types (adaptive and generative) of learning going on in an organisation should be the best approach to measure progress towards LO ideals (See Chapter 5, Section 5.3). However, the issue of measurement of learning in itself is problematic. Pondering the issue of measurement reveals a puzzle. If LO is more of a journey than an end to itself, can it be “achievable” and hence measured? Even if it is measurable, the issue of what constitutes “learning” or LO needs to be “problematized”. In general, cooperation of scholars and combining existing knowledge are rare. The common ground for measuring is also missing. In addition, the feedback from the tool development process to more theoretical work is lacking. These issues relate to the classic scientific problems one tends to associate with the ability to identify operational concepts and measurable variables. They indicate that “How do we measure LO?” is not a straightforward question, and one should rightly be cautious about claims of measurability.

The position taken in this research is that measurement of the LO is not principally a scientific or technical issue. In other words, it is not an issue of identifying the most appropriate indicators of learning, and then devising optimal techniques for their measurement. LO is not an objective, measurable entity. It is not a concept that can be operationalised scientifically. The activity of measuring LO and of making progress towards the LO ideal is essentially a social process.

First, this study contended that attempting to link progress toward LO ideals with demonstrable “bottom line results” is a social need not a scientific obligation. Peters and Waterman (1982), among others, have critiqued the myth of rationality which supposes that companies choose to undertake organisational change programmes on the basis of hard evidence. The field of organisation development is typified by a great lack of evaluative evidence of the efficacy of change programmes. This, therefore, led to the assumption that hard-headed business people are necessarily convinced by “objective”



evidence of results. Some hard evidence may well contribute to credibility, but business people make decisions on a far wider range of criteria.

Second, what types of LO are valued may be defined differently by different actors. The fact is that mainstream literature which advocates LOs suggests that the concept is primarily rhetorical rather than actual. The idea of a LO may function more as a concept to focus aspiration than as some objective state. The issue here, therefore, is not so much the scientific merits of measures themselves, as the suitability of the heuristic for the various purposes in hand.

Therefore, on the basis of the above alone, one should not embrace uncritically the proposition that LO initiatives can be or even should be measurable in terms of learning or bottom-line results. However, the author does want to suggest that the old truism: “what doesn’t get measured won’t improve” is an important contributory factor to show progress in operationalising LOs. If these views are accepted, they do provide an avenue for measurement of progress towards LO ideals.

Under such circumstances, for the purpose of this research, one diagnostic instrument is used to measure the level of change and the degree to which LHub has moved towards becoming LOs - a modified version of the existing Singapore Quality Award’s (SQA) Business Excellence for Continuous Improvement (BEACON) company audit questionnaire (see Chapter 5, Section 5.3.2).

#### **7.4 Case Study**

As explained in Chapter 5, Section 5.2, this study utilised case study as a method of confirming or disconfirming the above research issues. The use of case studies as a research tool, as exemplified by Yin (1994), should investigate a contemporary phenomenon within its real-life context when boundaries between phenomenon and context are not clearly evident and in which multiple sources of evidence are used.

The case study company is NTUC LearningHub Pte Ltd (LHub), a newly incorporated small and medium size entity which decided to embark on ISO 9000 and other SQA related initiatives. It is an account of problem situations and events that took place in the organisation over a period of one year from July 2005 to July 2006. Questionnaire survey and evidentiary documents were used as primary and secondary sources of data collection to gather detailed information about the entity over a period of one year, with a view to obtaining in-depth knowledge.

This study satisfies Yin's exemplification of case study research in that there has been a lack of empirical exploration in the relationship between learning and organisational success. It investigates a contemporary phenomenon but the boundaries between the phenomenon (LO) and context (Business Results) are not clearly evident (Yin, 1994). Besides, despite the limited attempts in explaining the performance outcomes of LO, few have adopted a more quantitative approach in accounting for the behavioural aspect of learning (Swanson and Holton, 1999; Chaston et al, 1999; Levinthal and March, 1993; Dixon, 1999).

Hence, this study aims to provide an insight into the various interpretations of organisational success associated with LO, bridging the gap between the two (phenomenon and context). The findings can then be used to further develop a more in-depth study or case analysis of potential or successful LO, satisfying Yin's (1994) definition of a comprehensive research study.

