HOW DOES THE QUALITY CULTURE AFFECT THE QUALITY IN THE PROJECT ENVIRONMENT?

By

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DATE: NOVEMBER 2005

DECLARATION

I declare that is my own work, that all the sources used or quoted have been indicated and acknowledged by means of complete reference.

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ABSTRACT

While many organizations are "getting" into quality and announcing themselves to be devotees of TQM, the problem remains that getting into "quality" would seem to be using tools to pinpoint problems or defects in what is assumed to be an otherwise well-ordered and predictable world. These tools, although sophisticated, only deal with symptoms rather than deeper underlying issues. To the question of why workers may resist TQM or why Employees may fail to commit to quality, this view of quality can give only very sketchy responses. Among management gurus, consultants and senior management teams, there would appear to be fairly broad agreement that culture is the key factor underpinning success in terms of developing the necessary commitment to any form of change in an organisation. I will be focusing on the quality culture in the organisation and linking it to a major project that is currently in progress.

The thesis explores the relationship between total quality management (TQM) practices and organizational quality culture with the purpose of identifying the particular cultures that determine the successful implementation of quality practices.

However, the issue surrounding quality cultures have not been comprehensively studied and, as such, a structured approach to culture change remains largely unclear. The study focuses on the nature of problems faced in the attempt to develop a quality culture and the results will form the basis for a structured approach to culture change in the project environment and the organisation as a whole

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CHAPTER 1

1 PROBLEM STATEMENT

1.1 Introduction

The focus of this study is to understand how quality impacts on the Cape Strengthening project in the Transmission business by focusing on the quality culture within the organisation. To understand its impacts we have to understand what quality is, what are the perceptions and misconceptions of quality and how is quality managed in the organisation in relation to its culture.

The thesis originated from that the Transmission organization within TX Finance and Business support department, which provides a quality assurance service to the organization in which projects utilize services and suppliers who are awarded tenders by the Finance and Business department. The quality department is responsible to assessing the quality of suppliers and service providers according to the ISO9001:2000 criteria and Eskom Transmission quality standard.

Eskom Transmission is embarking on implementing ISO9001:2000 system and so too they are doing business with other suppliers and service providers who have a quality management system in place and are striving to be certified with a recognized body.

In most organizations and in government, organizations are pursuing ISO 9000 registration, not only to enhance their long-term ability to compete and be recognized globally but also for the beneficial side effects of pursuing and attaining ISO 9000 certification. Many researchers and

practitioners inevitably point to the culture of an organization as a critical context (not component or element) for the achievement of quality and performance outcomes

(Mallak, Bringelson& Lyth, 1997)

Quality, like beauty is in the eye of the beholder. What is considered by one person to be good quality is considered by another to be poor quality and vice versa. (Stebbing, 1989)

Quality means different things to different people. The challenge is to focus it in such a way that we can measure the impact of quality as a strategic tool in our organisation. Quality

improvements should permeate all the spheres of an organisation as well as society. It does not help to have quality processes without quality people and vice versa. It is neither a concept that works bottom-up nor top-down: if it is not entrenched throughout an organisation, the system will fail. A product, process or service is just as strong as its weakest link. (Quality Edge, 2005)

The word quality was defined as "conformance to specification", until it we realized that the specification sometimes do not exactly and explicitly match a particular customer need and though some might meet it, this failed to meet customer satisfaction. (Lock, 1990)

The primary focus of total quality management (TQM) is customer satisfaction. Continuous improvement and worker empowerment are primary vehicles for achieving customer satisfaction. Effective TQM hinges also on management performance in planning, organizing, influencing and controlling activities in all functional areas (such as marketing, purchasing, design and engineering, production, distribution, finance and accounting, human resources, etc.)(Gunasegaram, 2003)

One of the most commonly used words in business today is "quality". Project management has been beneficial in many areas but has had limited exposure in the field of quality to date. (Leavitt and Nunn). The service business is mostly composed of projects, each project for an individual customer and each project usually led by a project manager, (Darnall, 1994).

In the current times, quality has come under the spotlight in South Africa. This is due to various factors including increased globalisation which opened world markets to South African producers and suppliers. It also mean that foreign suppliers started to competing for local market share and in order to get products into the foreign markets, products had to comply to standards like ISO9000:2000. In South Africa today, products have to be of an acceptable quality while the price have to be competitive in relation to those of foreign suppliers, which came from renowned international brand names.

Many organizations and industries today are in constant yearning for improved production of goods and services due to competition and environmental changes that pose threats, pressures and challenges on them. Consequently, several efforts have been made to curb the negative human factors that militate against goal attainment in the workplace. (Ehigie and Akpan, 1994)

The general decrease in quality standards and increased competition highlighted the need for companies who wanted to survive, to look at ways of ensuring a good name with clients which could lead to follow-on work. The expected economic upswing in the services sector would further find companies who can produce quality work at an immediate advantage over their rivals. (Joubert, 2002)

Due to government objective to encourage the use of Suppliers and contractors who are Black Economic empowerment and Black Woman owned companies due to political correctness and being previously disadvantaged. Although these objectives have to be met, quality should not be compromised as this will have long term effects on the Organisation and the country as a whole.

Quality management is seen a philosophy for improving both customer satisfaction and the way organizations do business with suppliers and contractors in the organisation. As competition increases and changes occur in the business world, we need to have a better understanding of quality. Quality concerns affect the entire organization in every competitive environment (Joubert, 2002). Therefore, top managers and project managers need to understand and apply quality philosophies to achieve high performance levels in products and processes and to face the challenges of new global competition. Consumers demand high quality levels of products/services at reasonable prices to achieve value and customers satisfaction.

There is an increasing focus on quality throughout the world. With increased competition, companies have recognized the importance of quality system implementation in maintaining effectiveness in a volatile business environment. Specifically meeting the needs and desires of the customer is critical, must be done much better, and efficiently than it has been done in the past.

As mentioned above, more and more service related companies are emerging and the need for total quality techniques applied to organisation driven by project management and quality management is increasing. This thesis has arisen from this need. The methods and techniques used in TQM can be applied to any kind of organisation, (Oakland, 1995).

1.2 Purpose of the study

The purpose of this study is to evaluate one major project in Transmission and identify how quality culture has affected the organisation, suppliers and project managers perceives quality management in the Transmission organisation. How does the quality culture affect the quality in the project environment?

This will be accomplished by getting a better understanding of organisation culture in quality, through studying, analyzing and describing the quality cultures within a qualitative methodological approach.

As competition increases and changes occur in the business world, we need to have a better understanding of quality. Quality affects the entire organization in every competitive environment.

There is an increasing focus on quality throughout the world. With increased competition, companies have recognized the importance of quality system. The use of quality tools and techniques provides long-term dividends through lower costs and productivity improvement

In the study I will try to cover both aspects of quality management and project management and combine the two issues. The study is based on theory from books and interviews with Transmission personnel, external customers and suppliers. The study also will investigate Transmission project managers, Top management and quality manager influencing current projects.

1.3 Research Objectives

This research project will aim the following objectives:

- The actual and desired organisation cultures and the change of the organisation Culture towards quality
- Describe the need for project managers to understand quality management.
- Understand the important of leadership-support and commitment in quality services rendered.

- Promote the importance of established quality management philosophies.
- Understand how to determine, and evaluate customer requirements.
- Determine the need for continuous improvement efforts and competitive advantage in the future.

Understand how organisation can successfully achieve business excellence through the implementation of quality practices.

1.4 Significance of the Study

The study focuses on a "real world problem" that is experienced on a day to day by project managers, customers and quality practitioners. I will focus on the Cape strengthening project which is worth R150million rands and analyze how quality has affected the running of the project by exploring the organizational quality culture. I am currently involved in the quality assurance field of the Transmission business and have noticed problems being experienced by managers, quality practitioners, employees, customers and different business units and these problems are perceived to be related to the organisation culture. There seem to be recurrence of these problems due to inconsistent organizational processes and different quality perspectives.

The study will help explore the quality culture in the organisation by investigating the different perceptions managers, quality practitioners and line employees have about how culture affects the quality of the organization. Finally, I will show that managers, quality practitioners, employees, customers and different business units have different views as to how quality affects projects due to the nature of the culture.

It will also make it better to understand the complex environment of quality in project management and also important to identify the required quality culture areas of quality in The Cape strengthening project and recommend preventative actions that can be taken to improve the organizational culture.

Quality practitioners have noted the importance of the culture of an organisation in sustaining any quality effort (Juran and Gryna, 1986). There is also general agreement that there is a gap to be filled in the development of the appropriate culture for quality. Organisational culture forms the glue that holds the organisation together and stimulates

employees to commit to the organisation and to perform.(Berg and Wilderom, 2004)

It is important to plan and monitor progress in reaching the agreed quality of achieved milestones and be able to take corrective actions where necessary. Carruthers, (1999 : 5).

Problem formulation

This can lead to the following questions:
What are the critical factors in quality that affect project management?
What is considered quality culture in a project?
What are the factors that affect quality culture?
How can this degree of quality be measured?
How can quality culture be improved?

1.5 Definitions of Terms

Through literature, reviews that had been conducted for this research study many key definitions or terms will be highlighted and identified in relation to the topic of discussion. The relevant key words or terms will only be focused on trying to explain the concepts of quality and project management.

The following terms have been noted

Quality in projects can be defined as the ability to meet the requirements set for the deliverables that have been identified and mutually agreed upon by the customer and the contractor. Such deliverables will satisfy the needs of the customer and the stakeholders. Carruthers (1999 :3)

When Iso 9000:2000 talks about quality, it means that your product should be fit for its intended purpose. Quality means meeting customer's needs. For ISO 9000, quality does not

mean "excellence". Sadgrove (1994 :2)

"We define and focused on quality as meeting specifications, fitness for the use or conformance to requirements. If we translate these concepts into project management terms, a quality project is a project that meets the standards established in the scope of works." Darnell (1996: 14)

Total Quality Management: is a structured system for satisfying internal and external customers and suppliers by integrating the business environment, continuous improvement, and breakthroughs with development, improvement, and maintenance cycles while changing organizational culture ("TQM", 2000).

Quality, as applied to the products turned out by industry, means the characteristic or group or combination of characteristics, which distinguishes one article from another, or the good of one manufacturer from those of his competitors, or one grade for product from a certain factory from another grade turned out by the same factory (Kolarik, 1995).
Quality is the totality of features and characteristics of a product or service that bear on its ability to satisfy stated or implied need (Kolarik, 1995).

Quality control is the operational techniques and the activities which sustain a quality of product or service that will satisfy given needs; also the use of such techniques and activities (Kolarik, 1995).

Quality assurance quality assurance is defined as a set of activities whose purpose is to demonstrate that an entity meets all quality requirements. Q.A. activities are carried out in order to inspire the confidence of both customers and managers, confidence that all quality requirements are being met (Kolarik, 1995).
A customer is anyone who receives or is affected by the product or process.
(Kolarik,1995).
ISO 9000
Series of quality standards where effectively applied and demonstrated itself as a foundation for quality management program. These standards apply to generic product categories such

as hardware, software, processed material, and service, but are not related to any product's technical specifications (Peach, 1997).

1.6 Delimitation and Limitation of the Study

Considering the time given for the research the study will be limited to review of one major project in Transmission. The following will be conducted on the project,

one to three customers and Five project managers will be interviewed.

Questionnaires will be sent out to approximately thirty five people.

Two or more of these interviews will be done telephonically.

Some correspondence will also be done through emails due to availability of project managers and top management

The project has been chosen in consideration of criteria such as how recently they were completed and how complex they were.

The quality will be assessed from project initiation to project handover to the customer. This being Transmission business units.

CHAPTER 2

2 LITERATURE REVIEW

2.1 Introduction

The main purpose with this chapter is to discuss total quality in projects. The text will discuss the planning, organisation and evaluation of a project. Also, systems, techniques, procedures, methods and tools typical for TQM will be taken up and the usefulness of these things when it comes to project management will be discussed. The chapter investigates the possibilities of integrating TQM and project management and the developing of quality programs for companies, driven by project management.

2.2 History of Quality

The introduction of total quality management concepts can be traced to the first management consultant, an engineer named Frederick W. Taylor. His application of science to complex human endeavors was further developed by Walter A. Shewhart, a statistician who developed work sampling and control charts, which attracted the interest of another statistician, Edwards Deming. Joseph M. Juran, an investigator at the Hawthorne Works experiments, also, drew from Shewhart's work and recognized that system problems could be addressed through three fundamental managerial processes -planning, control and improvement. Philip B. Crosby advocated the "zero-defects" program adopted by the US federal government defining quality as "conformance to requirements". Work regarding the quality discipline is continuing, and adoption of these concepts by service industries is resulting in broaden application and interpretation of quality principles based on Philip Kotler's. Marketing approach and strong customer focus. Deming, Juran, and Crosby, initiated the TQM principles and, share a common theme of participatory management. Management participation and attitude, professional quality management, employee participation, and recognition reflect a philosophy making internal and external customer satisfaction as the organization's primary goal ("History of Quality", 2001).

In 1960, the first quality control circles were formed for the purpose of quality improvement

within work groups. Simple statistical techniques were learned and applied by Japanese workers.

By the late 1970s and early 1980s. U.S. managers were making frequent trips to Japan to learn about the Japanese miracle of quality. Such trip could have been avoided of us industries would have continued the usage of these principles after wwII, during which time TQM activities were effectively used in many manufacture. Nevertheless, a quality renaissance began to occur in U.S. products and services, and by the middle of 1980's the concepts of TOM were being publicized.

In the late 1980s the automotive industry began to emphasize statistical process control (SPC). Suppliers and their suppliers were required to use these techniques. Other industries and the Department of Defense also implemented SPC. The Malcolm Baldrige National Quality Award was established and became the means to measure TQM. Genechi Taguchi introduced his concepts of parameter and tolerance design and brought about a resurgence of design of experiments (DOE) as a valuable quality improvement tool.

Emphasis on quality continued in the auto industry in the 1990s when the Saturn automobile ranked third in customer satisfaction behind the two most expensive Japanese automobiles. The ISO 9000 quality standard was developed and quickly became the worldwide model for a quality system. The automotive industry adopted ISO 9000 to place greater emphasis on customer satisfaction and also added elements on production and Aufmented it to planning and organizing so 14000 was approved as the worldwide model for environmental management systems (Besterfild, 1997).

2.3 What is Quality?

"Quality has to be defined as conformance to requirements". (Crosby, 1995:p60)
The above definition does not adequately define quality as quality means different things to different people, depending on their own perspectives. In a project, quality usually implies the supplying of facilities and services on time and within budget. These facilities and services must conform to the project scope and technical specifications. It must be fit for their intended purpose and comply to the National Engineering contracts as agreed upon.

Satisfied and happy customers base these positive feelings not only on the results of deliverables, whether products or services, but also on their perception of excellence and customer care.

Customers can only be satisfied when their needs have been fully met in terms of acceptable deliverables that are timorously available at an acceptable price and in acceptable quantities. (Carruthers, 1999:p12)

The customer and stakeholders needs and deliverables are not always obvious and this can have a negative effect on the quality and this is therefore why the process of converting customer and stakeholder perceptions into realizable reality. This can be a very difficult task and most suppliers and service providers fail. Only when such needs have been fully understood and accepted by all parties concerned can suitable deliverables be negotiated.

The agreed deliverables still have to be quantified in terms of the requirements which is the specifications and standards that make the output product or service possible.

It is a fact that there is no single definition of quality that will apply to all companies in all industries. Each company must define their own meaning of quality if they are to meet the challenges of modern business which almost always require a recognition and improvement of the quality of the company's product or service. (Hradesky, 1995, p.630)

As a concept, quality has been with us for millennia. Only recently has it emerged as a formal management function. Quality remains a term that is easily misunderstood. (Garvin, 1988:p39)

In this early stage, we can see that quality means different things to different people. For the producer quality is "conformance to specifications", but for the customer quality is "fitness for use".

Different companies also give a different meaning to quality when they used it, so do different groups or department within the same organisation. We must however manage this continued ambiguity and confusion which is inevitable in companies and organisation.