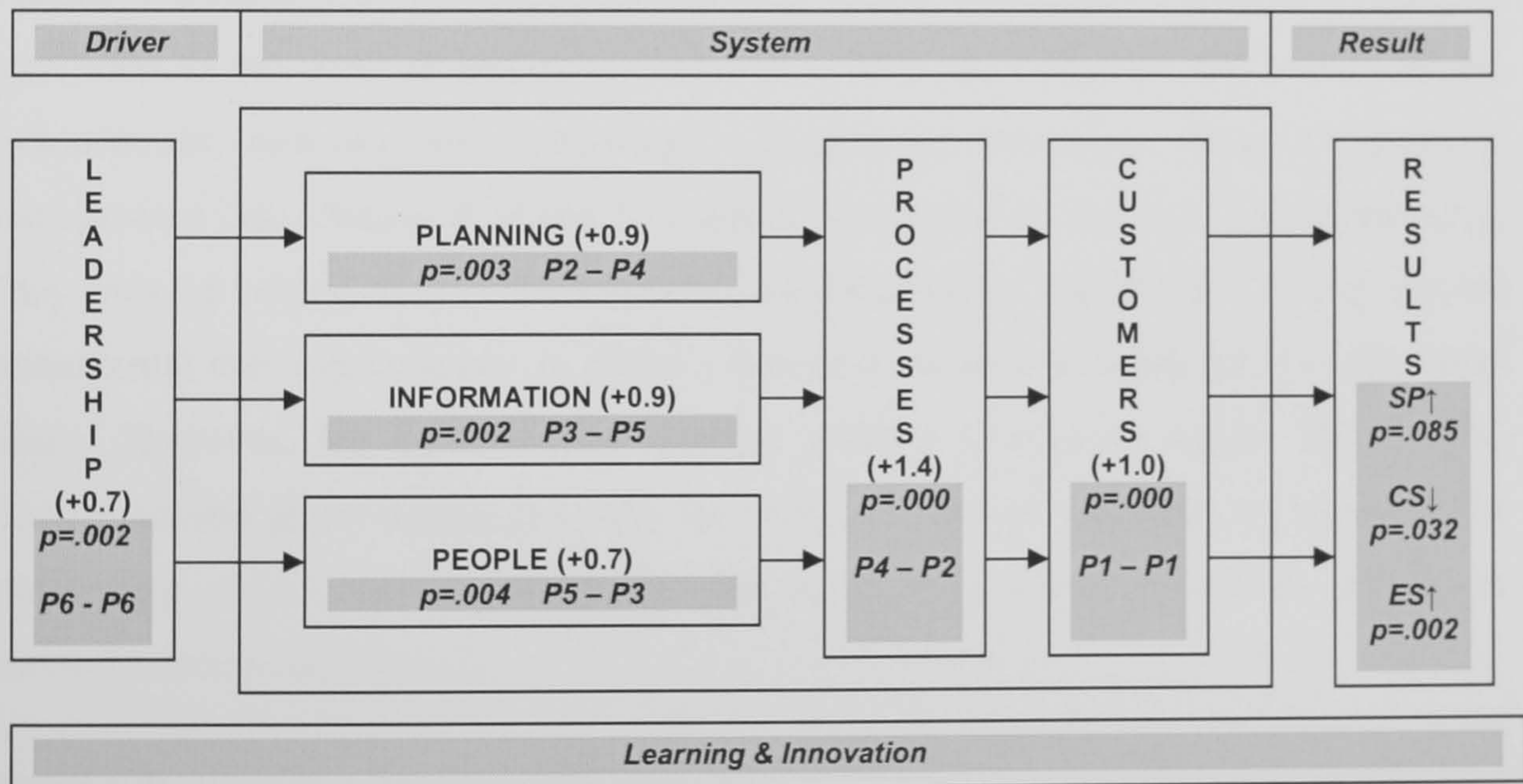
A one-group pre-test-post-test design was used in this study (see Chapter 5, Section 5.4). However, as there is no control group in this study, internal validity is also limited, e.g. inability of the study to differentiate whether or not differences in measurement results are due to the treatment or to other irrelevant variables; maturation effect where the subjects' attitude or views towards certain issues might change as they grow older, become more experience in their work, become tired, etc.

## 7.5 Research Findings

The overall research question is to find out whether an organisation that moves towards being a LO will have improved business results. The findings are mainly presented in quantitative data evident in Chapter 6.

Figure 7.1 summarises some of the key findings in this research (see Chapter 6, Table 6.1, 6.2, 6.8, 6.10 and Figure 6.1 for details) to ascertain (a) whether LHub has moved towards being a LO; and (b) whether there is an improvement in LHub's business results after that in the areas of (i) sales revenue and profitability, (ii) customers' satisfaction, and (iii) employees' satisfaction after adopting the SQA business excellence approach.

**Figure 7.1 - Pictorial Summary of Key Findings in the Study**



Note: (+ve) = Mean Variance (Table 6. 1), *p* = Significance Level, P = Priority (Table 6.2), SP = Sales & Profitability (Figure 6.1), CS = Customers' Satisfaction (Table 6.7), ES = Employees' Satisfaction (Table 6.9)

The research result shows that there is a positive mean variance in the 6 strategic determinants ( $p < 0.05$ ) of (i) Leadership, (ii) Planning, (iii) Information, (iv) People, (v) Processes and (vi) Customers in LHub from year 2005 to 2006 even though

dissatisfaction index has increased from 8.6% in 2005 to 11.0% in 2006. ANOVA test reveals a significant effect of improvement in self assessment results from July 2005 to July 2006,  $F(1, 80) = 18.768, p < 0.05$ . From this, it appears that LHub has moved towards becoming a LO in some respects.

However, the research findings only partially support the hypothesis that there is an improvement in LHub's business results in the areas of (i) sales revenue and profitability ( $p > 0.05$ ), (ii) customers' satisfaction ( $p < 0.05$ ), and (iii) employees' satisfaction ( $p < 0.05$ ) after adopting the SQA business excellence approach. This is because only (i) sales revenue and profitability and (iii) employees' satisfaction show signs of improvement whereas (ii) customers' satisfaction has a dropped in desired outcome. In addition, the improvement in (i) sales revenue and profitability is not statistically significant.

Chapter 4 describes the changes introduced by LHub management from July 2005 to July 2006 in the area of leadership, strategic planning, customer and market focus, measurement, analysis, and knowledge management, workforce focus and process management (see Chapter 4, Table 4.11 and 4.12; Chapter 5, Table 5.12 for summary). They may be related to or even treated as an independent variable and it may not be coincidental that improvement in LHub's business results has taken place at the same time. However, the problems of internal validity mentioned earlier have to be recognised and these results can only be treated as a first indication of the possible relationship, a first attempt to measure what has so far not been measured - and often said to be immeasurable.

Despite the partial support of the hypotheses between moving towards an LO and improved business result, a number of writers have forecast that the LO will continue to provide an effective model for the development of many types of organisations in years to come (Lessem, 1993; Coopey, 1995). Studies such as this demonstrate the worth of regular evaluation of learning-oriented businesses in terms of recognising strengths and weaknesses within the organisation system and addressing the critical issues so as to improved business results.

## **7.6. Limitations of Research and Areas for Future Research**

If LO has resulted in a change in organisational performance, the obvious question that must be asked is whether or not this new performance is superior to the organisation's original performance. In the case of LHub, sales revenue, profitability and employees' satisfaction increased although customers' satisfaction level has dropped. With such an outcome, it might be argued that to a certain extent, LO is beneficial in changing organisational behaviour and improving performance. There are, however, a number of limitations faced in the conclusion that the few positive changes observed in LHub is a result of its effort of moving towards being a LO.

First, there is the inherent problem of measuring the results of any change programme: it is difficult to know what the performance would have been if the programme had not taken place. This is what is called the impossibility of knowing the non-occurring alternative. Even if the LO has resulted in a change in organisational performance, and even if this change in performance is better than the organisation's starting point, it is still not possible to conclude that LO is the best available strategy. This is because there is no way of knowing whether another strategy - one which LHub could have adopted but chose not to - would have been more successful.