Today most companies admit that quality is not accurately definable as the client defines it. According to ISO 9000, quality is "the totality of features and characteristics of a product or service that bears on its ability to satisfy stated or implied needs." Today quality is

considered to be more of a process than a product. It is a process where lessons learned are used to change future products to better satisfy the clients needs and expectations.

Finally we can therefore say that quality can be seen as satisfying the customer and stakeholders needs by means of mutually agreed deliverables that meet all the agreed requirements and specification every time, on time and in an affordable manner. (Carruthers, 1999:p13)

It can be stated that there are two types of quality i.e. quality in fact and quality in perception. Quality in fact is achieved when the producer of the product achieves conformance to specifications. Phil Crosby (1979, p.7) said that quality is "conformance to requirements." The source of the requirements is however, unclear. The requirements could be those of either the client or the manufacturer.

According to Jackson total quality is a broader concept in that it includes consideration of business processes for providing complete customer satisfaction on the full range of product and service needs. As global competition intensifies, companies are concluding that excellent product quality is no longer sufficient. Rather, there is a need to incorporate the much wider definitions of customer satisfaction and loyalty embraced by TQM.

2.4 Quality Management Philosophies

2.4.1 Introduction

More managers than ever before are focusing on quality as a way of increasing productivity, reducing costs, and meeting customer needs. These managers are beginning to understand the importance of continuously improving the quality of their services and products as a means of achieving these goals. Those who begin to learn about quality quickly become familiar with the names of Philip B. Crosby, W.Edwards Deming, and Joseph M. Juran--renowned quality experts that have been carrying the message of quality for more than 30 years.

At an age when most people have retired, Philip B. Crosby and Joseph M. Juran continue an untiring pace of work conducting seminars, consulting with clients, and writing new texts. They have devoted their lives to helping organizations improve the quality of their products and services. Their influence is now worldwide and their accomplishments are legendary in the discipline.

2.4.2 The Deming Philosophy

W. Edwards Deming was originally trained as a statistician, and much of his philosophy can be traced to these roots. He worked for Western Electric during its pioneering era of statistical quality control development in the 1920s and 1930s. During World War II, he taught quality control courses as part of the national defense effort. Deming began teaching statistical quality control in Japan shortly after Word War II and is credited with having been an important contributor to the Japanese quality improvement programs. In fact, the highest award for quality improvement in Japan is called the Deming Prize. While Japan embraced his methods for 30 years, he was virtually unknown in the United States until 1980.

Deming focuses on the improvement of product and service conformance to specifications by reducing uncertainty and variability in the design and manufacturing process. In Deming's view, variation is the chief culprit of poor quality. In mechanical assemblies, for example,

variations from specifications for part dimensions lead to inconsistent performance and premature wear and failure. Likewise, inconsistencies in service frustrate customers and hurt the reputation of the company.

To achieve reduction of variation, refines a never-ending cycle of product design, manufacture, test, and sales, followed by market surveys, then redesign, and so forth. Deming claims that higher quality leads to higher productivity, which in turn leads to long-term competitive advantage. The Deming "chain reaction" theory summarizes this view; the theory states that process improvements lead to lower costs due to less rework, fewer mistakes, delays and snags, and more efficient use of materials. Lower costs, in turn, lead to productivity improvements. With better quality and lower prices, the firm can achieve a greater or larger market share and remain competitive and provide more meaningful and rewarding jobs. Upper management needs to recognize the benefits of quality as a strategic factor and strive to create a culture that supports empowerment, continuous improvement and customer satisfactions. Deming stresses that top management has the overriding responsibility for quality improvement (Evans & Lindsay, 1993).

2.4.2.1 Deming's 14 Points for Management

1. Create and publish to all employees a statement of the aims and purposes of the company or other organization. Management must demonstrate constantly their commitment to this statement

2. Learn the new philosophy throughout all areas everybody.

3. Understand the purpose of inspection. it should evaluate process improvements and cost reductions.

4. End the practice of awarding business on the basis of price alone

5. Improve constantly and forever the system of production and service

6. Institute training

7. Teach and institute leadership

8. Drive out fear. Create trust. Create a climate for innovation

9. Optimize all efforts toward the aims and purposes of the company.

10. Eliminate exhortations for the work force

11. (a)Eliminate numerical quotas for production Instead learn and institute methods for improvement

(b) Eliminate management by objectives (MBO). Instead, learn the capabilities of processes, and how to improve them.

12. Remove barriers that rob people of pride of workmanship.

13. Encourage education and self-improvement for everyone.

14. Take action to accomplish the transformation

(Beckford, 2000)

2.4.3 Juran's Quality Trilogy

Dr. J. M. Juran, whose impact on the quality movement in Japan, was second only to Deming's, developed a useful framework to what referred to as "a universal thought process- a universal way of thinking about quality, which fits all functions all levels, all product lines." He called it the "quality trilogy":
The underlying concept of the quality trilogy is that managing for quality consists of three basic quality oriented processes:

- Quality planning
- Quality control
- Quality improvement

The starting point is quality planning which involves creating a process that will be able to established goals. Once the process is turned over to the operating forces.thier responsibility is to run the process at optimal effectiveness and take corrective action when the process or

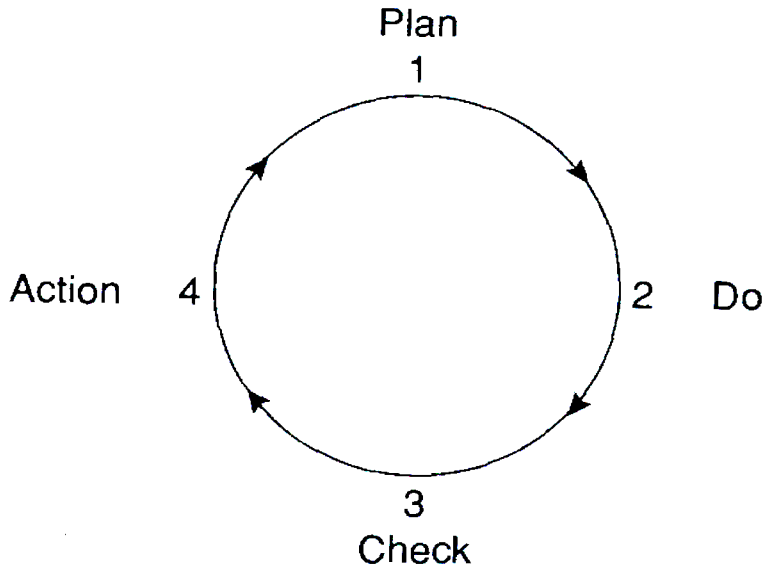
product does not conform to established specifications.

Finally, quality improvement is "the process for breaking through to unprecedented levels of performance. "But quality improvement does not happen of its own accord. It results from purposeful action taken by upper management to introduce a new managerial approach throughout the organization of quality improvement process. This quality improvement process is super-imposed on the quality control process. It is implemented in addition to quality control, not instead of it. Juran's approach is essentially the same as Deming's. Quality is a management responsibility that needs to be performed systematically to achieve continuous improvement over time.

This is the same basic idea behind the so-called PDCA cycle, known in Japan as the Deming wheel, which is considered to be the essence of the Japanese approach to total quality control:

Plan: The basic planning process described by Juran.
Do: The implementation of the plan.
Check: Evaluation of performance according to critical measures appropriate methods
Act: Quality improvement efforts based on the lessons learned from experiences.
(Beckford, 2000)

Figure 1: W. Edwards Deming's Plan, Do, Check, Action cycle



2.4.4 John S Oakland philosophy

John Oakland is considered by many to be the British guru of quality. He was previously Professor of Total Quality Management and head of the European Centre for Total Quality Management at the University of Bradford Management Centre in the United Kingdom. The approaches used by Oakland and his colleagues in his consulting firm are pragmatic and have been used by many organisation.

"We cannot avoid seeing how quality has developed into the most competitive weapon, and many organisation have realised that TQM is the way for managing for the future"

From this statement he give pre eminence to the pursuit of quality as the cornerstone of organisational success. Oakland also stresses about the importance of the quality chain and emphasizes on inter-departmental relationships which he perceives to be were most problems arises.

Oaklands ten points for senior management

1. Long term commitment
2. Change the culture to "right first time"
3. Train the people to understand the customer-supplier relationship

4. Buy products and services on the basis of total cost

5. Recognise that systems improvement must be managed

6. Adopt modern methods of supervision and training and eliminate fear

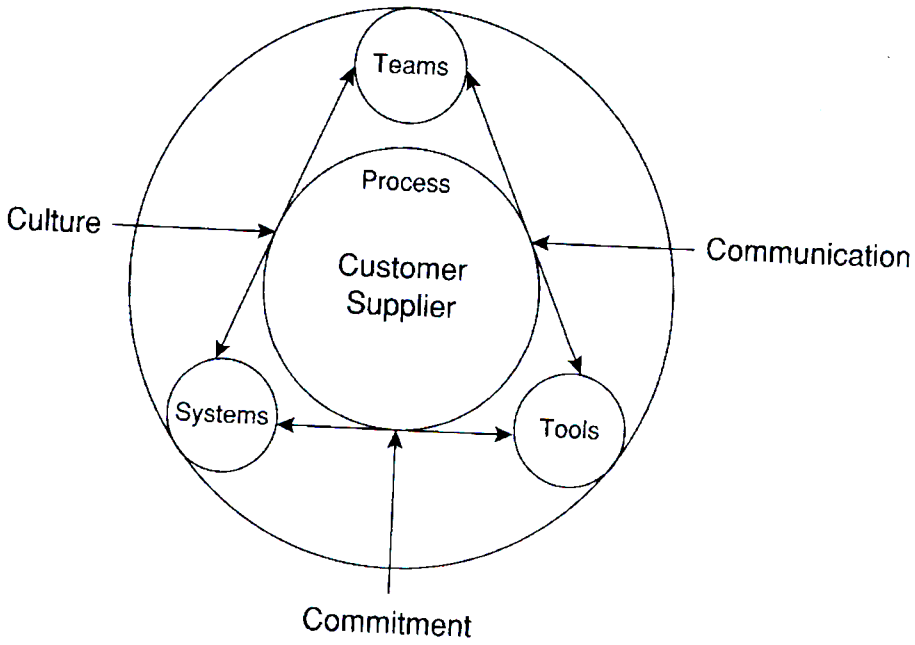
7. Eliminate barriers, manage processes, improve communication and teamwork

8. Eliminate arbitrary goals, standards based only on numbers, barriers to pride of workmanship, fiction

9. Constantly educate and retrain the in-house experts

10. Utilise a systematic approach to TQM implementation

Figure 2: John S. Oakland's Total Quality management model, p120



2.5 The Crosby philosophy

Philip B. Crosby was corporate vice president for quality at International Telephone and Telegraph (ITT) for 14 years after working his way up from line inspector. After that he established Philip Crosby Associates in 1979 to develop and offer training programs related to quality. He is also the author of several popular books. His first book, Quality is Free published in 1979, sold about one million copies.

The essence of Crosby's quality philosophy is embodied in what he calls the "Absolutes of' Quality Management and the Basic Elements of Improvement." Crosby's Absolutes of Quality Management areas follow:

Quality means conformance to requirement, not elegance

- There is no such thing as a quality problem only opportunities to improve .
- There is no such thing as the economics of quality; it always cheaper to do the job right the first time.
- The only performance measurement is the cost of quality approach.
- The only performance standard is "Zero Defect"

Crosby's "Basic Elements of Improvement" include determination, education, and implementation. By determination, Crosby means that top management must be serious about quality improvement. The "Absolutes" should be understood by everyone; this can be accomplished only through education. Finally, every member of the management team must understand the implementation process. (Evans & Lindsay, 1993).

Crosby's 14-point program

1. Management commitment .Top management must become convinced of the need for quality improvement, and must make its commitment clear to the entire company.
2. Quality Improvement Team. Management must form a team of department heads to oversee quality improvement.

3. Quality Measurement. Quality measurement appropriate to every activity must be established to identify areas needing improvement.

4. Cost of Quality Evaluation. The controller's office should make an estimate of the cost of quality to identify areas where quality improvement would be profitable.

5. Quality Awareness. Quality awareness must be raised among employees. They must understand the important of product conformance and the cost of nonconformance.

6. Corrective Action. Opportunities for correction are generated by steps 3 and 4,as well as discussions among employee.

7. Zero Defects planning. An ad hoc zero defects committee should be formed from member of the quality improvement team.

8. Supervisor Training. Early in the process. All levels of management must be trained to implement their part of the quality improvement program.

9. Zero Defects Day. A zero Defect day should be scheduled to signal to employees that the company has a new performance standard.

10. Goal Setting. To turn commitment into action. Individuals must establish improvement goals for them selves and their group.

11. Encourage obstacle reporting. Employees inform management of factors which prevent them form achieving error free work e.g. Poor quality components, defective and inadequate equipment etc.

12. Error Cause Removal. Employees should be encouraged to inform management of any problems that prevent them from performing error-free work.

13. Recognition. Public, non financial appreciation must be given to their quality goals or perform outstandingly.

14. Do All again. To emphasize the never-ending process of quality improvement.

(Beckford, 1998)

The key to successful implementation of quality principles and methods is tied directly to leadership. In fact, lack of management and leadership commitment is considered by Crosby to be the number one cause of quality system failure. According to Juran, every successful quality revolution has included the active participation of upper management- there are no exceptions and Deming agrees. He says the transformation is top management job and it cannot be delegated.

Quality is not a quick fix to address management problems. It is not a program, but a transformation. As part of this effort, top managers must recognize the need for assessment, strategic planning, and the development of a long-term, integrated organizational-wide approach. Leadership is needed to establish policies defining the positions the organization will take in regard to quality. Leadership is also necessary to cultivate a customer orientation and provide all employees with ongoing education and training. These arguments notwithstanding, success or failure will rest upon the correct assessment of how to achieve customer-defined quality criteria and the kind of leadership required to get the organization mobilized in the most cost-acceptable way. (Costin, 1994).

Table 1: List of the critical elements of TQM found in the literature

Customer focus	Product/service defects, errors, failures Product/service order processing time order accuracy Customer complaints Timeliness and accuracy of delivery Supplier relationships
Process improvement	Number of product/service defects, errors, or break downs (internal and external failures) Product lead time Cost of quality Process improvement teams and quality meetings
Total involvement	Employee participation quality teams Employee satisfaction Voluntary separations (employee turnover) Formality of communication between departments-information sharing Team/quality-based measures
Continuous improvement	Management leadership and commitment Fact-based decision making Obtaining return on investments Profitability Market share and competitive position in the industry Sales per employee Customer satisfaction Open corporate culture

2.6 Managing Projects in today era

Managing projects requires unique skills and techniques. These skills are different from those needed to manage ongoing operations. As project management moves into the 21st century, project managers face the challenges of operating in a project environment characterised by high levels of uncertainty, cross-cultural teams and global competition. These challenges can be met by developing a clear understanding of human factors in project management.

We sometimes forget that despite the recent information and technology revolution in project management, people are at the center of projects. People determine the success or failure of a project. They help define the goals and objectives , they also plan, organize, direct, coordinate and monitor project activities.(Verma:2000)

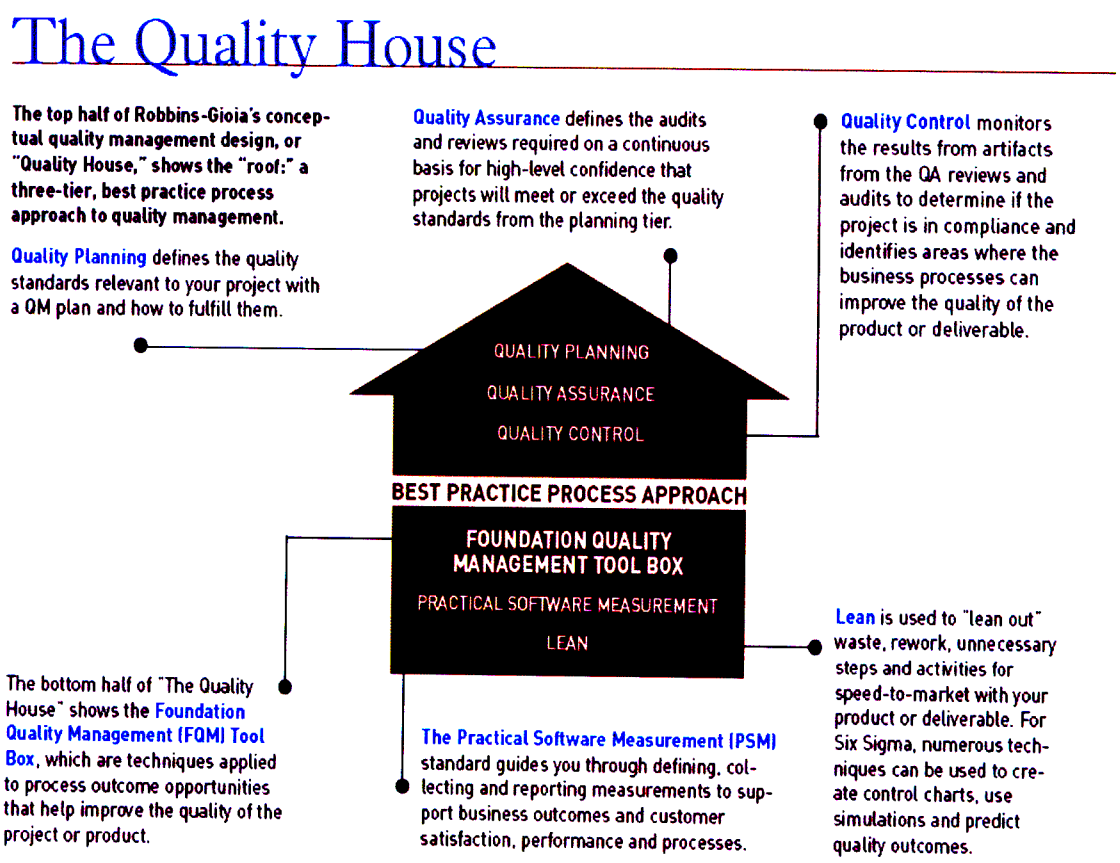
They meet the project goals and objectives by using interpersonal and organizational skills such as communication, delegation, decision making and negotiation.

By definition, incidents will never be eliminated. Rather than assigning blame, a **quality culture** fosters the belief that even undesirable events can be used to advance risk reduction. Focusing on problem solving rather than finger pointing encourages people to call on particular hand-on knowledge of hazards of near accidents to identify risks. The result is continuous improvement of risks management and safety. (Strecker,

Quality responsibilities can be confusing, especially at the interface points between different phases and processes. Project managers can enforce quality by controlling and integrating the interactions between various phases of the project life cycle. "Project management helps transform quality management procedures into a common understanding among departments and instills a quality-oriented mindset that drives project completion," Mr. Cazacu says.

"Project management plays an important role in applying quality management process, but my expectations of it go far beyond this aspect. For example, the next step will be to use project management processes to collect feedback about how effective the quality management system is in each business process and what we can do specifically to improve them." Because quality is defined by the customer and project success is measured against customer expectations, then both the quality management system and the project management process must work together to contribute to overall business success—each of them by different, but complementary means (Pappas, 2005)

Figure 3: The Quality House



3 CULTURE

3.1 The concept of culture

"*Organizational culture is the way we do things around here.*"
Burke & Litwin, 1995
There exist more than a hundred definitions of culture (Kroeber & Kluckhohn, 1952)
"Culture has a powerful influence throughout an organization; if affects practically everything from who gets promoted and what decisions are made, to how employees dress and what sports they play. Because of this impact, we think that culture also has a major effect on the success of the business." (Deal, 1982, p. 4)

Another definition stated by Batten as being the concentration of all people and resources in a never-ending quest for greater quality and service in every dimension of the organization. Culture is the collective values, assumptions, beliefs and paradigms that create the expected and accepted behaviors of the organization.

R.P. Mohanty ,O.P. Yadav(1996) suggested that a distinguishing characteristic of a highly successful organization is a very strong and well developed culture. Work culture has been defined as the combination of attitudes, relationships, developed capabilities, habits and other behavioural patterns that characterize the dynamics of an organization. He has described the work culture as the resultant effect of information or organizational and organizmic factors which are reflected in established roles, norms and values pertaining to work. Such attempts at definition indicate that culture develops through the mutual interactions of different people playing different roles in a collective system which calls for mutual co-operative behaviour.

The culture of an organization is strongly linked to its management style and processes. Management patterns set the "tone" of an organization, establish the rhythm for operation,

influence the process of decision making, create action impulses etc. The culture created through the influences of these management patterns influences the ways in which managers and employees play their roles in approaching problems, serving customers, reacting to the environment and carrying out their various activities to satisfy themselves and other stakeholders. The culture sets the norms for the whole organization and provides a sense of direction which governs how to behave, what to do, where to place organizational priorities, etc. Culture shapes the willingness of people to exert high levels of effort in creating a vision of the future directed towards the attainment of organizational goals, and is conditioned by people's ability, behaviour and values.

In order to assure success, the basic principles of quality management must permeate the entire organization. Cooperation, teamwork, and partnering are examples that foster synergy among associates from various functions. Factual approach to decision making, respect for all individuals, encouragement for innovation, and emphasis on improvement not focus on blame for errors, are signs of a learning organization. (Laszlo G.P, 1998)

Changing a culture is not a matter of teaching people a bunch of new techniques, or replacing their behavior patterns with new ones. It is a matter of exchanging values and providing roles models. This is done by changing attitudes. (Crosby, 1995. pp98)

We must constantly, responsively, and incessantly challenge current paradigms in order to achieve a total quality culture. The organization of flee nineties will be value-centered and value-led. "Driven" organizations belong to yesterday. (McCormack, 1992)

Quality is not a new or recent development. Although much of the business literature on the subject of quality is fairly recent, in that it was written in the later half of the twentieth century, quality has been an integral component of cultures throughout the world for several millllennia. One only has to consider the architectural genius in the magnificent Egyptian pyramid at Giza to appreciate the importance of quality to many cultures.

In fact quality has become an increasingly predominant feature of our lives. Nowadays

people are constantly involved in the search for quality products, quality services and even abstract notions such as quality time with which to share with their partners and families. The existence of this desire for quality has caused industries and organisations throughout the world to attttempt to develop a philosophy which can deliver customers the quality they require. Total quality management (TQM) is one such philosophy which aims to provide organisations with a template for success through customer satisfaction. (Walsh, Hughes and Maddox, 2002)

Batten states that Total Quality Culture goes beyond Total Quality Management in that it encompasses the philosophy, central values, and practices of an organization and the micro-elements that make things happen within that organization.

Awareness of the need to build a Total Quality Culture is growing at an exponential rate. To do so, the following values and principles must be observed:

- Every facet of the organization must exist to provide value-added services.
- "Weaknesses" must be recognized as insufficiently developed strengths.
- All people should have a clearly defined purpose, direction and expectations.
- All people should seek growth through open- and tough-mindedness.
- Everyone in the organization should, above all, expect the best from every dimension of life. A quality inner-life leads to a rich and abundant total life.

(Batten, 1994)

Batten (1994) states that a tough-minded leader expects total integrity and ensures that all compensation is related to positive performance. All decisions must he guided by these two components. It's people, not the statistical analyses that have become endemic to TQM, that have the power to transform vision into reality. A Total Quality Culture optimizes the leadership

abilities of all members of the organization.

Organizational culture may be influenced by such dimensions as national background, ideology (which means a systematic set of beliefs and values), personality of the members and TQM principles (see Figure).(KANJI and YUI, 1997)

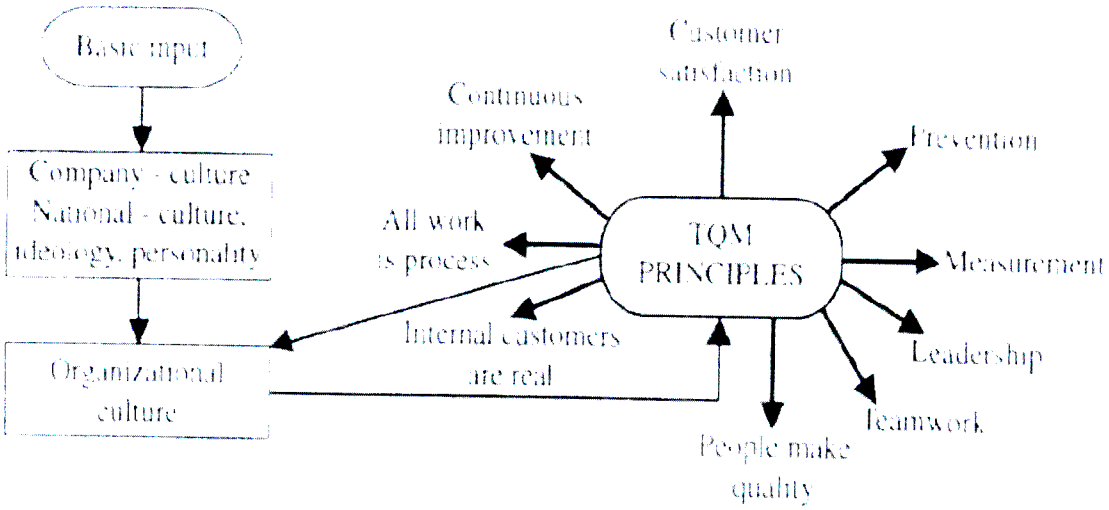


Figure 4: Creating quality culture. (KANJI and YUI, 1997, pp426)

Total quality management as a concept is a question of determining, developing and controlling a company's quality. For this purpose, a number of tools and procedures have been developed, ranging from statistical techniques to for example quality circles, and they are all described in literature. (Hilderbrandt, Kristensen, Kanji Dahlgaard, 1991)

What is special about emphasizing the quality culture concept in this connection is an assumption that a considerable part of literature so far on control and management of quality is too superficial. By superficial is meant that a number of formal and real aspects of quality are treated, but the more deep-rooted causal and explanatory factors remain hidden and subconscious. (Hilderbrandt et al, 1991)

With a view to defining more precisely some of the cultural elements that are relevant in this connection, it has been found expedient to use Johnson & Scholes' model of influence. See figure 4 below

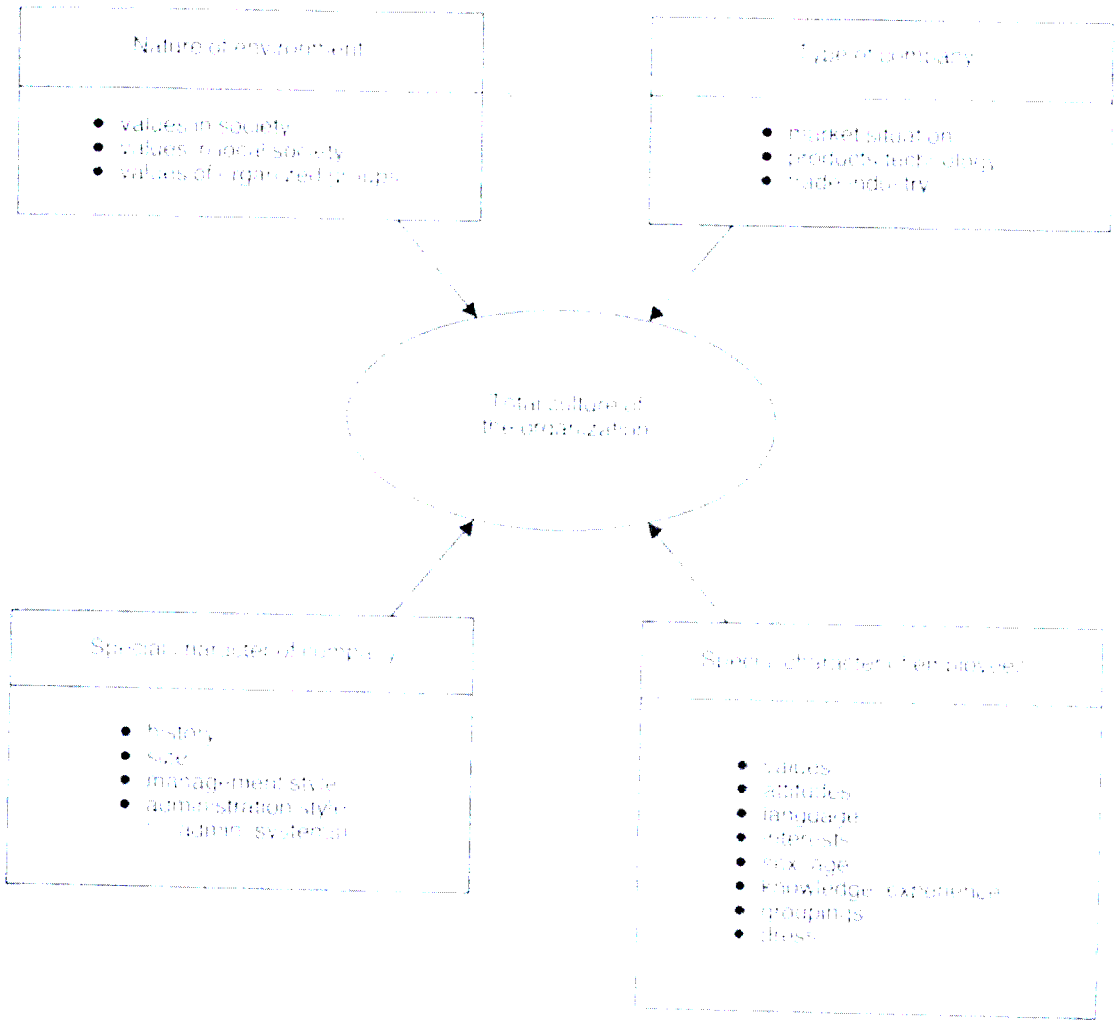


Figure 5: The main types of factors of influence determining the total culture of the organisation. (Steen Hilderbrandt, Kai Kristensen, Gopal Kanji & Jens Jorn Dahlgaard, 1991, pp7)

Hussey (1996:246) writes that on many occasions strategic change requires a change in company culture, in which case, a training initiative may be one of the most powerful tools that can be used. Klopper states that changing culture, like changing emotions, is not an easy subject to deal with, and therefore it is important that the organisation and the people

in it, must be willing and able to make the change. It can for this reason be argued that failure to build an appropriate culture is not caused by a stubborn refusal to change by an antiquated workforce, but rather by a lack of clear vision and guidance in how to change.

Organisational change and culture are therefore closely related. Without the necessary support from an adaptive culture, organisational change will be very difficult to accomplish. A number of different views on the relationship between culture and change exist. In the article he writes that in adaptive cultures, which are characteristic of organisations that can transform themselves successfully. Members share a feeling of confidence that the organisation can deal with whatever threats and opportunities come down the pike; they are receptive to risk-taking, experimentation, innovation, and changing strategies and practices whenever necessary to satisfy the legitimate interests of stakeholders – customers, employees, shareowners, suppliers, and the communities where the company operates. (Klopper, 2001)

3.2 Organizational theory

The theory of organizations is often described through different types of organizational models. These models may be mutually different, but have certain characteristics which are based on a stable structure. The traditional model of an organization is therefore most often a model emphasizing characteristics of: hierarchy, division of labour and communication.
It is a well-known fact that the organizational structure is traditionally described in an organization chart, and is important for the understanding of an organization, but has a limited perspective.
Therefore, it is traditional to supplement the description of the formal organization with a description of the informal organization. By informal organization we mean the many by management non-planned and maybe unknown, but often stable patterns of behaviour which fill and characterize major parts of the daily routines. The informal organization is described in different ways, e.g. `the human group', where the informal aspect is described as norms and roles in the socio-cultural system and the concept 'work group', describing a shadow organization established by the workers in defence of management's `infringements'.