In truth, the extent to which benefits can be ascribed to the LO depends, to a great extent, on the breadth of the definition of a LO. If the LO is widely construed - as an umbrella term for a disparate group of management practices, including quality programmes, training and development programmes and organisational strategy development (as in this research) - it is likely that many benefits can be attributed to this basket of activities. If, however, a LO is seen as a distinct practice removed from existing management programmes and practices, then it is likely to be far more difficult to attribute any benefits to a LO.

Second, there is the problem of causality: it is difficult to know whether the change in performance is the result of the LO. The question one must ask is whether the LO

causes an otherwise ordinary company to become successful, or whether successful companies choose to become LOs. Thus, to show that a LO is useful, it is not enough simply to show that companies like LHub that practise the LO are more successful than those that do not. This does not show simply that all companies should adopt LO as their route to success. If one is to conclude that a LO is a useful concept, then there is a need to establish that a LO is the cause, or at least one cause, of superior performance. This is because there might be some other intervening factors which is causing both the LO and results to increase, eg. something in the economy as a whole.

Third, even if benefits have been successfully attributed to the LO, there is the problem of measuring their extent. A major difficulty when trying to measure the benefits of the LO is the non-quantifiable nature of many of the potential benefits. Some benefits, such as a reduction in time to market, are likely to be difficult to measure in purely financial terms, although they will be measurable. Other benefits, such as increased loyalty to the organisation from employees, will be almost impossible to measure meaningfully, although proxies such as employees satisfaction surveys and labour turnover may be of some use.

A wider problem with the measurement of organisational success in general is the lack of agreement on a single, definitive measure of even purely financial success. There are many possible financial indicators with which to assess company performance, each with its advocates and opponents, and its associated advantages and disadvantages. Each measure, however, offers only a limited view of an organisation's performance.

In an attempt to alleviate this problem, for this research, an effort is made to use multiple measures, financial and non-financial like sales, customers and employees' satisfaction, to assess LHub's performance. This allows more aspects of the organisation's performance to be linked and assessed.

Another major problem with measuring the results of a LO is the fact that many of the likely benefits will be realised only in the long term. Potential benefits such as

increased employee loyalty and reduced staff turnover, an enhanced sense of esprit de corps and increased creativity are not only difficult to measure in financial terms, but likely to become apparent only gradually and to yield any benefits in the long term.

A further related problem is to know whether any benefits, measurable or otherwise, will be maintained in the long term. The difficulty of maintaining success has been highlighted by the problems faced by Peters and Waterman's (1982) so-called excellence companies. By 1987 the fortunes of some of the case companies had plummeted to such an extent that Peters began "Thriving on Chaos" (1987) with the line 'there are no excellent companies'. Five years after the publication of "In Search of Excellence" (Peters and Waterman, 1982), only 14 of the 43 excellent companies could still be classified as excellent using Peters and Waterman's original criteria (Peters, 1987). This demonstrates the difficulty of maintaining success even in the medium term. The nature of many of the benefits of a LO means that they may be more sustainable in the long run. Potential benefits such as increased employee loyalty and enhanced creativity are likely to be difficult for competitors to emulate and so will be sustained sources of competitive advantage. However, there is as yet no way of knowing whether or not these advantages, such as they are, will be sustained in the long run.

Bearing all the above limitations in mind, the purpose of this research is to find out if a LO leads to enhanced organisational performance. Ideally, a larger statistical sample of subjects as well as availability of a control group would have been the basis of this study. The situation and constraint in LHub does not allow such a luxury. However, as an early empirical study of the performance of a LO, the opportunity sample data does provide some insights into the research question.

Based on the outcome of this study, it is suggested that a replication of this effort be done to a broader sample base to test this study's findings. The insights gained from this research would allow researchers to suggest to managers and practitioners what characteristic adjustments might be made to the strategic determinants (ie. leadership,

strategic planning, customer and market focus, measurement analysis, and knowledge management, workforce focus, and process management) which could cause them to also be viewed as predictors of the business performance of a LO.

There is also need to develop valid measures of learning outcome. While it is possible to use indirect measures like new product development, etc, there is a need to develop more direct measures. Perhaps a design that puts a greater emphasis on qualitative exploratory research would have helped to measure the “immeasurable”.

Another important area for further research is to understand how features of the organisation’s culture lead to superior learning or performance outcomes. Likewise, there is a need to focus on understanding individual and group learning processes. All these can be very different in the Asian and Western context.

Essentially, the research challenge is to validate/invalidate much of the sentiment and the significant claims that one reads for the LO concept within the literature. Such research will, in the long run, provide a better service to managers and those involved in trying to build the LO than will literature which is anecdotal and generalist in nature. At the practitioner level, there remains the issue of whether it is possible to create a LO. Perhaps for future research, it might be more useful to consider a LO in terms of organisational values and processes that adopt a learning-based approach than in terms of specific LO structures or interventions as per this current research. Many of the issues raised by LO are equally relevant in the context of the management of change and the introduction of continuous improvement and other quality initiatives.

## **7.7 Conclusion**

There is no roadmap available to follow that will take an organisation down the path to being a LO. Each organisation must develop a structure and style that is best suited for its own people, history, skill base, technology, mission, and culture. Watkins and Marsick (1993) refer to this process as ‘sculpturing’ the organisation in the way that best ‘releases the inner potential of its technology, people, and resources.’



In many ways it is the journey that creates the LO. It is clear that each organisation must find its own way, but the principles to apply are becoming clearer. The journey is not a simple one, for it requires challenging many of one's most fundamental beliefs and operating principles, and it does take sustained effort and time to change individual behaviours, perceptions, and beliefs.

An organisation that looks for meaningful solutions, then internalizes those solutions so that it continues to grow, develop, and remain successful. The concepts of LOs incorporate ideas from many sources and involve a variety of people in problem solving, information sharing, and celebrating success. From the literature on LOs, it is clear that how well or badly an organisation learns does not occur haphazardly. The literature suggests that policies, structures, and processes do make a difference. By reviewing why learning takes place in successful companies, facilitating factors that induced or supported learning were identified (Argyris, 1977). While not all factors were observed at each site, many of them are recurring. Thus they are viewed as generic factors that any organisation can benefit from.