In recent years, another important source of understanding of an organization has been demonstrated through different forms of environmental relationships. It provides a model, which includes the importance of the environment to organizational structure and behaviour emphasizing some important variables in the environmental relations, e.g. market, technology, politics, financing and manpower. (Hilderbrandt et al, 1991)
Understanding both the formal, the informal and the environmental-related framework of description is important in order to understand total quality management and quality culture.

3.3 Organizational culture: background

The culture of an organization is often a difficult characteristic to define since many aspects of culture are intangible and cannot be seen. Despite this difficulty, most authors seem to agree that organizational culture is central to the functioning of an organization. Hofstede also acknowledge agreement among researchers that organizational culture is holistic, soft, and difficult to change, has a historical basis, and is socially constructed.

The following definition offers one perspective on the topic: Organizational culture tends to be unique to a particular organization, composed of an objective and subjective dimension, and concerned with tradition and the nature of shared beliefs and expectations about organizational life. It is a powerful determinant of individual and group behavior. Organizational culture affects practically all aspects of organizational life from the way in which people interact with each other, perform their work and dress, to the types of decisions made in a firm, its organizational policies and procedures, and strategy considerations. Gordon (1991) suggests that: culture formation is neither a random event nor an action dependent solely on the personalities of founders or current leaders, but it is, to a significant degree, an internal reaction to external imperatives. Simply stated, Gordon (1991) observes that an organization's culture is a product of successfully adapting to the environment and will, as a result, resist change. He further notes that a change in the environment might necessitate a change in the culture, going so far as arguing that these changes, which include new learning, can also involve the need for new people. (Schraeder, Tears and Jordan, 2005)

Organisational culture forms the glue that holds the organisation together and stimulates employees to commit to the organisation and to perform. Literature on how to operationalise this "glue" is fairly rare. In order to stimulate empirical, comparative research on organisational cultures, we provide our own operational definition of the construct of organizational culture.(van den Berg and Wilderom, 2004.)

Organizational culture is defined as the general pattern of mindsets, beliefs and values that members of the organization share in common, and which shape the behaviours, practices and other artefacts of the organization which are easily observable. Culture therefore is an explanatory variable that distinguishes one organization from another. In relation to the context of this study, as mentioned earlier, there is a shift of focus on studies in TQM from its "hard" aspects which are more observable, such as tools, techniques, and systems, to "softer" behavioural and cultural aspects of TQM which are harder to measure and to change. This shift of emphasis has been driven by the fact that many TQM implementations have failed, preventing companies from realizing its potential benefits because of the ignorance of the cultural factors (Prajogo and McDermott C, 2005)

An awareness of the organization's culture also provides guidance allowing employees to be more supportive of the organization's mission (Schulz, 2001). Schulz further contends that organizations with strong cultures, where employees share common values, enjoy distinct performance advantages over those firms that have weak cultures.

Schein (1988) argues that the concept of culture ought to be reserved for the deeper lying level of basic assumptions and convictions that are common to members of an organization. These assumptions and convictions are acquired responses to a group's problems of surviving in their external environment and its problems of internal integration. According to Schein, a distinction should be made between these deeper-lying assumptions and the systems and values which are the form of manifestation of culture in day-to-day life, but are not the epitome of culture.

Historically, researchers have written about organizational culture as if organizations were comprised of one overarching or supra ordinate culture. In actuality, organizations are likely

to exhibit multiple cultures with different norms and values existing concurrently at different levels and across organizational boundaries. That is in addition to the norms and values that comprise an overarching or supra ordinate culture, organizations are also likely to exhibit lower-level or subordinate cultures corresponding, for example, to different functional business units or product lines.(Stahl, 1999)

Another method suggested for studying culture is to study subcultures. While much of the literature on studying culture simplifies the process by considering the culture of an organization, some authors acknowledge that large organizations often have many cultures, which form over time as a result of segmentation, importation, technological innovation, ideological differentiations and career filters. (Lewis D, 1996)

An organization's outcomes concerning quality and performance are the result of many complex technical, political, social and behavioural processes operating inside and outside the organization. Many researchers and practitioners inevitably point to the culture of an organization as a critical context (not component or element) for the achievement of quality and performance outcomes. An organization's culture provides the basis for forming and modifying attitudes, values, behaviours, and rituals deemed important to the power structure of the organization.

Culture, too, is used loosely in many management contexts. cites the use of organizational culture as the manager's "excuse for everything", albeit slightly tongue in cheek. Often, culture is seen as a ubiquitous reason for the failings of quality efforts, behaviour change, customer focus, employee attitudes, reward systems and so on. These claims are partially true. However, culture must be operationalized into a concept that can be measured and compared within and across organizations. The operationalization of culture depends on the definition and conceptualization of culture.

People are an essential element of a quality management system. An important component of introducing TQM in an organisation is training, development, and empowerment of personnel, as well as ensuring that quality is not only what employees strive for to make money for shareholders (value creation), but that it becomes a personal goal to them.

The need to understand what culture is and the effects it can have on the individual, team and organisation was implicit in many of our observations. We felt that understanding the meaning of culture and how to develop a team culture, attuned to high performance, was more important than focusing on national cultural differences.

Organizational leaders, managers, and academic researchers are demonstrating an increased interest in understanding the concept of organizational culture while specific reasons for this increased interest vary; it is likely that the primary reason for the growing interest resides in the recognition that organizational culture is an important factor in organizational effectiveness.
Consequently, "Given that corporate culture is crucial to organizational effectiveness, it follows that a key task of managers is to understand, monitor, and actively manage the culture of their organization"). Understanding an organization's culture can also provide insight into the history of the organization, as well as key events that may have helped shape the identity of the organization. Indeed, increased knowledge about organizational culture can provide leaders, managers, and researchers with special insight regarding fundamental characteristics of an organization (Schein, 1985), that will, in turn, help in managing or changing the culture. Further, it is important to note that managing an organization's culture can be one of the most daunting tasks faced by leaders while monitoring an organization's culture to ensure that it remains aligned with the external environment is essential to the perpetuity of that organization (Valle, 1999).

3.4 The quality audit

The quality audit or climate survey consists of two major parts. One part measures attitudes relating to work, life, and conditions such as satisfaction with pay,
benefits, communication and appraisal. The other part assesses the company culture. A company, through its day-to-day actions and policies, sends signals that define what it thinks is important and proper. Employees then behave according to their interpretation of these signals. An assessment of the company culture will help to determine changes in

company programmes, policies and management behaviour that are necessary to support a TQM process.

Two basic methods used to conduct the audit are the circulation of a questionnaire, which may be used extensively across the organization, and personal interviews. The criteria which should be used by the auditors, against which to evaluate their observations and interview responses, may be stated as the qualities of "the excellent organization" (Fox, 1991).

The aspirations of top management will undoubtedly help to define a model of an "excellent" organization. As a final point, the audit team must be capable of defending its conclusions. Management must accept the outcome even if the audit reveals more discrepancies than conformances. (Vermeulen, 1997)

3.5 Cultural Elements

The values and beliefs that make up a TQM culture ensure that organization members cooperate to carry out their work with a common aim: quality for the customer.

Culture is complex. The beliefs and values that make up an organization's culture support and reinforce one another. Often they are interrelated to the point of being interdependent. To understand the bases of TQM culture we can simplify this complex web of TQM culture elements. We have defined each of eight culture elements in terms of a single, specific value or belief. Table 1 shows these eight crucial elements. (Sashkin & Kiser, 1993)

Culture Element 1	Quality information must be used for improvement, not to judge or control people.
Culture Element 2	Authority must be equal to responsibility.
Culture Element 3	There must be rewards for results.
Culture Element 4	Cooperation, not competition, must be the basis for working together.
Culture Element 5	Employees must have secure jobs.
Culture Element 6	There must be a climate of fairness.
Culture Element 7	Compensation should be equitable.
Culture Element 8	Employees should have an ownership stake.

Table 2: Eight Crucial Elements of TQM Culture. . (Sashkin & Kiser, 1993) pp77

Cultural Element 1: Performance and quality information must go to those who use it to understand problems, develop solutions, and take action. Such information must not be used to judge individuals' performance.

Cultural Element 2: Employees responsible for doing the work and attaining certain outcomes must have the authority they need to carry out their responsibilities effectively.

Cultural Element 3: There must be rewards for results. Individuals, teams and all members of the organisation must share equitably the fruits of their efforts.

Cultural Element 4: Cooperation must be the basis for working together. To the extent possible, people in an organisation must support one another's efforts and not compete with one another.

Cultural Element 5: Employees must know that their jobs are secure and that they will not be discarded at management's convenience like an obsolete piece of equipment.

Cultural Element 6: Everyone in the organisation must perceive that a climate of fairness exists which are based on the behaviours and actions of managers at all levels.

Cultural Element 7: Pay should be equitable across organisation levels. This means top executives pay should not be much more than about twenty times the pay of the lowest paid full time employee.

Cultural Element 8: Employees should have an ownership stake in the organisation.

The eight TQM culture elements are founded on certain values, the sense of what is right and what is wrong. They are based on specific beliefs about the way things work-and the way they should work-in the organization. We have tried to avoid philosophical discussions, in favor of practical specifics about the policies and practices that help define and shape culture. They do so by exhibiting, reflecting, and in concrete ways supporting the values and beliefs

that underlie TQM.

Some of the eight elements are relatively simple to implement, at least in concept. Setting up an employee stock ownership plan or a policy of job security, for example, is in most organizations difficult only if management does not accept these concepts. (Sashkin & Kiser, 1993)

Sashkin & Kiser (1993) also state that implementing other culture elements can be more complex and challenging. An example would be developing policies, systems, and practices that reward employees for results and for team and organizational as well as individual performance. It can be even more difficult to make some of the elements just described a part of the organization's culture. Three obvious examples are developing a climate of fairness, instilling cooperation, and empowering employees.

3.6 Creating commitment

The first requirement for cultural change is the total commitment of every person in the organisation to the company and its survival. Part of this commitment must be commitment towards reaching the company goals, CBSFs and cultural change. Commitment must not be confused with interest. Interest is involvement when it is convenient, whereas commitment is a tenacious pursuit of goals regardless of obstacles and without excuses. The commitment boils down to devotion to excellence. It is further evident in a triumph of integrity over skepticism. (Joubert, 2002)

Commitment requires accountability for failure or success. Mistakes should however not be seen as only negative in value. Lessons are learned through mistakes and contribute toward experience. The idea is to confront and overcome obstacles while learning how to attain objectives.

Some obstacles to achieving commitment are:

- Conflicting goals e.g. extensive capital projects while the company is having cash-flow

Problems.

- Procrastination e.g. a lack of sense of urgency
- Lack of focus identified by a lack of priority setting and a tendency to always be putting out fires
- Inflexibility and resistance to change often caused by fear or misunderstanding of change
- Allowing excuses to be made
- Self-defeatism with the idea that one person cannot influence change
- Lack of enthusiasm which usually occurs if top management does not lead by example
- Perceived or real lack of time to devote to goals
- Misinterpreting commitment as interest and waiting to act until it is convenient.

3.7 Competing Views and Shifting Perspectives

The coexistence of these differing approaches has several important implications. First, it helps to explain the often competing views of quality held by members of the marketing, engineering, and manufacturing departments. Marketing people typically take a user-based or product-based approach to the subject; for them, higher quality often means better performance, enhanced features, and other improvements that increase cost. Their sensitivity to customers also means that they are primarily concerned with what happens to products once they are in the field.

Engineers characteristically take a different approach, as do manufacturing people. Engineers frequently think in terms of specifications; their role is to translate product performance into precise tolerances and dimensions. That suggests a product-based approach to quality. Most manufacturing people, on the other hand, are more comfortable with the idea that quality means conformance to specifications and "doing things right the first time." They often associate poor quality with high levels of rework and scrap. For this reason, they expect quality improvements to result in cost reductions. . (Garvin, 1988)

These three views are obviously in conflict and can cause serious breakdowns in communication. Remedial efforts may become paralyzed if the coexistence of the competing perspectives is not openly acknowledged. For example, a large division of a major consumer goods company recently reviewed its quality management practices. The firm was especially interested in assessing its new product introduction process, for new products were regarded as the key to competitive success.

Two divergent views emerged. One group, primarily marketing and R&D experts, felt that the process had been quite successful: New products appeared regularly and performed as expected, customer complaints were few, and defective items had not been shipped to the trade in any large number. Another group, primarily manufacturing people, felt that the process had to be revamped because quality was so poor:

New product releases were frequently delayed while designs were reconfigured to adapt to manufacturing requirements, and material and labor variances of several hundred thousand dollars had been incurred because of unanticipated expenditures on rework and scrap. Because of these disagreements, the project quickly stalled. Further progress required the recognition that one group was employing user-based and product based definitions of quality while the other was employing a manufacturing-based approach. Only then were the two groups able to agree on the nature of the problems they faced. (Garvin, 1988)

Harris (2000) noted a perception is the way that we see something based on our experience. Everyone's perception of a situation will be, at least slightly, different. The question persists, "Is the glass half full or is it half empty?"

Perceptions are frequently developed over a period of time and reflect the ways that we have been treated, our values, priorities, prejudices and sensitivity to others. Two people could share with same experience and then describe it differently. Unfortunately, perceptions are not necessarily based on rational ideas and may be influenced by momentary frustration and anger. It is important for the customer service staffs to anticipate customer resistance based on the customers' prior interactions and always to work at providing customers with excellent service, so that their most current perception is a positive one. Customers may not remember every detail of an experience, but they will retain an overall feeling about it. That

"feeling," in combination with other experiences, will create their perception of company. It is hard to erase customers' negative perceptions that are based on their prior interactions, but what customer service staffs can do is to show them, through their genuine action, that their perception is not accurate. (Harris, 200)

3.7.1 The human resources perspective

Human resources (HR) managers are involved in enabling the workforce to develop and utilize its full potential to meet the company's objectives. Understanding the human resources perspective on quality is essential as it is impossible to implement quality without the commitment and action of employees. A common impact of effective quality management is improved employee satisfaction. While the quality literature is unanimous that leadership is an important antecedent to successful quality efforts, the involvement and participation of employees is just as key. After all, it is the rank and file that implements quality throughout the organization.

The quality-related issues that were discussed by a majority of the human resources respondents are:

- empowerment;
- teams/self-directed work;
- organizational redesign;
- job analysis/roles clarirification;
- performance appraisal/evaluation.

3.7.2 A financial perspective

One of the most commonly asked questions about quality management is ""will it pay us financial benefits?" " The answer to this question is an unqualified ""maybe." " It is clear that management pursues quality improvement as a means for reducing waste and increasing profitability. Implemented correctly, improved quality reduces waste and can lead to reduced cost and improved profitability. However, these returns tend to be long term rather than short term. Never was the axiom more true, ""it takes money to make money."

The quality-related issues that were discussed by a majority of the finance respondents are:

- maximizing return while minimizing risk;
- is quality cost-effective?
- costs of quality;
- law of diminishing marginal returns;
- cost allocations/activity based costing/scorecards;
- better use of data/information

3.7.2.1

3.7.3 A marketing perspective

One of the problems with differing perspectives on quality is that some perspectives are internally oriented, such as the engineering perspective. The internal perspective of quality improvement tends to focus on process improvement which by extension can result in improved customer service. However, in focusing on internal quality processes, sometimes the customer is forgotten. On the other hand, marketing tends to have the most externalized view of quality. The marketing perspective has been important to the growth of quality as a field. It is the marketers who have provided the emphasis on satisfying the customer. The quality-related issues that were discussed by a majority of the marketing respondents are:

- customer satisfaction/sales increase;
- commission restructuring;
- relationship management/selling;
- solution selling;
- identifying customers;
- consumer bundles;
- surveys;
- identifying customer needs/quality function deployment (QFD).

(Foster and Gallup, 2002)

3.7.4 Diversity perspective

Largely, there is still a perception among black people, especially the black labour movement, that the wealth of the country belongs to whites, so motivation for quality is perceived as making the white man richer. On the other hand, workplace cultures are dominated by western ways, resulting in opportunities lost for the development of unique systems and processes based on a combination of western and African cultures. This remains a major hurdle to using a combination of diversity and quality as a competitive advantage in the global markets.

As more and more employees spend a big part of their waking hours in the workplace, it becomes important that relationships in the workplace receive as much respect as relationships outside work. This is an imperative for the success of teamwork; self managed teams, and quality circles as defined in the beginning of this article. (Matlhape, 2002)

3.8 Roles and expectations

The roles and expectations that employees have are thought to play an important aspect in how a work culture evolves. The expectations that employees have concerning their roles within an organization, affect the behavior of each employee. "Behavior is also partly determined by the roles we occupy in society, both in our personal lives and in organizations. Roles can be viewed as specific types of experiences, but it helps to examine them separately because this provides some important clues as to how behavior might be changed" (Gray, 1984, p. 108) The concept of an individuals "social role is used by behavioral science to describe the set of behaviors that is expected of us by others" (Gray, 1984. p 109).

Specific roles and expectations of employees in organizations "tend to be less clearly defined because direction and expectations usually do not come from a single source. The social role that exist in organizations are defined by many people: peers, subordinates, managers, friends-virtually anyone that has a reason to expect specific behaviors in the role. The general principle which determines our behavior is that if we wish to continue to occupy a particular role, we will attempt to engage in the behaviors which are expected of us." (Gray, 1984, p109)

These expectations placed on employees from different sources can lead to role conflict and ambiguity, which can lead to stress in organizations. Role conflict can be defined as "simultaneous occurrence of two (or more) sets of pressures such that compliance with one would make more difficult, or impossible, compliance with the other". (Organ, 1991, p386)

> "Communication is easier in organizations where there is trust and respect between management and employees. A sudden interest in more open communication or participation may leave some employees skeptical. Consistent and honest communication is a critical element in the working relationship between management and employees in a participative process." (Aubrey, 1988, p.38).

Role ambiguity is defined as 'the uncertainty surrounding one's job definition: uncertainty

concerning the expectations held by others for one's job performance, the steps necessary to go about meeting those expectations, and the consequences of one's job behavior." (Organ, 1991, p387) The amount of uncertainty an employee feels varies from one individual to another. Some individuals seem to like ambiguity and even thrive on it in their lives. While other individuals need a high degree of structure in their lives in order to function within a less stressful environment. Understanding one's job definition or the expectations for a particular job up front should lead to less stress and ambiguity on the job.

3.9 The role of leadership

Transformational change requires managing from the top, and as Beeby & Simpson (1995:20) confirm: "…employees must have a clear, consistent and compelling picture of the goals of their changing organisation, which is only possible with a clear vision of the organisation shared by management and employees." The authors furthermore describe the dynamics of top management teams pointing out that such teams work to facilitate visible and unified leadership from a committed and cohesive management team, which involves developing a climate of openness, trust and risk taking between team members.
Klopper (2001) argue that in today's organisation marked by continuous transformation, effective leadership is increasingly based on conceptual and interpersonal competency rather than technical competencies. He notes that successful executives truly believe that people are their greatest asset. With effective leadership, the value of employees' actions can be optimised to realise higher growth, greater shareholder value and sustained competitive advantage. stress the importance of the fact that a leader in transformation must link change to key business processes and performance measures, set goals for the change effort using these measures and then track and report on progress against goals.
A key leadership duty, according to the above authors, is the defining of the values and beliefs that can be used to shape behaviours and ultimately performance.

According to Klopper (2001) leaders involved in the transformational process must have a

few necessary characteristics to enable strategic transformation, which include the ability to

- recognise the need for change and to persuade other key people in the organisation to understand the seriousness for the need for change;
- to manage the transition process by effectively diagnosing and addressing problem areas and dealing with people resisting the change and who find it hard to reject old beliefs and values; and
- to create a new vision and find ways to inspire people with this vision of a better future.

Above all, a tough-minded leader expects total integrity and ensures that all compensation is related to positive performance. All decisions must he guided by these two components. It's people, not the statistical analyses that have become endemic to TQM, that have the power to transform vision into reality. A Total Quality Culture optimizes the leadership abilities of all members of the organization.

All the creative breakthroughs in quality must originate with people. For this reason, everyone in your organization, must be trained in leadership, treated like leaders, and be expected to lead.

They need to be led, not driven. (Batten, 1994)

Chen and Lu believe that top management is the motivation behind quality transformation. It insists that top management should become fully involved in quality initiatives and serve as role models. Moreover, it stresses that constant learning is the only way to update and revitalize the wide range of knowledge required by top management for vision development and for strategies formulation. Top management should first develop a commitment to quality improvement. They should then learn what quality management really is and what specific goal the organization should strive for. With a clear picture of quality transformation in mind, they should then formulate strategies and choose an appropriate methodology to implement it. Finally, in order to facilitate an effective implementation, top management must play the crucial role of motivating employees and guiding them.

Middle management must be fully committed to continue organizational development under the inspiration of top management's leadership. Middle managers are expected to be fully aware of the significance of each and every quality program and to work out a detailed implementation procedure in accordance with the firm's quality strategies. (Chen and Lu, 1998). They furthermore state that in such an environment, it will be easier to cultivate healthy attitudes toward quality improvement throughout the entire company. Employee behavior that leads itself to quality improvement is consciously encouraged and developed and believes that quality is a manifestation of habit and attitude. While a person retains good habits and maintains a healthy attitude, it is natural for him or her to achieve quality work. If everyone retains good habits, a quality culture will accordingly emerge that will be characterized by creativeness, responsiveness, flexibility, and customer satisfaction. See figure 5.

Top management	make commitment to quality →	acquire quality knowledge →	formulate quality strategy →	choose appropriate methodology →	motivate employees →
Middle management	be involved in quality goals →	be aware of quality problems →	formulate improvement procedures →	apply quality improvement methods →	train & develop oneself and subordinates →
Organization (all people)	keep environment clean and neat →	cultivate quality attitude →	encourage quality behaviour →	develop quality habits →	nurture quality culture →

Figure 6: A step-by-step people approach to quality transformation. (Chen and Lu, 1998. pp76)

3.10 Struggles of Diverse People

Inter-group relations are sometimes difficult hurdles to overcome for diverse people. When a person comes into a new culture, they feel as if they do not belong and feel the need for identity with a social group. Social identity allows the individual to feel as if they are part of a group, and Prasad, Mills, Elmes, & Prasad (as cited in Ashforth & Mael, 1989) further

explain it as "the act of social classification and identification assists individuals in defining themselves and others within the social environment, in answering the question, who am I?" (1997, p. 151). This social identification provides individuals with a positive view of themselves and contributes to self-esteem. (Prasad et el., 1997) The definition of a group is offered by Alderfer and Smith (1982) as: a collection of individuals

1. who have significantly interdependent relations with each other,
2. who perceive themselves as a group by reliably distinguishing members from nonmembers,
3. whose group identity is recognized by nonmembers,
4. who, as group members acting alone or in concert, have significantly interdependent relation with other groups, and
5. whose roles in the group are a function of expectations from themselves, from other group members, and from non group members.

Many groups also have status differentials, and these differentials contribute to a groups' beliefs that the status, whether high or low, "is the status they are supposed to have, and they often enact roles and behaviors that are consistent with their groups' relative status" (Prasad et el., 1997, p. 153). This "set status" can add to feelings of incapability and at the same time, members of other groups may unfairly attribute characteristics to all members.

Social identity can inevitably lead to conflict when an individual's separate identities clash, depending on different situations. Ashforth and Mael state, "Given the number of groups to which an individual belong, his or her social identity is likely to consist of an amalgam of identities" (1989, p. 29) and these identities may conflict depending on the conditions of the situation. These conditions can impose inconsistent demands on the individual, and may confuse their values, beliefs, and norms of their particular groups. (Prasad et el., 1997) This conflict of identities will typically occur in women and minorities. An example of a black police officer follows:

I am in a ticklish situation. How so? Let's say I have to decide if I am going to be a policeman first or a [black] first. If I am a policeman first, I ostracize the other [blacks]. If I am a [black] first, there goes my job. So I don't know. (Alex, 1969, p. 163)

Another good example would be of a woman in the position of management who also might happen to define herself as a design engineer. Conflict might arise between the importance of producing good quality, but also having to realize the necessity and importance of reaching deadlines. (Prasad et el, 1997)

Times are difficult for everyone in an era of declining resources, and especially difficult for minorities and women. Prasad et el. (1997) state, "The emphasis on improving efficiency, lowering cost, and flattening organizational structures has led to the permanent elimination of many positions in middle management-a career level many women and minorities have only recently achieved" (p. 160). Even if women and minorities acquire the upper management positions, they still must deal with the possibility of co-workers believing they only received the job because of affirmative action acquirements, not because they are the best candidate for the job. This aggression may be physical or symbolic (e.g. using derogatory language), but either way is harmful to a work environment, as well as a social environment.

3.11 Empowerment

Empowerment has become a frequently used term in the modern South Africa. It has is some instances been made law by the government. It is therefore necessary to investigate how empowering the workforce can and should be used to improve quality.

Empowerment in quality terms means that every employee feels that he is responsible for quality and for solving problems that arise. This leads to a whole company of committed problem solvers who will greatly outperform their rivals who are still caught in the trap of a few people trying to control everything.

By empowering people they are given the authority to do whatever is necessary (within reason) to achieve the quality goals. This can be achieved by creating an environment where everyone feels free to suggest solutions and act on problems.(Joubert, 2002)
By empowering people, the person who is closest to the quality problem, i.e. the person physically responsible for the work, is given the authority to decide how to resolve it.

Joubert (2002) explains that empowerment leads to higher productivity and personnel involvement in the daily tasks.
People will take responsibility for the quality of their work. It is an effective method of changing the culture of an organisation. Empowerment also improves communication, which in turn, leads to fewer misunderstandings regarding what quality is expected and how it is to be achieved, because people are not afraid to ask questions.

Global competition and a changing business environment have instigated organisational change in response to increased pressures to improve efficiency and performance. Specifically organisations have sought improvements in cost control, flexibility, quality improvement. It has been argued that empowered organisations have demonstrated improvements in various economic performance areas. However, measurement of the economic benefits of empowerment specifically may be difficult as often it is introduced as part of a broader initiative.(Greasley K, Bryman A, Dainty A, Price A, Soetanto R and King N, 2005)

Typical problems which organizations encounter in empowering employees include:

⇒ lack of real commitment by senior management to the process. Senior managers may endorse empowerment but do nothing through their actions to set a positive example to their subordinates;

⇒ lack of real communication about the benefits of empowerment, why the organization is adopting this approach and how it will help the company achieve its aims;

⇒ failure to explain and train managers on the role they have to play and how they can facilitate and enhance the empowerment process;

⇒ managers who view empowerment as a sophisticated form of delegation: getting someone else to do the job for them rather than giving their subordinates responsibility for the job;

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⇒ ambiguity of roles and responsibilities among all levels of employees; lack of training for members of staff who take on new responsibilities;

⇒ lack of a team environment and support network for employees where problems and issues are discussed and shared openly;

⇒ ill-will between those groups of workers who are empowered and those who are not;

⇒ disillusionment that nothing really changes as a result of empowering the workforce. (Cook, 1994)

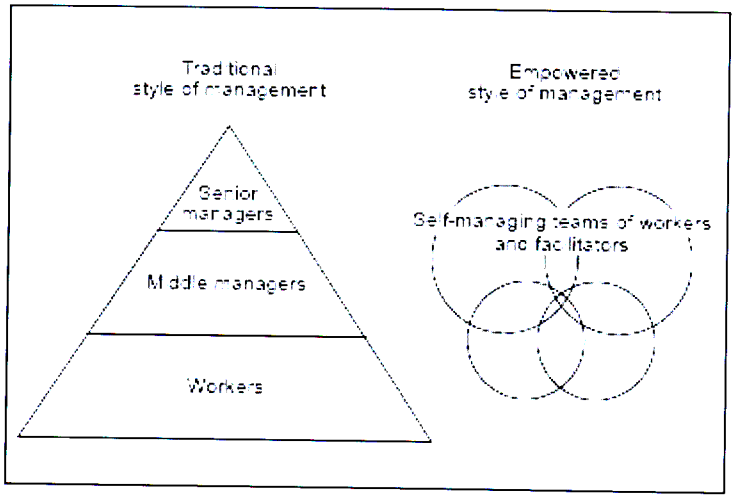


Figure 7:Traditional Management versus Empowered Management

3.12 Verbal and Non verbal Communication

Communication is key in the workplace, and if cultural verbal and nonverbal communication barriers are present, potential problems will arise. Henderson (as cited in Kameda, 1992) says, "English has become the international business language" (1994, p. 179) and just because a person can speak English, does not necessarily make that person a fluent speaker. Considering that "English is one of the most difficult languages for people in other countries to learn because there are so many forms of like-sounding words" complicates matters even more. "Communication is a word and a concept that comes up in all kinds of for a and in all kinds of circumstances". Communication is one of the core management processes at any level of an organization, as staff in particular need, to receive information that is meaningful to their work and their commitment to the organization. (Wood, 1999) Communication is very important as messages get sent from the sender to the receiver by formal and informal processes.

The basis of effective communication is the commitment of top management. Communication is not merely to inform but to effect change in attitudes and behaviour.

Information within the organization can be communicated downwards by:

- Through face-to-face communication between managers and their staff.
- Through memos
- Through internal newsletters or notice boards.
- Intranet web pages
- Email systems e.g. GroupWise
- Meetings and discussions

Minority cultures have a myriad of different vocabulary, syntax, idioms, slang, and dialect, and this can cause difficulty in completely understanding the English language and communicating effectively. Confusion can easily occur if the employee learning the new language wants to cling to their meaning of a word or phrase. (Henderson, 1994) Other problems are present as well and Henderson states, "the infinite variations of one word can make it extremely difficult to clearly communicate in a new language.

Open communication is the most important factor in retaining any employee because it provides an interactive and highly motivational environment. An organization with high levels of communication has greater respect levels among employees regardless of their place in the hierarchy. This respect leads to higher productivity because employees feel a sense of belonging and loyalty to their company.
In the book, "Teamwork: Involving people in Quality and Productivity Improvement", the authors believe communication is an important part of employee's roles and expectations as well.

"Communication is easier in organizations where there is trust and respect between management and employees. A sudden interest in more open communication or participation may leave some employees skeptical. Consistent and honest communication is a critical element in the working relationship between management and employees in a participative process." (Aubrey, 1988, p.38).

3.13 The need for a culture change

In order to gain long term benefit from any improvement programme or re-alignment of the organisation, it is necessary to work on a culture change. Barrie Dale discusses the introduction of a total quality management programme and says, "the change of culture must be planned to avoid ambiguity and facilitate improvement and that managers must learn to lead change." He says: "Culture change must be recognised as ongoing rather than the prerequisite for TQM."
According to Deming, after transformation, the manager of people will have the following roles:

- managers understand and convey the meaning of a system,
- they help people to see themselves as components of the system,
- they recognise and accommodate individual differences,
- they encourage people to study and to grow,
- they are a coach and counsel and not a judge,

- they understand the interaction between people and circumstances they work in and recognise that workers that can learn a skill that will come to a stable state
    - upon which further lessons will not bring improvement of performance,
- they have three sources of power:
    - authority of office (positional power),
    - knowledge,
    - personality and persuasive power (personal power),
- managers will study results with the aim to improve performance as manager of people,
- they will try to discover whom if anybody is outside the system and in need of help,
- they create an environment that encourages trust (freedom and innovation),
- they do not expect perfection,
- they listen and learn without passing judgement on those that have spoken,
- they hold spontaneous meetings (at least once per year) with all subordinates to establish their aims, hopes and fears,
- they understand the benefits of and losses from competition between people and groups.

(Harding, 2005)

3.14 Cost of Quality

The "costs of quality"-or more specifically, the costs of poor quality, were associated with avoiding poor quality or incurred as a result of poor quality.