One contribution of this research is to offer a realistic assessment, albeit with limitations, of the usefulness of the LO as a way towards competitive advantage. While it was ultimately impossible to assess definitely the usefulness of the LO, significant value can still result from the delineation of the process necessary to show such usefulness. The author can only hope that further research will shed more light on this complex question.

The origins of the LO are clear. The successful description of the antecedents that have led to the espousal of the LO by so many consultants, and its adoption by so many managers, is a powerful aid to any assessment of a LO's contribution to enhanced effectiveness. There exists an ongoing debate on the contribution of LO towards organisational effectiveness. This research has shown that even a small and medium enterprise like LHub which put their emphasis on the 7 strategic determinants of (i) leadership, (ii) strategic planning, (iii) customer and market focus, (iv) measurement,

analysis, and knowledge management, (v) workforce focus and (vi) process management found in the Baldrige framework will be able to show positive results in the area of sales and employees' satisfactions (though not quite so in customers' satisfaction).

It has been an exciting journey to discover how these 7 strategic determinants or dimensions found in the Malcolm Baldrige Quality Award framework are closely related to LO concepts. However, it needs to be emphasized that while the Malcolm Baldrige approach is used as a proxy to move towards being an LO, this research does not devise rules for managers to transform their companies into LOs. There are no neat models or rules for implementation which can be applied easily in a wide range of contexts and settings. However, it is hoped that this research will strike a chord with practising managers as well as with academics - purely because it conforms more closely with their own tacit understanding of organisational realities.

Finally, it is hoped that this research will be of value to all those interested in LOs: managers, consultants, academics and students. This study hopes to have demonstrated that there is indeed real value in the concept of LOs. Equally, however, it must be acknowledged that further research is required to determine definitively both the usefulness of LOs and the best way of implementing the ideas explored here. The author looks forward to considering the answers of other researchers to the many questions which remain to be explored and remains convinced that the only way to understand the complexities of corporate life and the influence of ideas as elusive as those associated with LOs is through rigorous intellectual analysis of contemporary management practice.

## Epilogue

The completion of the concluding chapter brought to me a big sign of relief. It was a long and tiring journey - two years of course work, two years of suspension approved by the University of Durham due to unforeseen family and work matters, and six years of research. That was a good ten years. There were moments when I thought of giving up but encouragement from my wife, supervisors, bosses and colleagues at different times of my research study kept me going.

The modular portion of the Doctorate of Education (EdD) coursework and their short assignments/assessments were easy enough for me to complete the studies in time. However, the challenges started during the thesis phase. My marriage, the birth of my daughter a year later, followed by the arrival of my son another 3 years later, kept me very occupied. To make matters worse, this was also a period where the company that I worked in, NTUC LearningHub Pte Ltd (LHub), was in a high growth phase. I volunteered to cross over from the headquarters to work in this small company as Director of Corporate Services. One year later, I was promoted to the position of a General Manager and was given an unenviable task of setting up a totally new business unit focusing on workplace safety and health training. As I have never managed a business with profit and loss responsibility before, the learning curve was steep and I have to work late almost everyday, leaving little time for my family and research study.

It was in LHub that I decided to use this company as a case study for my research. It serves two purposes. First, it is convenient as I need not look for another company or companies to conduct the field work. Second, the concept of Learning Organisation is directly applicable to my course of work as Director, Corporate Services and subsequently as General Manager of a new training centre. Whatever new ideas discovered I could try to apply or relate them to the developments in LHub. I treated the research work as a form of continuous study.

I am lucky to have supportive bosses who allowed me to conduct field study in LHub, colleagues from the Human Resource Department who allowed me access to the results of their workplace satisfaction survey as well as assisted me to track the respondents during the pre-and-post phase of July 2005 and July 2006. I am also glad to have a supportive wife who resigned from her job shortly after the birth of my son to help take care of the family, thus enabling me to focus on my office work and research study without worrying too much about the upbringing and education of my children.

When I read back the case study in the research work, it reminded me of how much LHub has gone through since corporatisation, from a small outfit with 29 staff in August 2004 and a modest turnover of \$7 million to one with about 200 staff and a turnover of \$30 million for the Fiscal Year 2008/09. The hard work of all the managers and staff eventually paid off as LHub was given due recognition by the human resource community - it was being voted as the top ten most preferred private education and training organisation in Singapore in its 2007 annual HR survey. In addition, LHub was also being accorded a Quality Provider status by the Workforce Development Agency in 2008 and treated as one of its strategic partners in the skills upgrading of the Singapore workforce.

As for me, during the course of my research work, I have engaged myself in a process of discovery that have enhanced my critical thinking, namely, the selection of a thesis, identifying the central issues pertinent to it, conducting research, and constructing an extended argument. When I first started, with all the problems that I encountered in my workplace, I was not sure if I could make it through. I was glad that I persevered. Looking through my first draft of the thesis and the final submission to the University of Durham, it made me realised how embarrassingly simple minded I used to be when I first started writing and how appreciative I am to my two supervisors, Professor Mike Byram and Mr Steward Martin, who have given me so many invaluable guidance and comments. They have made me more critical of my own research study and enhanced my critical thinking skills along the way.

The core “product” of research is essentially asking a question, recording the answer and teaching someone what you have learned. However, during the research process, things may not be so straightforward and there are a lot of nuances that one needs to be aware of. So what is a good research? To me, the best research design may not be the one which offers the most accurate results. Rather, it is the one which offers the greatest value for money, or the one which can best allocate the available research funds. I have learnt much about research work in general which can be summarised as follows:

- 1) Gaining access or finding the right subjects for investigation may not be as difficult as one thought. In fact, there is no lack of opportunities or ideas even if you used your own workplaces to conduct field research. Having access to your own senior management and staff will give you an extra edge in the course of work. The important thing is to seek their approval and consensus. This is why I have switched my field research “target” from the initial NTUC Customer Service Centre to NTUC Admin and Research Unit at the headquarters as my case study, and finally settled for LHub when I was being transferred there in August 2004.
- 2) Having supportive bosses, family members and good research supervisors is not good enough. To carry out the research over a long period while juggling with work and family needs a lot of self-discipline and motivation. It is important to identify a research topic that you are passionate about and have lots of interests in doing. If you could link your research work to your work life or organisation work, that will be an added bonus. I selected LO and LHub as my research subjects precisely due to these reasons.
- 3) What you want may not be what you get. I was very ambitious in the beginning to prove a lot of hypotheses including those related to performance, learning motivation and culture but resource and time constraints dictate that I should only focus on just one research question of linking LO to organisation performance.