Beckford describes the cost of quality as the direct and invisible cost unnecessarily incurred by any organization which does not have an effective quality system in place. Direct costs in this context means those costs arising as a result of the non- achievement of quality and visible attributable to that fact. Invisible costs in this context means those costs arising in the organization as a result of not achieving quality but not visibly attributable to thyat fact- those where the relationship between non-quality and the cost may not have been discerned by the organization. (Beckford, 2002:p35)

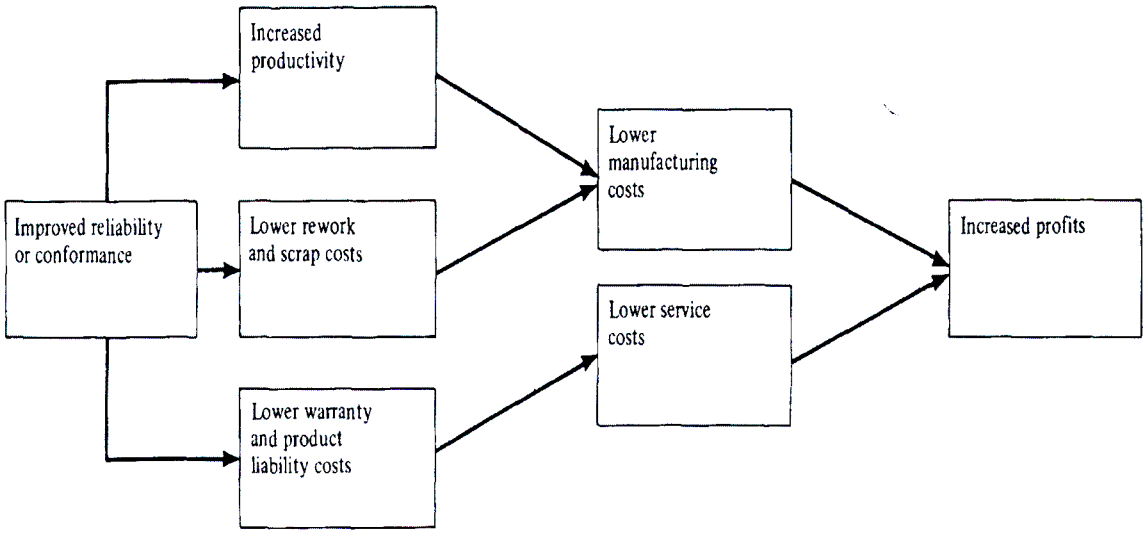


Figure 8: Quality and Profitability (Garvan, 1988, pp90)

3.14.1 WHAT ARE QUALITY COSTS?

Two factions often find themselves at odds with each other when discussing quality. There are those who believe that no "economics" of quality exists, that it is never economical to ignore quality. There are others who feel it is uneconomical to have 100 percent perfect quality all of the time. Cries of "Good enough is not good enough" will be heard from some, while others will say that achieving perfect quality will bankrupt a company. Should decisions about the level of quality of a product or service be weighed against other factors such as meeting schedules and cost? To answer this question, an informed manager needs to understand the concepts surrounding the costs of quality. Investigating the costs associated with quality provides managers with an effective method to judge the economics and viability of a quality-improvement system. Quality costs serve as a baseline and a benchmark for selecting quality-improvement projects and for later evaluating their success. (Summers, 1997)

Quality costs are defined by as any expenditures on manufacturing or service in excess of those_ that would have been incurred if the product had been built or the service had been' performed exactly-right the first time

When a company cost of quality has been identified and fed into the regular management process, it serves as a very good and positive stimulus for the quality improvement process itself. There's nothing like money to get managements attention. The cost of quality has to be pulled together formally and objectively. (Crosby, 1995)

The cost of quality can loosely be described as the costs that would not have been incurred had there not been any quality deviations.

Understanding the concept of cost of quality is vital as this understanding should lead to the identification of these costs which would stimulate quality improvement and provide a basis for a continuous tracking of this improvement (Joubert, 2002).

In most cases, the cost of quality is not easily determined in business and this has lead to a lack of focus on these costs. These costs are, usually, scattered throughout the construction process with some easily identified while others are difficult to define and quantify. (Joubert, 2002).

Like all things, there is a price to pay for quality. This total cost can be split into two fundamental areas:

- a. Non Conformance. This area covers the price paid by not having quality systems or a quality product. Examples of this are:

  (1) Rework. Doing the job over again because it wasn't right the first time.

  (2) Scrap. Throwing away the results of your work because it is not up to the required standard.

  (3) Waiting. Time wasted whilst waiting for other people.

  (4) Down Time. Not being able to do your job because a machine is

broken.

- b. Conformance. Conformance is an aim of quality assurance. This aim is achieved at a price. Examples of this are:

  (1) Documentation. Writing work instructions, technical instructions and producing paperwork.

  (2) Training. On the job training, quality training, etc.

  (3) Auditing. Internal, external and extrinsic.

  (4) Planning. Prevention, do the right thing first time and poka yoke.

  (5) Inspection. Vehicles, equipment, buildings and people (http://www.educesoft.com/cost of quality.htm accessed on 11 November 2005 23h11)

3.14.2 DEFINING QUALITY COSTS

A variety of terms are used to describe the costs associated with providing a quality product or service, including cost of quality, poor-quality cost, cost of poor quality, and costs related to quality. A quality cost is considered to *be* any cost that the company would not *have* incurred if the quality of the product or service were perfect. Quality costs are the portion of the operating costs brought about by providing a product or service that does not conform to performance standards. Quality costs are also the costs associated with the prevention of poor quality. The most commonly listed costs of quality include scrap, rework, and nonconformities. As Figure 7 shows, these easily identified quality costs are merely the tip of the iceberg.

Quality costs can originate from nearly anywhere within a company. No single department has the comer of the market on making mistakes that might affect the quality of a product. Even departments far removed from the day-to-day operations of a firm can

affect the quality of a product or service. The receptionist, often the first person the customer has contact with, can affect a customer's perceptions of the firm. The cleaning people provide an atmosphere conducive to work. Mistakes, oversights, and errors can and will affect the quality of an item. Salespeople must clearly define the customer's needs as well as the capabilities of the company. Figure 11.2 provides a few more examples of quality costs. Every department within a company should identify, collect, and monitor quality costs within their control. (Summers, 1997)

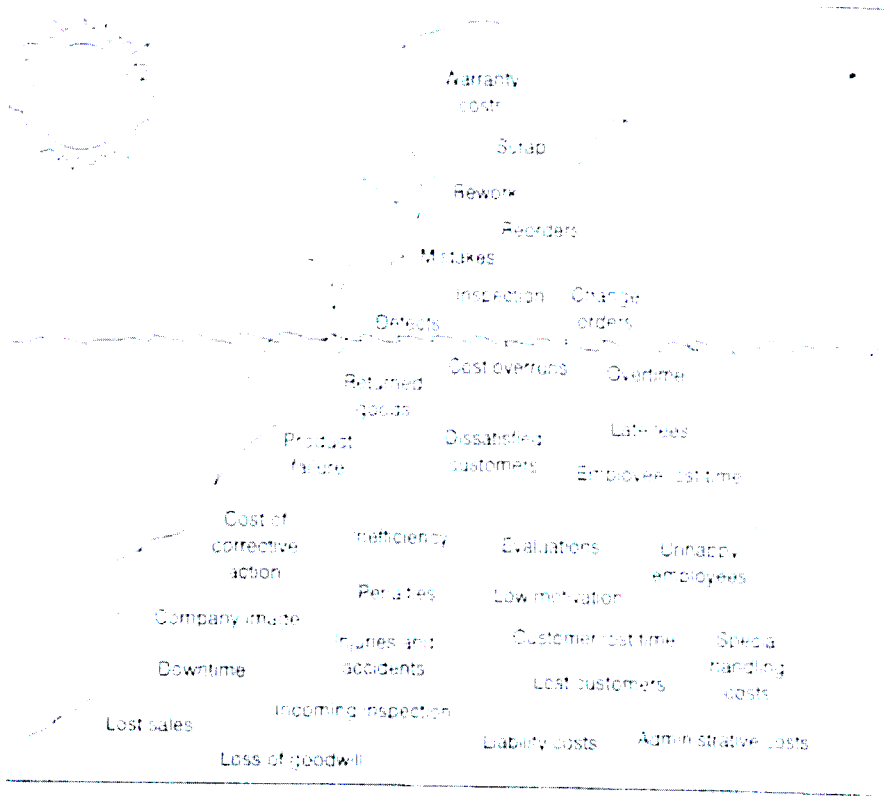


Figure 9: The Iceberg of quality cost (Summers, 1997. pp421)

SOURCE; Adapted from *Principles of Quality* Costs, ed. J. Campanella. ASQC Quality Press

3.14.3 Quality Cost Classification

Quality cost can be organized into four major categories: prevention cost, appraisal cost, internal failure cost, and external failure cost.

Prevention costs are investments made to keep nonconforming product from occurring and reaching the customer, including the following specific costs:

- *Quality planning cost*, such as salaries of individuals associated with quality, planning and problem-solving teams, the development of new procedures, new equipment design, and reliability studies.
- *Process control cost*, which include costs of analyzing production processes and implementing process control plans.
- *Information systems cost* expended to develop data requirements and measurement methods.

Training and general management cost, include internal and external training programs, clerical staff expenses, and miscellaneous supplies.

Appraisal costs are those associated with effort to ensure conformance to requirements, generally through measurement and analysis of data to detect nonconformance's.

Categories of appraisal costs include :

Test and inspection cost associated with incoming materials, work-in-process, and finished goods, including equipment costs and salaries.

. Instrument maintenance cost due to calibration and repair of measuring instruments.

Process measurement and control cost, which involve the time, spent gathering and analyzing quality measurements.

Internal failure costs are incurred as a result of unsatisfactory quality found before the

delivery of a product to the customer; some examples include:

. **Scrap and rework cost,** including material, labor, and overhead.
Cost of corrective actions, arising from time spent determining the causes of failure and correcting production problems.

External failure costs occur after poor-quality products reach the customer, specifically these are:

- *Costs due to customer complaints and returns*; including rework on returned items, cancelled orders and freight premiums.
- *Product recalls costs* and warranty claims including the cost of repair or replacement, as well as associated administrative costs.
- *Product liability costs*, resulting from legal actions and settlements. (Evans & Lindsay, 1993).

The four types of quality costs are interrelated. In summary, total quality costs are considered to be *the sum of* prevention costs, appraisal costs, *failure* costs, and intangible costs. Table 1 shows some of the quality costs from Figure 7 in their respective categories. Investments made to prevent poor quality will reduce internal and external failure costs. Consistently high quality reduces the need for many appraisal activities. Suppliers with strong quality systems in place can reduce incoming inspection costs. High appraisal costs combined with high internal failure costs signal that poor-quality products or services are being produced. Efforts made to reduce external failure costs will involve changes to efforts being made to prevent poor quality. Internal failure costs are a portion of the total production costs, just as external failure costs reduce overall profitability.

A trade-off to be aware of when dealing with quality costs is the need to ensure that appraisal costs are well spent. Companies with a strong appraisal system need to balance two points of view: Is the company spending too much on appraisal for its given level of quality performance or is the company risking excessive failure costs by under funding an appraisal program. In all three areas-prevention, appraisal, and failure costs-the activities undertaken

must be evaluated to ensure that the efforts are gaining further improvement in a cost-effective manner. Figure 9 reveals that as quality costs are reduced or-in the case of prevention quality costs-invested wisely, overall company profits will increase.

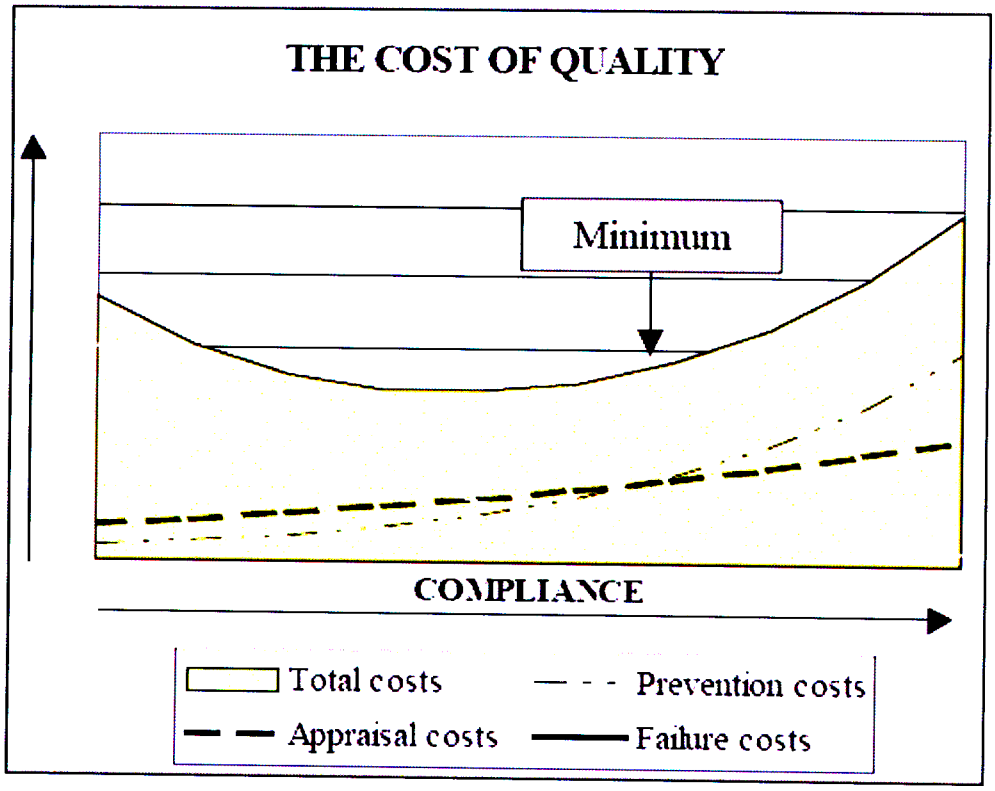
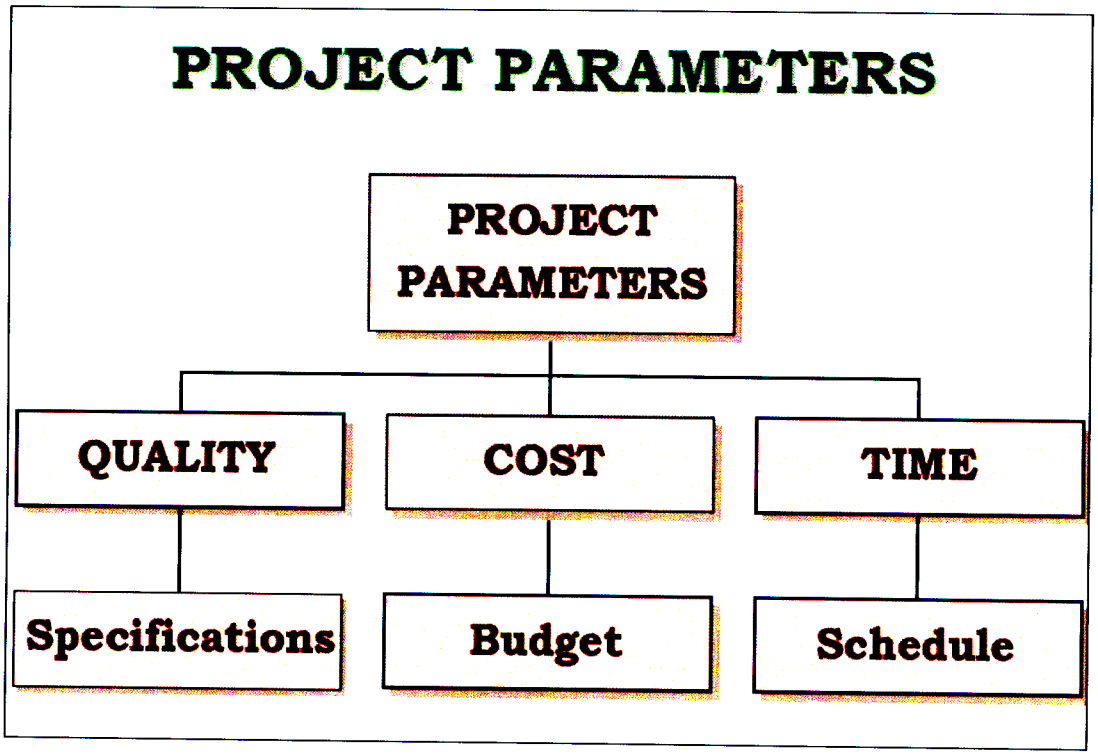


Figure 10: The cost of quality

Source : Joubert,2002. . The establishment of critical success factors required for the successful implementation and maintenance of a Total Quality Management system for the South-African Construction Company in the building sector, University of Pretoria

Prevention Costs Quality planning Quality program administration Supplier-rating program administration Customer requirements/expectations market research Product design/development reviews Quality education programs Equipment and preventive maintenance	**Appraisal Costs** In-process inspection Incoming inspection Testing/inspection equipment Audits Product evaluations
Internal Failure Costs Rework Scrap Repair Material-failure reviews Design changes to meet customer expectations Corrective actions	**Intangible Costs** Customer dissatisfaction Company image Lost sales Loss of customer goodwill
External Failure Costs Returned goods Corrective actions Warranty costs Customer complaints Liability costs Penalties	

Table 3: Categories of Quality Costs (Summers, 1997)


PROJECT PARAMETERS
PROJECT PARAMETERS
QUALITY
COST
TIME
Specifications
Budget
Schedule

3.15 How can we improve?

How to improve on your current service offering is then the final step in the quality management cycle and refers once again to the wants and expectation of the customer.
The first step in improvement is to ask. Never assume you know what they want as this results in giving customers what you think they expect. Always assume that customers' wants are unmet. By asking customers what they expect from a product and what they want, organisations can design their product offering to best fulfil these needs.
The second step is through innovation, and a move from convergent thinking to divergent thinking. Convergent thinking is product focused and is grounded in continuous improvements – incrementally modifying the product to improve quality. Convergent thinking keeps organisations abreast of competitors, but is not adequate to maintain or achieve leadership. Divergent thinking, on the other hand, is outcome focused and refers primarily to innovation, leading to very rapid improvement. Benchmarking is essential to divergent thinking as it identifies others who are already doing the things we think are impossible – it breaks down the barriers for news ideas, encouraging creative product innovation. For benchmarking to be of any relevance, however, it must include in-depth discussions with customers, highlighting those things they want to avoid and helping to better understand the outcomes they want to achieve. Ultimately improvement is about continuous innovation through the active involvement of customers. It is about meeting and exceeding expectations by placing the power in the hands of the customers, asking them "what do you want?" Merely satisfying customers is no longer enough. Where it was once considered a reliable guarantee of repeat business, today customer demands are higher. Now organisations need to expand their fields of influence by focusing on creating an ideal customer experience, one that is based on meeting and exceeding the expectations of their core customer base. (Bell, 2004)

The underlying concept is clear and well established: "Give a person a fish and they will eat for a day, teach a person to fish and they will eat for a lifetime". The process of managing a project is as important as the final product and the benefits of a well-managed process may

be realized organization-wide and over future projects.

TQM principles extol the virtue of standardization and uniformity. As project management is a service, we strive for consistent performance, regardless of time, place or person. To achieve this, project management frameworks comprising mandatory processes are established. The TQM culture, emphasizing all-party involvement and employee responsibility for continuous improvement, ensures all project staff contributes to the development of such frameworks and processes. (Bryde, 1997)

A quality awareness course is a good starting point, especially if held at a location well removed from the day-to-day office environment. Management must take the initiative and lead by example; gaining credibility is everything and the head of projects or a senior figure in the project organization leads the course and spreads the word. They put themselves on the line, stand up and publicly state unflinching belief in the quality principles.

The fundamental message put across is "it doesn't matter how good we think we are, there is always room for improvement". It is not something to be done by outside consultants, however skilled and experienced in quality management or project management. (Bryde, 1997)

The key: improvement is essential to stay in business. Continual improvement means never being satisfied with things as they are, but always looking for a smarter, better,

faster, cheaper way to achieve the same end result. It also means looking for new and better ways of satisfying customers' needs ... and listening to your people – often it is the person doing the job that spots a better method that will speed up things or avoid future (expensive) mistakes. You do this by comparing new ideas to the information you have learned from keeping records and measurements.

How do we improve our business? Answering the following questions will help you:

- Where things went wrong and why and how to correct them – both quick fix and long term.
- Where the business is losing its resources through scrap, theft or returns of bad products to suppliers, etc. or by goods returned by customers.
- Where the business is wasting resources by re-work, repeating tasks that should have been done correctly the first time, etc.
- When a competing product comes on the market that the customers prefer (customers

switch product).

- Where the same product comes on the market at a cheaper price.
- Know all the costs relating to production, distribution, administration, finance and management.
- Do not do tasks that don't add real value or prevent a loss to your business.
- If there are such processes or activities, eliminate them or contract them out.
- Use technology and the right equipment and methods to reduce costs by increasing output and reliability.
- Use staff that becomes free as a result of technology in the improvement process and expansion

(Jaftha, 2005)

CHAPTER 4

4 RESEARCH METHODOLOGY

4.1 Introduction

This chapter contains definitions and descriptions of the methodology for this paper and data collection procedures that will be used to review and analyze the existing body of knowledge in quality management.

4.2 Research design

The purpose of research design varies according to the research paradigm, methods and assumptions. Generally speaking, there are two major methods in research design: quantitative and qualitative approach.

Quantitative approach requires the use of standardized measures to fit into a limited number of predetermined response categories to which numbers are assigned. The advantage of quantitative approach is that it is possible to measure the reactions of many people to a limited set of questions facilitating comparison and statistical aggregation of the data. This gives a broad generalised set of findings that can be presented briefly and clearly (Patton, 1990).

This study will be based on a qualitative research approach. Due to the limited information on the topic under discussion, the research will be exploratory in nature. At first when deciding on the topic above I did not clearly understanding what approach to use for this study but after reading a few books like "Finding your way in Academic writing" and "How to succeed in your Masters and Doctoral Studies ". I could formalize an approach. To find the right approach it means you have to search, e.g. read, study the reality or talk to others.

In such types of research the aim is to acquire insight into a situation or phenomenon, Bless & Higson-Smith (1995:42). The research approach will be a nature of enquiry from systems

thinking perspective and looking at the problem in a holistic way because of the complexity of the problem.

The context of the Research Approach and Paradigm is in the project management environment within the Transmission Division.

To accomplish the required objective of this study and be objective the theory and reality have to be related to each other. How to relate theory and reality is one of the most difficult problems in all scientific work but the problem has been identified and with the qualitative method used to research this problem a solution or corrective action will be identified.

This method uses either random assignment or other sampling techniques to minimize intervening variables that could impact the results of the research (Cook, & Reichardt, 1997)

Qualitative research is multi-method in focus, involving an interpretive, naturalistic approach to its subject matter. This means that qualitative researchers study things in their natural settings, attempting to make sense of or interpreter phenomena in terms of the meaning people bring to them. Qualitative research involves the studied use and collection of a variety of empirical materials-case study, personal experience, introspective, life story, interview, observational, historical, international, and visual texts that describe routine and problematic moments and meaning in individuals' lives (Creswell, 1997).

"Qualitative methods are a traditional evaluation in which the researchers translate the results of findings to describe research categories. The methodology of qualitative provides depth and detail rather than breadth through direct quotation and detailed descriptions of people's activities, behaviors, actions, and the full range of interpersonal interactions and organizational processes that are part of human experience" (Patton, 1990).

For the purpose of this study, the qualitative methodology was selected for the following reasons:

- The topic of total quality management is complex, and qualitative research will continue to play an important role in investigation and analysis.

- . Total quality management in one of those topics where there is no foreseeable endpoint where researchers will be able to state that there is a complete shared understanding.

- . Total quality management is also a topic that poses serious problems for quantitative methods. There is not sufficient information available to use the quantitative measures and experimental design

This research was conducted through comprehensive review of project management and quality literature. To identify quality objectives and project management approaches the researcher has identified and selected Deming, Juran, Crosby and Ishinkawa and others who have focused their concern on quality management philosophies and techniques.
For the purpose of this study, the researcher will study, analyze, and evaluate, in depth the philosophies that are represented in these approaches.

4.3 Methodology of the Study

The purpose of research design varies according to the research paradigm, methods and assumptions. Generally speaking, there are two major methods in research design: quantitative and qualitative approach.

Quantitative approach requires the use of standardized measures to fit into a limited number of predetermined response categories to which numbers are assigned. The advantage of quantitative approach is that it is possible to measure the reactions of many people to a limited set of questions facilitating comparison and statistical aggregation of the data. This gives a broad generalizable set of findings that can be presented briefly and clearly (Patton, 1990).
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Qualitative data is any information the researcher gathers that is not expressed in numbers. If we accept this definition, the range of qualitative data includes information than words. Pictures are qualitative data too.
The term "qualitative" data denotes a variety of data, not a single kind and the distinction from "qualitative" is not crisp but somewhat arbitrary. (Tesch, 1990)

The mission of research is to generate knowledge. As a researcher one also gains knowledge during the path of reading, discussing and investigating. The research, and how it is conducted, is influenced by the researcher's epistemological standpoints. The different

theoretical paradigms and perspectives of research that the researcher believes in, shapes how the researcher looks at the world and acts in it

The objective to generate knowledge regarding quality culture in organisation by studying, analysing and describing such cultures this also contains research questions of a descriptive nature. Therefore, the research design chosen is based on social, non-experimental, empirical and qualitative science.

4.4 Methodology of Data Collection

The following methods of data collection will be used:

Standard Interview Questions

Literature reviews

Case studies

Personal interviews can be used for complicated questions. If something about the answers is unclear or vague a further explanation can be asked to clarify the misunderstanding and it gives you a better insight to the problem. Personal interviews provide better validity than telephone interviews and questionnaires. Telephone interviews will be conducted if a certain person do not have time enough to meet.

The interview guide was designed to collect both quantitative data and qualitative data. To complete the information collection, visits were made to each department or business unit. The aims and objectives of the research project were described and discussed during the initial meeting with management (typically the departmental manager). Discussion with management focussed on the overall quality of the organisation, has it has affected The Cape strengthening project. Following the interviews with project management, the focus of the interviews was then shifted to the implementation and scope of their quality initiatives. At this stage the interviews were conducted with functional managers including quality managers, project managers, line managers and the employees involved. At least four such discussions were conducted at each department. The interviews were conducted over several visits to the departments and generally lasted one to two hours as per the standard interview questions.

The interviews were targeted at individuals with major responsibilities for planning and directing quality related matters (usually quality manager or project managers).
The prime methods for investigating the cultural problems were to ask the interviewee the effect of certain activities on the organisation's culture and/or to ask what factors they had noticed contributing either positively or negatively to cultural differences.

The interviews also served both as a tool for validating some of the questionnaire responses and as a mechanism for extracting new information that may have eluded the questionnaire survey. On completion of the interviews, similar activities that affected quality cultural were grouped and their effects identified.

4.5 Data Analysis

Data analysis will be conducted by reviewing collected data through interviews with project managers, customers, suppliers and contractors. Data will also be reviewed through the literature review and this will comprise of books, articles and the Internet searches.

The case study can also be used for descriptive or explanatory purposes. The focus of the case study is on the process rather than the result, on the context rather than specific variables and on discoveries instead of proving casual connections. With a case study, we can better understand complex social phenomena.

4.6 Outcome of the Study

It was said earlier that this study is based on what Phillips & Pugh (1998:50) refer to as problem-solving research. The outcome of this study will identify problems with Cape strengthening project being managed in Transmission. The study will also explore what are the perceive perception about quality from the different stakeholders and outline possible problem areas which then can be identified and corrective action taken to improve effectiveness and efficiency.

CHAPTER 5

5 FINDINGS AND RECOMENDATIONS OF THE STUDY

5.1 Findings

5.1.1 Methodical Assumptions

This research assumes:

1. The people answered the survey honestly.
2. The participants were able to read and understand the survey questions presented.
3. Having the survey voluntary and non identifiable to individual reduced the chances of the Pygmalion effect on the research.

5.2 Quantitative Survey Results

This chapter contains the results of the survey on both the quantitative and qualitative questions. Of the 28 surveys distributed, 25 surveys were returned. A distribution of the first nine questions is listed below in Table 5 below.

Quantitative Questions

1=SD=Strongly Disagree
2=D=Disagree
3=U=Undecided
4=A=Agree
5=SA=Strongly Agree

Through an analysis of the responses to the questionnaire, an understanding of the use of activities and general nature of problems facing Transmission organisation was gained. This is illustrated in Tables 4. Table 4 shows the 17 most common activities for each of the dimensions of quality culture and I have used these culture activities for my analysis form the overall questionnaire of forty eight questions..

Table 4: Survey results

Change activity	SD	D	U	A	SA
Quality policy in organisation is understood	0	10	8	5	2
There is top management commitment	5	15	2	3	
Project managers stick to cost, time and quality always	1	18	3	2	
Management examines poor performance by suppliers	5	14	3	3	
department have the equipment and resources to do their jobs		1	4	20	
Poor communication in organisation		3	1	19	2
Suppliers meet specifications	14		1	10	
Cost of quality	18	2	5		
Differing department targets		6	3	8	9
Training in quality		8	2	11	4
Quality perspectives	4	17	1	3	
Supplier on-time delivery		12	2	11	
Do the organisation conduct quality culture audits	3	6	11	5	
Organisation strives for continuous improvement process		2	1	22	
Employees understand quality process			13	10	2
Employees value quality improvement			3	20	2
Employees empowerment		21		4	

Some of the important findings with respect to use of activities and cultural problems in the combined sample were that:

⇒ Senior management does not place much emphasis on the measurement of customer satisfaction and the development of quality training programmes.

⇒ There is also poor top management support for quality problems with suppliers and contractors.

⇒ There is a lack of training in the quality area and quality programmes in the organisation does not support employee involvement and empowerment. The

organisation as a whole needs to be trained in quality, including project managers.

⇒ Cost of quality cannot be quantified in monetary values so top management can act against poor service delivery from suppliers, contractors and internal processes.

⇒ With respect to customer focus, the perception is that there is still largely room for improvement from the quality department and who seems to fail to monitor product purchased from suppliers.

⇒ many companies still fail to involve suppliers early in new development and suppliers are generally unable to meet the demands required of them. Policy awareness among suppliers is also low

⇒ teams and use of team-building techniques are not practiced and is lacking in the organisation. The other major factors that led to team working problems were poor training and facilitation, lack of time for teamwork, weak support and commitment from managers and supervisors and personnel conflicts.

⇒ many chief executives do not institute reward systems for employees and also do not see the need for increasing employees' pay in relation to quality improvement. Furthermore, performance appraisal is not the major determinant of employee progress in most organisations.

⇒ Organisational structures still tend to be task-based as opposed to process-based. This along with factors such as rigid work schedules and team selection based on personality have a negative effect on the openness of the organisation

⇒ Management continues to instill different targets for different departments. Where there is a conflict in departmental targets, friction may develop. Our studies show no evidence that management takes this into account when setting targets

⇒ Employees feel that they are not empowered enough to make decisions relating to quality issue they feel that are sub standard on their sites, projects and products.

⇒ Communication is not effective throughout the organisation as information is

⇒ Project mangers feels technical assurance is greatly lacking as specialists are not

competent and cannot make decisive decisions relating to technical specifications.

⇒ Management commitment. Inconsistent management commitment to quality improvement is often noticeable to junior employees and acts as a demotivator.

⇒ Internal Departmental barriers. The need is to successfully break down departmental barriers within their organisation, the major problems encountered were suspicion, inability to understand the needs of others and personal conflicts. This has a major effect on communication; inter dependant processes and low productivity in the organisation which affects the quality eventually.

5.3 Qualitative Survey Results

The last page of the survey used qualitative type questions to give the participants the opportunity to give opinions on the topics. The survey responses were read and common themes or patterns were determined and identified.