- 4) Things may not be as neat as it is sometimes said to be in research textbooks. I would like to have a bigger sample size for my questionnaire in LHub but its small size constrained me. I would prefer to have a Control Group but the small number of NTUC CertCentral staff made it impossible for me to form one. So I need to make do with such a limitation.
- 5) The selection of comparison or benchmark group makes all the difference in how impressive the results appear. For instance, my research finding rejected the hypothesis that customers' satisfaction will improve when LHub moves towards being a LO. This is because I have used LHub's standard customer survey form to ascertain my hypothesis. However, there are a lot of variables in this form, and some of them showed improvement in customers' satisfaction over a one year period (eg. in the areas of training facilities and frontline service level). Should I select only variables in the customers' survey form that showed positive results, the conclusion of my research will be very different.

One of the purposes of academic research or argument is to discover new views, new knowledge, and new truths about a complex issue. One specific reflection after making the above general points about learning how researches work is whether ideas champions by LO proponents are anything new or they are just old wines put in new bottles because they are indeed very similar to total quality management (TQM) concepts which appeared much earlier. Both models shared many similarities in terms of fundamental philosophies like top management commitment, customer focus, high level of employee participation, open and effective communication, fact based management and strategic quality planning. One way to differentiate them is to view learning as a process (means) towards quality (end), as something that is necessary if one wants continuous improvement in an organisation.

In the course of my research, it became clear that LO does not always occur in the linear fashion implied by any stage model. Learning may take place in planned or informal, often unintended, ways. Moreover, knowledge and skill acquisition takes place in

sharing and utilisation stages. It is not something that occurs simply by organising an “acquisition effort”. Ideally, an organisational development model should measure the relationship of a supportive culture and TQM principles on a LO as well as the relationship between the LO and its impact on organisational performance. Unfortunately, as this research mainly focused on the latter, I have not dealt further into the former, ie. researching on the more fluid and chaotic learning environment to seek for the less-defined, more subtle embodiments even though culture examination is important for any organisational development practitioners before they attempt to implement any LO or TQM principles. Infact, if I were to go deeper, what about LO and TQM’s applications in countries outside of the US and Europe? But studying arguments across cultures in different societies is a complicated field, and most of its findings may well be tentative because of the vast individual differences in people from culture to culture.

There is no roadmap available to follow that will take an organisation down the path to being a LO. Each organisation must develop a structure and style that is best suited for its own people, history, skill base, technology, mission, and culture. In this research, I have used the Malcolm Baldrige framework, a TQM tool, to provide a system view of an LO, assembling a group of inter-related elements towards a common goal of the success of LHub. This is because 7 dimensions found in the framework are sufficient to describe a LO and the Singapore Quality Award framework - the Singapore equivalent of Malcolm Baldrige, is something that is familiar to both the public and private sector organisations in Singapore. Unfortunately, I cannot say that the Malcolm Baldrige framework is a perfect tool as it is, after all, a detached audit tool that can be pretty complicated and bureaucratic to understand. Basically, it focuses on the evaluation of the process of strategy formulation rather than the actual formation and evaluation of strategy, and lacks predictive elements that would help identify new customers and markets. It also does not show how business process can be identified or improved, nor does it takes into account that organisations are usually structured according to different functionalities and processes rather than completely process based.

Despite the above shortcomings, looking through the Malcolm Baldrige framework with an LO angle is still an enriching experience for me and it is very satisfactory indeed to link up each of the different strategic determinants of the Malcolm Baldrige with LO philosophy. If I were given an opportunity to do the research again with the current LHub staff strength and resources, and assuming that it would be a PhD thesis, I would have done some things differently to make it better. First, I would increase the sample size for the Experimental Group and introduce a Control Group to improve on the internal validity, perhaps hundred from each group. Second, I would research on the business performance of local SQA companies rather than using Malcolm Badrige examples from the US. Third, I would go further in-depth to find out more about the relationship between each of the strategic determinants in the Malcolm Baldrige framework vis-à-vis business result, ie. Leadership and business result, Workforce Focus and business result, etc. Fourth, instead of only using one year as a period of study (as in the case of LHub), I would stretch it further to at least 5 years of observation. Lastly, other than quantitative research to link LO with business performance, I would introduce qualitative research work like focus group discussion with staff and customers to find out more about their views on LO's culture.

I am glad that my EdD research work is coming to an end. It has been a most fulfilling research journey. The concept of LO has gone through many combinations and permutations over the last two decades, especially during the 1990s, in terms of theoretical development and attempts at practical application. Management theorists have traditionally under-utilised the insights and practices from other disciplines such as sociology, philosophy and anthropology. Sooner or later, organisation studies such as those of LOs will enter an area where management, philosophy, anthropology and social science meet.

I also believe that in time to come, the LO concept will evolve further from its traditional focus on the individual, team and organisation levels to that of societal and national levels, where countries that compete for investments look towards new strategies for growth and sustaining/improving their competitive edge over other cities



and nations. The competitive strategy of these region-states and nation states have developed beyond providing more physical resources and cutting labour costs but an explicit commitment to learning and innovating to sustain economic activity through various combinations of lifelong learning, innovation and creative uses of information and communication technologies. I look forward to the participation of the different practitioners, economists, social scientist, bureaucrats, politicians and scholars in such areas of research.