A core problem experienced by the organisations appears to be internal customer, or employee issues. These issues represent the internal processes and functions within the organisations studied which dramatically affects the service rendered by the organisation to the project environment.

A definite link between quality and project was established. It was established that it was easier to motivate personnel for quality improvements than for productivity improvements because quality improvements did not appear to endanger their jobs. (Joubert, 2002)

It had been stated that quality is usually the first aspect to be sacrificed when time or cost came under pressure. This had a catch 22 effect as the temporary relief gained always turned into more pressure on time and cost, nearer the completion of the project.

The corporate culture is influenced by the business environment and the values of the organisation. A strong culture will determine behaviour generally and in crisis situations, specifically. Cultural change requires a good reason for change, a plan indicating changes

necessary, measurement of progress, the provision of training and incentives to encourage desirable behaviour. (Joubert, 2002)

The most alarming gap here is in leadership development. Although leadership is a challenging task in this ever-changing marketplace, with employee difficulties being accepted as the norm, it can make or break an organisation. As the literature clearly states, employees will perform to the standards set and achieved by their leaders. This gap was followed appropriately by internal communication that may be one of the main reasons behind the inadequacies of leadership. Organisations cannot expect to be successful if internal communications are ineffective and employees are frustrated by an environment in which they feel completely uninformed and without direction. I must stress once again that communication was clearly the high point, with the feedback showing that this area needs to be improved.

The culture is created over a long period of time and to change this quickly requires enormous effort from top management, middle management and the employees themselves in order to change the current quality culture.

Structures need putting in place to build on the newly created awareness of quality. Applying the principles will not happen unless it is carried out in a planned fashion and unless processes are established to ensure it happens. In short, it needs managing as a project. The steps of customer identification and analysis can be modelled, providing a route map for project managers (see Appendix). This process will help ensure the selected project management methods for the individual projects are appropriate and will, if followed in a similar fashion by all project managers, ensure a uniformity of approach leading to an enhanced customer perception of professionalism in project management. (Blyde, 1997)

Again customer quotes indicate some positive changes: "the project was very well handled", "the project team pulled out all the stops" and "the project team's contribution was excellent".

This is not to say all problems had been eliminated. Indeed there was still some variability of performance, as found previously, although overall things had improved. Furthermore the only truly meaningful comparison would be with a scenario in which the TQM programme had not been initiated. In this respect the consensus was that customer perceptions of the project management service would have been no better and almost certainly worse.

CHAPTER 6

6 CONCLUSION

6.1 Overview

⇒ TQM works when: there is a clear understanding of what fundamental change the organization is going to make and a clear understanding of how TQM will help.

⇒ It is directed and led by the personal involvement of all top management.

⇒ Each employee understands the seven QC Tools and uses the PDCA cycle to continuously improve and hold the gains

⇒ Each employee contributes in an integrated way to the fundamental improvement of the organization

⇒ The whole organization is structured to produce significant results in quality, cost, and delivery and quality of work live with the leadership of key executives (cross-functional management).

⇒ The organization has a customer-driven master plan of how it will accomplish its fundamental improvement and carries out that plan during four to six years.

According to Hofstede (1997), "… it is important for the managers and members of a complex organization to know its cultural map" It is also generally acknowledged that projects are becoming more complex due to globalization, technology changes, and the bidirectional interaction between the social and technical aspects.

Top management must get involved. Superior customer service must start with the top management of the organization being committed to the process of satisfying and meeting the customer's expectations. Top management must drive all change initiatives within the organization. Changing direction is never a simple process and changing it from the bottom up is an even bigger task that is bound to fail. If and when top management shows total commitment and is seen to be "walking the talk", then the employees will soon follow their example.

Finally, top mangers needs to ensure that quality initiatives are understood at all key levels of the organization. These levels are the organization level, the operational/process level, and the individual level. This means that from the board of directors to the line worker, everyone needs to understand why these changes are being made and which strategic goals these changes will affect, and what the benefits with result.

In this paper we begin by recognising that many companies are now attempting to identify their organisational culture or cultures prior to implementing their TQM programme. This raises a major philosophical point: can organisational cultures be identified? Are they in any sense separate from the organisation or are they synonymous with the term organisation? In short is culture something an organisation has or something an organisation is?

In recognition of the needs of operations managers we took the view that culture could be identified and set out to provide users with a model of culture and to develop ways to apply the results of a cultural assessment which would feed through into changes to a TQM programme.

In developing a model which would help organisations assess their organisational culture prior to TQM, we recognised it was also important to measure the impact that the culture had on the everyday operations and workings of the organisation. In other words, how the organisation organized itself, its relations with customers (internal and external) and how the organisation treated staff. The model, therefore, has two interrelated aspects:

the cultural element and three identified elements which make up the climate (or atmosphere) in which culture exists.

The specific focus of the PCOC model is to identify areas for intervention within the organisation. The model does not contain implicit value judgements about ``best" or ``strong" cultures or what profile is best to have. The focus is on identifying those areas that can assist organisational and quality improvement through development and focused interventions.

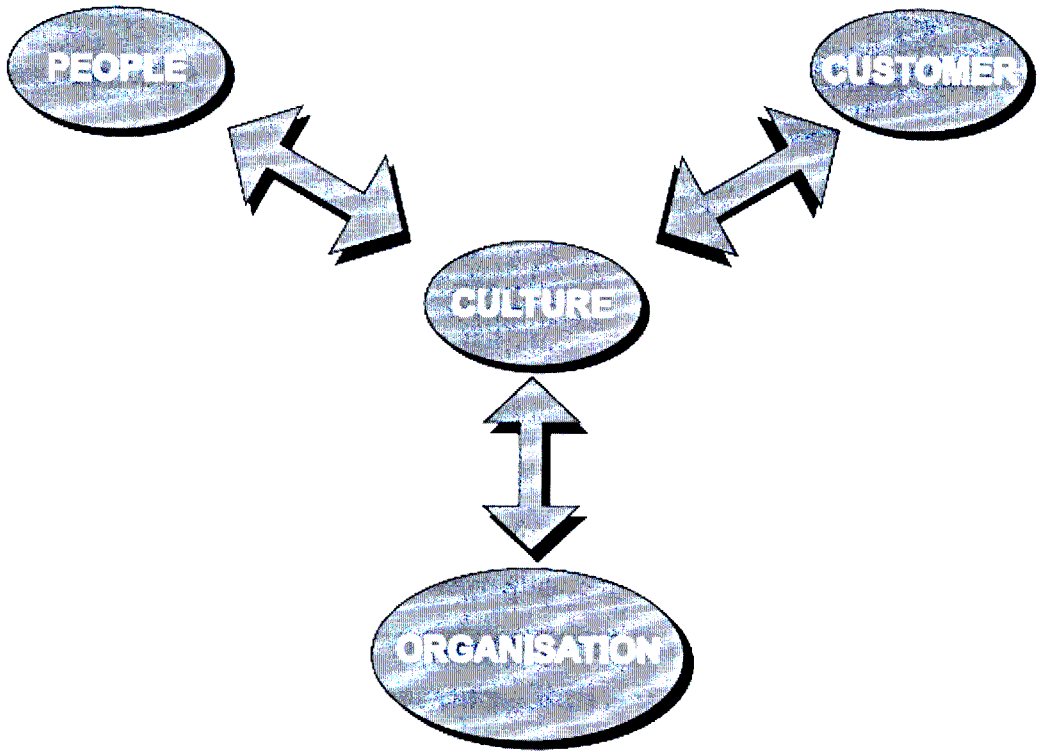

Figure 11: People, Culture, Organisation and Customer. (Maull, Brown and Cliffe, 2001)

The restructuring, the cost-cutting, the new message has to permeate through the company's layers. Employee commitment is essential for the success of the company. Leadership must be strong. Leaders need to communicate what the company is trying to achieve and become the living example of what they stand for. Changing mistrustful cultures is possible.

6.2 Recommendations

Organisations can develop an effective quality strategy that builds on the strengths and core competencies whilst minimising any resistance that may be experienced to the proposed changes.

⇒ Organisations need to lead and guide and support employees in learning and practicing TQM.

⇒ Act as a team leader in directing subordinates. Practice delegation through participation and involvement, but avoid abdication.

⇒ Accept mistakes as one of the prices of improvement. Avoids censure. Help analyze mistakes for learning purposes.

⇒ Identify customers and learn what customers' need are. Leads his/her people in identifying how to better serve customers.

⇒ Train people and help them in recognizing suggestion opportunities, and making suggestions.

- Develop ways to enhance the relationships with current and potential customers and
- provide a means to measure and evaluate satisfaction.

⇒ Recognize the need for assessment, strategic planning, and the development of a long-term, integrated organization-wide approach.

⇒ Identify and overcome any resistance to the change in standards.

⇒ Understand quality standards and concepts, be able to implement organizational assessments, and maintain customer satisfaction and focus.

⇒ Seek to ensure that the organization provides products and services of a predictable and reliable standard that meet the needs of the clients or customers.

⇒ Do not attempt to implement a TQM system without the genuine commitment of the entire executive level of management.

⇒ Designate a committed and energetic champion who will lead the quality improvement process for an extended period of time.

⇒ Appoint a specialist to assist with planning the implementation process and, if possible, keep the specialist to guide the process itself.

⇒ Ensure good communication is maintained throughout the organisation, prior to, during and after the implementation process.

⇒ Elicit the help and support of clients, professionals, suppliers, unions and sub-contractors in the quality improvement process.

⇒ Amend contract agreements with clients, suppliers and sub-contractors to ensure alignment with the TQM goals and procedures.

⇒ Be realistic regarding the time required to implement the TQM system, as it is a long and arduous process.

⇒ Remember that quality improvement does not have a completion date.

⇒ Celebrate successes and learn from mistakes

⇒ Invest in the preventative cost of quality i.e. implementing a TQM system, as the benefits received in the long run will far outweigh the initial investment. Failure to act altogether will result in even greater costs

Building a quality culture is not an easy task. Developing a focus on quality seems very easy but it really is not a straightforward thing to achieve. Organisations spend years of efforts and budget to achieve the goal.

⇒ The TQM emphasis on prevention rather than detection of defects was notably absent.

⇒ There was no evidence to suggest that top management was committed to quality. Cost and profitability were the forces driving the policies enacted on the projects studied.

⇒ The culture, far from being devoted to quality improvement, was dominated by short-term financial considerations, reflected in uncooperative and suspicious relationships.

⇒ Measurable quality criteria against which improvements could be monitored were absent

⇒ A company should never be content with the current quality of products and operations but always strive for further improvement even if this means frequent changes in procedures and organisation (intended to measure the level of continuous improvements).

⇒ Hard facts and numbers are always preferable to verbal data when a decision is to be made (intended to measure the qualitative-quantitative aspect of measurement).

⇒ It is essential that all employees are empowered and participate actively in

promoting quality (intended to measure the level of full participation).

6.3 Criticism on our own work

The empirical research is based on interviews. Even though the interviewed people are experts on their areas, some of the empirical data are opinions. Sometimes it was hard for us to separate fact from opinion when we draw our conclusions. Our own opinions also influence the thesis of course. We also think that the theory we found to chapter 3 is relatively broad compared to the empirical data and the investigated area. Theory about how culture affects quality on projects is extensive and this led to the understanding that people are an essential element of a quality management system. An important component of introducing TQM in an organisation is training, development and empowerment of personnel. Each employee contributes in an integrated way to the fundamental improvement of the organisation. From the research above the author has learnt that an organisation's outcomes concerning quality and performance are the result of many complex technical, political, social and behavioural processes operating inside and outside the organization. Since organizations are cultures, it is more difficult for management to see that they are part of the culture and are affected by it. What they perceive to be problems and solutions is, in part, developed through their view of organizational reality and so reflects a cultural bias. This, however, is only part of the culture trap for management and this has to be dealt with daily.

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8 APPENDIX

8.1 SURVEY QUESTIONNAIRE

USE THE FOLLOWING RESPONSES.

1=SD=STRONGLY DISAGREE

2=D=DISAGREE

3=U=UNDECIDED

4=A=AGREE

5=SA=STRONGLY AGREE

No.	Questions	SD	D	U	A	SA
1.	This organisation shows loyalty and respect towards employees	1	2	3	4	5
2.	People are proud to work for the organisation	1	2	3	4	5
3.	This organisation is committed to excellent customer service	1	2	3	4	5
4.	In This organisation continuous improvement is a priority	1	2	3	4	5
5.	In This organisation people talk a lot about the past	1	2	3	4	5
6.	In This organisation sticking to the basics is important	1	2	3	4	5
7.	This organisation balances the demands of work and personal/family demands	1	2	3	4	5
8.	In This organisation newcomers need to learn the formal rules and procedures	1	2	3	4	5

9.	In This organisation meetings are planned well in advance	1	2	3	4	5
10.	In This organisation decisions are always made in meetings	1	2	3	4	5
11.	In This organisation newcomers are left to find their own way in the organisation	1	2	3	4	5
12.	In This organisation we regularly celebrate our achievements	1	2	3	4	5
13.	In This organisation advancement and promotion is on the basis of job performance only	1	2	3	4	5
14.	People who are successful in This organisation are very ambitious	1	2	3	4	5
15.	People who are successful in This organisation have a real concern for customers	1	2	3	4	5
16.	Successful people in This organisation do not work long hours	1	2	3	4	5
17.	Do the organisation conduct quality culture audits	1	2	3	4	5
18.	Successful managers in This organisation are mavericks, who do things differently	1	2	3	4	5
19.	It is important to wear a suit in This organisation	1	2	3	4	5
20.	My dept has no rules about the use of memos, faxes and letters	1	2	3	4	5
21.	In This organisation experimentation and innovation are stressed, even at the expense of orderliness and consistency	1	2	3	4	5
22.	In This organisation controversial issues appear regularly in the staff magazine	1	2	3	4	5
23.	Everybody in This organisation is cost conscious	1	2	3	4	5
24	In This organisation employees are always well dressed	1	2	3	4	5
25.	People in This organisation talk seriously about the organisation and the job	1	2	3	4	5
26.	In This organisation people are recruited who fit into the culture	1	2	3	4	5

27.	Across This organisation established procedures are important	1 2 3 4 5
28	In This organisation pay and bonus is designed to maximize group/team interests.	1 2 3 4 5
29.	In This organisation successful managers keep the best people in their own departments	1 2 3 4 5
30.	My department has good communications with other teams in the organisation	1 2 3 4 5
31.	In this organisation important information comes from formal communications channels rather than the "grapevine"	1 2 3 4 5
32.	in my department we have the equipment and resources to do our jobs	1 2 3 4 5
33.	My department has good communications with other teams in the organisation	1 2 3 4 5
34.	In the organisation, all staff is involved in continuously reviewing and improving processes relating to quality.	1 2 3 4 5
35.	In the organisation managers make use of everyone's job skills and talents	1 2 3 4 5
36.	Management and employees meeting to discuss and compare their perceptions of roles helped in training process.	1 2 3 4 5
37.	I feel that I have been part of the process for creating future role expectations in the organisation.	1 2 3 4 5
38.	In the organisation is quality managed effectively and efficiently	1 2 3 4 5
39.	Do suppliers provide quality products	1 2 3 4 5
40.	Do think cost of quality can be measured accurately organisation(Both internally and externally)	1 2 3 4 5

41.	In the organisation change is fast and immediate	1 2 3 4 5
42.	Projects are always implemented by the agreed deadline	1 2 3 4 5
43.	Project managers stick to cost, time and quality always without compromising the other.	1 2 3 4 5
44.	Quality in a company cannot be achieved without a firm commitment from the managers	1 2 3 4 5
45.	A company should never be content with the current quality of products and operations but always strive for further improvement even if this means frequent changes in procedures and organisation	1 2 3 4 5
46.	It is essential that all employees are empowered and participate actively in promoting quality	1 2 3 4 5
47.	Quality policy in organisation is available and understood	1 2 3 4 5
48.		1 2 3 4 5

Please list some words you would use to describe the culture of the organisation