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**BEACON**  
**BUSINESS EXCELLENCE ASSESSMENT**  
**FOR CONTINUOUS IMPROVEMENT**

Name of Organisation						
APPROACH	NONE	REACTIVE	DEFINED	INTEGRATED	REFINED	INNOVATIVE
DEPLOYMENT	NONE	SOME	SOME KEY	MOST KEY	ALL KEY	ALL
RESULTS	NONE	LIMITED	FAIR	GOOD	VERY GOOD	EXCELLENT
LEADERSHIP						
PLANNING						
INFORMATION						
PEOPLE						
PROCESSES						
CUSTOMERS						
RESULTS						
BUSINESS EXCELLENCE						
BAND	1	2	3	4	5	6
SCORE	0	1 - 199	200 - 399	400 - 599	600 - 799	800 - 1000



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		APPROACH	NONE	REACTIVE	DEFINED	INTEGRATED	REFINED	INNOVATIVE
		DEPLOYMENT	NONE	SOME	SOME KEY	MOST KEY	ALL KEY	ALL
<b>1 LEADERSHIP</b>	<b>A Senior Executive Leadership</b>							
	1	Develop organisation's purpose, vision and values focussing on key stakeholders, learning and innovation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	2	Communicate purpose, vision and values to employees	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	3	Communicate purpose, vision and values to customers, suppliers/partners and other external parties	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	4	Demonstrate and reinforce, as role models, commitment to excellence in day-to-day activities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	5	Evaluate and improve personal leadership and involvement	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<b>B Organisational Culture</b>							
	6	Translate values into desired employee behaviours to support innovation, learning, and organisation's objectives	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	7	Adopt practices that support values	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	8	Develop policy and structure to promote values	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	9	Introduce programmes to promote values	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	10	Close gaps between current and desired culture	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<b>C Responsibility to Community &amp; Environment</b>							
	11	Adopt policy, goals and programmes for organisation's contribution to the community and environment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12	Communicate policy, goals and programmes to employees and involve them	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
13	Communicate policy, goals and programmes to customers, suppliers/ partners and other external parties and involve them	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
14	Evaluate and improve the process adopted for contribution to community and environment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<b>2 PLANNING</b>	<b>A Strategy Development &amp; Deployment</b>							
	15	Use and analyse internal information to develop strategies	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	16	Use and analyse external information to develop strategies	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	17	Involve employees in strategy development	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	18	Establish short-term strategies and goals	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	19	Establish long-term strategies and goals	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	20	Set stretch goals based on benchmarks or customer requirements	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	21	Develop action plans aligned to strategies and goals	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	22	Set targets for individual employees linked to strategies and goals	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	23	Measure performance against plans and review regularly	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
24	Evaluate and improve the strategic planning process	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<b>OR MA</b>	<b>A Management of Information</b>							
	25	Select information for planning, day-to-day management and performance improvements	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

APPROACH		NONE	REACTIVE	DEFINED	INTEGRATED	REFINED	INNOVATIVE
DEPLOYMENT		NONE	SOME	SOME KEY	MOST KEY	ALL KEY	ALL
26	Collect and capture information related to organisation's directions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
27	Ensure information is reliable	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
28	Ensure information is easy to access and disseminated quickly to employees, suppliers/partners and customers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
29	Share information to encourage innovation and learning	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
30	Analyse and use information from various sources for planning and review	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
31	Evaluate and improve the management of information	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

1 2 3 4 5 6

		APPROACH					
		NONE	REACTIVE	DEFINED	INTEGRATED	REFINED	INNOVATIVE
		DEPLOYMENT					
		NONE	SOME	SOME KEY	MOST KEY	ALL KEY	ALL
<b>4 PEOPLE</b>	<b>B Comparison &amp; Benchmarking</b>						
	32 Develop criteria for selecting comparative and benchmarking information to improve performance	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	33 Use comparative and benchmarking information to improve processes, set stretch goals, and/or encourage breakthrough improvements	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	34 Evaluate and improve the process for selection and use of comparative and benchmarking information	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<b>A Human Resource Planning</b>						
	35 Develop human resource plans aligned to corporate objectives	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	36 Involve line managers in implementing plans	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	37 Review human resource plans regularly	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<b>B Employee Involvement &amp; Commitment</b>						
	38 Develop strategies to encourage employee involvement and commitment in improvement and innovation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	39 Develop mechanisms to involve individual employees in improvement and innovation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	40 Develop mechanisms to encourage teamwork in improvement and innovation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	41 Review effectiveness of employee involvement mechanisms	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	42 Evaluate and improve overall employee involvement process	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<b>C Employee Education, Training &amp; Development</b>						
	43 Determine education, training and development needs based on organisation's goals and objectives	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	44 Develop plans based on the needs identified	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	45 Deliver programmes based on plans	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
46 Review effectiveness of programmes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
47 Evaluate and improve the education, training and development process	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<b>D Employee Health &amp; Satisfaction</b>							
48 Create work environment that enhances employee health and satisfaction	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
49 Develop harmonious employee-management relationship	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
50 Measure and assess employee satisfaction	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
51 Evaluate and improve employee health and satisfaction system	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<b>E Employee Performance &amp; Recognition</b>							
52 Align performance appraisal to corporate objectives and values	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
53 Introduce variety of rewards and recognition schemes to support corporate objectives	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
54 Recognise and reward employee learning and innovation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
55 Evaluate and improve performance and recognition systems	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<b>OC</b>	<b>A Innovation Processes</b>						
	56 Generate, gather and screen creative ideas from all sources	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	57 Implement innovative ideas to achieve business outcomes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

		APPROACH					
		NONE	REACTIVE	DEFINED	INTEGRATED	REFINED	INNOVATIVE
		DEPLOYMENT					
		NONE	SOME	SOME KEY	MOST KEY	ALL KEY	ALL
58	Incorporate changing customer/market requirements in the new product/service design and introduction process	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
59	Incorporate new technology and knowledge in the new product/service design and introduction process	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
60	Involve employees from various departments in the new product/service design and introduction process	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
61	Involve customers in the new product/service design and introduction process	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
62	Involve suppliers and/or partners in the new product/service design and introduction process	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
63	Incorporate procedures for design validation in the new product/service design and introduction process	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
64	Design and introduce production and delivery processes for new products/services	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
65	Evaluate and improve the innovation and design processes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

1 2 3 4 5 6

		APPROACH					
		NONE	REACTIVE	DEFINED	INTEGRATED	REFINED	INNOVATIVE
		DEPLOYMENT					
		NONE	SOME	SOME KEY	MOST KEY	ALL KEY	ALL
<b>6 CUSTOMERS</b>	<b>B Process Management &amp; Improvement</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	66 Identify key business and support processes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	67 Measure process performance and set targets	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	68 Analyse variances in process performance and take actions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	69 Improve key processes for higher performance and customer satisfaction	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<b>C Supplier &amp; Partnering Processes</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	70 Identify and select suppliers and partners who fit into the organisation's overall strategy	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	71 Communicate requirements to suppliers and partners	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	72 Assess suppliers and partners to ensure requirements are met	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	73 Provide performance feedback to suppliers and partners	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	74 Improve capabilities of suppliers and partners to meet organisation's requirements	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<b>A Customer Requirements</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	75 Segment markets and customers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	76 Determine current and future customer/market requirements for each segment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	77 Analyse and incorporate requirements into strategic and improvement plans	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	78 Evaluate and improve the process for determining customer requirements	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<b>B Customer Relationship</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	79 Provide customers with easy access to conduct business with the organisation and make complaints	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
80 Set and deploy customer contact performance measures for employees in the response chain	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
81 Ensure customer complaints are resolved and analysed for improvements	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
82 Train and empower employees to delight customers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
83 Evaluate and improve the customer relationship management process	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

		APPROACH								
		NONE	REACTIVE	DEFINED	INTEGRATED	REFINED	INNOVATIVE			
		DEPLOYMENT								
		NONE	SOME	SOME KEY	MOST KEY	ALL KEY	ALL			
<b>7 RESULTS</b>	<b>C Customer Satisfaction</b>									
	84	Gather and analyse information on customer satisfaction and retention	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	85	Use the information to develop strategic and improvement plans	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	86	Evaluate and improve the process of determining customer satisfaction	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
			RESULTS							
			NONE	LIMITED	FAIR	GOOD	VERY GOOD	EXCELLENT		
		<b>A Customer Results</b>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		87	Improvement trends and targets met for customer satisfaction and retention indicators	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		88	Improvement trends and targets met for product and service performance indicators	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		89	Favourable comparison of results with competitors or benchmarks	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>B Financial &amp; Market Results</b>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
90		Improvement trends and targets met for financial performance indicators	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
91		Improvement trends and targets met for marketplace indicators	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
92		Favourable comparison of results with competitors or benchmarks	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<b>C People Results</b>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
93		Improvement trends and targets met for employee involvement indicators	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
94	Improvement trends and targets met for employee training indicators	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
95	Improvement trends and targets met for employee satisfaction indicators	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
96	Favourable comparison of results with competitors or benchmarks	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
<b>D Operational Results</b>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
97	Improvement trends and targets met for the performance indicators of key business and support processes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
98	Improvement trends and targets met for supplier and partner performance indicators	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
99	Improvement trends and targets met for community and environment protection indicators	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
100	Favourable comparison of operational results with competitors or benchmarks	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		

1 2 3 4 5 6

## Appendix B

### Demographic Data

Please provide some personal information by circling the appropriate choice and fill in the blank. All the information provided would be kept confidential.

Gender:

- a. Male
- b. Female

Age:

- a. Below 20
- b. 20-29
- c. 30-39
- d. 40-49
- e. 50 or above

Marital Status:

- a. Single
- b. Married
- c. Divorced
- d. Widowed

Ethnic Group:

- a. Chinese
- b. Malay
- c. Indian
- d. Others                      Please specify \_\_\_\_\_

Highest Education Level:

- a. Secondary
- b. Diploma
- c. Degree
- d. Others                      Please specify \_\_\_\_\_

SBU/SFU working at in NTUC LearningHub:

- a. Infocom Training Centre
- b. CET Centre
- c. NTUC CertCentral
- d. Operations
- e. Marketing
- f. Human Resource
- g. IT and Facilities
- h. Finance

Length of service in NTUC LearningHub (including years of service in NTUC ARU):

- a. Below 6 months
- b. 6 months to 2 years
- c. Above 2 years

Thank you for completing this questionnaire. Your cooperation has been most valuable.



## A MODIFIED VERSION OF BUSINESS EXCELLENCE ASSESSMENT FOR CONTINUOUS IMPROVEMENT (BEACON)

### *HOW GOOD IS OUR ORGANISATION?*

Is NTUC LearningHub (LHub) a company of business excellence? In each question below, there are a few short descriptions of those characteristics in practice. These characteristics are adapted from the Singapore Quality Class (SQC) company audit questionnaire.

#### How it is

Ask yourself, take these descriptions together - to what extent is LHub like this? If you think LHub is very much like the picture created by the descriptions combined together, then you might award it 8, 9 or even 10 points for that piece of the question in the small bracket.

#### How it should be

After this, do the questionnaire a second time asking yourself - if this is how LHub is at the moment, how important is it for us to try to achieve that characteristic? The most important will be awarded 10 points.

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### LEADERSHIP

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#### A Senior Executive Leadership

( )

- 1 Develop organisation's purpose, vision and values focussing on key stakeholders, learning and innovation
  - 2 Communicate purpose, vision and values to employees
  - 3 Communicate purpose, vision and values to customers, suppliers/partners and other external parties
  - 4 Demonstrate and reinforce, as role models, commitment to excellence in day-to-day activities
  - 5 Evaluate and improve personal leadership and involvement
-

## **B Organisational Culture**

( )

- 6 Translate values into desired employee behaviours to support innovation, learning, and organisation's objectives
  - 7 Adopt practices that support values
  - 8 Develop policy and structure to promote values
  - 9 Introduce programmes to promote values
  - 10 Close gaps between current and desired culture
- 

## **C Responsibility to Community & Environment**

( )

- 11 Adopt policy, goals and programmes for organisation's contribution to the community and environment
  - 12 Communicate policy, goals and programmes to employees and involve them
  - 13 Communicate policy, goals and programmes to customers, suppliers/ partners and other external parties and involve them
  - 14 Evaluate and improve the process adopted for contribution to community and environment
- 

*Level of priority for company to achieve these characteristic: \_\_\_\_\_*

---

## **PLANNING**

---

### **A Strategy Development & Deployment**

( )

- 15 Use and analyse internal information to develop strategies
  - 16 Use and analyse external information to develop strategies
  - 17 Involve employees in strategy development
  - 18 Establish short-term strategies and goals
  - 19 Establish long-term strategies and goals
  - 20 Set stretch goals based on benchmarks or customer requirements
  - 21 Develop action plans aligned to strategies and goals
  - 22 Set targets for individual employees linked to strategies and goals
  - 23 Measure performance against plans and review regularly
  - 24 Evaluate and improve the strategic planning process
- 

*Level of priority for company to achieve this characteristic: \_\_\_\_\_*

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## INFORMATION

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### **A Management of Information** ( )

- 25 Select information for planning, day-to-day management and performance improvements
- 26 Collect and capture information related to organisation's directions
- 27 Ensure information is reliable
- 28 Ensure information is easy to access and disseminated quickly to employees, suppliers/partners and customers
- 29 Share information to encourage innovation and learning
- 30 Analyse and use information from various sources for planning and review
- 31 Evaluate and improve the management of information

### **B Comparison & Benchmarking** ( )

- 32 Develop criteria for selecting comparative and benchmarking information to improve performance
- 33 Use comparative and benchmarking information to improve processes, set stretch goals, and/or encourage breakthrough improvements
- 34 Evaluate and improve the process for selection and use of comparative and benchmarking information

*Level of priority for company to achieve this characteristic:* \_\_\_\_\_

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## PEOPLE

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### **A Human Resource Planning** ( )

- 35 Develop human resource plans aligned to corporate objectives
- 36 Involve line managers in implementing plans
- 37 Review human resource plans regularly

### **B Employee Involvement & Commitment** ( )

- 38 Develop strategies to encourage employee involvement and commitment in improvement and innovation
- 39 Develop mechanisms to involve individual employees in improvement and innovation
- 40 Develop mechanisms to encourage teamwork in improvement and innovation
- 41 Review effectiveness of employee involvement mechanisms
- 42 Evaluate and improve overall employee involvement process

---

**C Employee Education, Training & Development** ( )

- 43 Determine education, training and development needs based on organisation's goals and objectives
- 44 Develop plans based on the needs identified
- 45 Deliver programmes based on plans
- 46 Review effectiveness of programmes
- 47 Evaluate and improve the education, training and development process

---

**D Employee Health & Satisfaction** ( )

- 48 Create work environment that enhances employee health and satisfaction
- 49 Develop harmonious employee-management relationship
- 50 Measure and assess employee satisfaction
- 51 Evaluate and improve employee health and satisfaction system

---

**E Employee Performance & Recognition** ( )

- 52 Align performance appraisal to corporate objectives and values
- 53 Introduce variety of rewards and recognition schemes to support corporate objectives
- 54 Recognise and reward employee learning and innovation
- 55 Evaluate and improve performance and recognition systems

*Level of priority for company to achieve this characteristic:* \_\_\_\_\_

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**PROCESSES**

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**A Innovation Processes** ( )

- 56 Generate, gather and screen creative ideas from all sources
- 57 Implement innovative ideas to achieve business outcomes
- 58 Incorporate changing customer/market requirements in the new product/service design and introduction process
- 59 Incorporate new technology and knowledge in the new product/service design and introduction process
- 60 Involve employees from various departments in the new product/service design and introduction process
- 61 Involve customers in the new product/service design and introduction process
- 62 Involve suppliers and/or partners in the new product/service design and introduction process
- 63 Incorporate procedures for design validation in the new product/service design and introduction process

- 
- 64 Design and introduce production and delivery processes for new products services
  - 65 Evaluate and improve the innovation and design processes
- 

**B Process Management & Improvement** ( )

- 66 Identify key business and support processes
  - 67 Measure process performance and set targets
  - 68 Analyse variances in process performance and take actions
  - 69 Improve key processes for higher performance and customer satisfaction
- 

**C Supplier & Partnering Processes** ( )

- 70 Identify and select suppliers and partners who fit into the organisation's overall strategy
  - 71 Communicate requirements to suppliers and partners
  - 72 Assess suppliers and partners to ensure requirements are met
  - 73 Provide performance feedback to suppliers and partners
  - 74 Improve capabilities of suppliers and partners to meet organisation's requirements
- 

*Level of priority for company to achieve this characteristic:* \_\_\_\_\_

---

**CUSTOMERS**

---

**A Customer Requirements** ( )

- 75 Segment markets and customers
  - 76 Determine current and future customer/market requirements for each segment
  - 77 Analyse and incorporate requirements into strategic and improvement plans
  - 78 Evaluate and improve the process for determining customer requirements
- 

**B Customer Relationship** ( )

- 79 Provide customers with easy access to conduct business with the organisation and make complaints
  - 80 Set and deploy customer contact performance measures for employees in the response chain
  - 81 Ensure customer complaints are resolved and analysed for improvements
  - 82 Train and empower employees to delight customers
  - 83 Evaluate and improve the customer relationship management process
-

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**C Customer Satisfaction** ( )

84 Gather and analyse information on customer satisfaction and retention

85 Use the information to develop strategic and improvement plans

86 Evaluate and improve the process of determining customer satisfaction

---

*Level of priority for company to achieve this characteristic:* \_\_\_\_\_

---

Scoring

This instrument provides a measure of urgency or priorities for action by asking you to indicate:

1. to what extent each characteristics is currently being achieved – ‘how it is’;
2. how important you think it is for the organisation to try to achieve that characteristic – ‘how it should be’.

Please add up the total of your scores for these two categories by summing up all the numbers that you have indicated in the questionnaire:

Total for ‘how it is’ = \_\_\_\_\_

Total for ‘how it should be’ = \_\_\_\_\_

Interpreting the scores

From these two totals, a dissatisfaction index is calculated, given by:

Dissatisfaction index

=  $100 \times [(\text{how it should be} - \text{how it is}) / \text{how it should be}]$

= \_\_\_\_\_

If you are totally dissatisfied, this index will be 100. If you are exactly satisfied, that is things are exactly as you would like them to be, it is zero.

