IMPLEMENTATION AND ADVANTAGES OF A TOTAL QUALITY MANAGEMENT SYSTEM IN SERVICE RELATED INDUSTRIES

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# IMPLEMENTATION AND ADVANTAGES OF A TOTAL QUALITY MANAGEMENT SYSTEM IN SERVICE RELATED INDUSTRIES

## TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>SYNOPSIS</td>
<td>ii</td>
</tr>
<tr>
<td>SINOPSIS</td>
<td>iv</td>
</tr>
<tr>
<td>LIST OF ACRONYMS</td>
<td>vi</td>
</tr>
<tr>
<td>LIST OF FIGURES</td>
<td>ix</td>
</tr>
<tr>
<td>Chapter 1: ORIENTATION</td>
<td>1-1</td>
</tr>
<tr>
<td>Chapter 2: ISO 9000 IN PERSPECTIVE</td>
<td>2-21</td>
</tr>
<tr>
<td>Chapter 3: A QUALITY MANAGEMENT SYSTEM FOR SERVICES</td>
<td>3-75</td>
</tr>
<tr>
<td>Chapter 4: MANAGING HUMAN RESOURCES</td>
<td>4-112</td>
</tr>
<tr>
<td>BIBLIOGRAPHY</td>
<td>BIB-139</td>
</tr>
</tbody>
</table>
SYNOPSIS

Throughout the world, service organisations and the service element of production orientated organisations are playing an increasingly important role.

A service is distinguished from other products in that it is intangible. An organisation providing a service, often faces the problem that the service delivery fails at the interface between the organisation and its customer. Perceptions of bad service or bad products stay with organisations for many years and for this reason it is important that organisations ensure that the services or products which reach their customers, are of a good quality.

The International Organisation for Standardization (ISO) has set up the ISO 9000 Series as a set of standards which can be used by organisations to assure their customers, both internally and externally, that the organisation will consistently meet their requirements. The ISO 9000 Series is very popular in Europe and is becoming increasingly popular in the United States of America. Many companies are today urging, or even coercing, suppliers to adopt ISO 9000. ISO 9000, if successfully implemented, leads to certification awarded by a certification body, attesting that the organisation has met the quality management requirements determined by the ISO. The ISO standards do not tell the organisation how to design or built a service or product but provide a framework for the organisation to test its services or products, train employees, keep records and fix or prevent defects.

However, it should assist with the implementation of Total Quality Management (TQM) because it provides a documented basis of the organisation's TQM system.

The ISO 9000 Series enables the organisation which wishes to implement such a system to either adopt a stakeholder motivated or a management motivated approach. If the management motivated approach is adopted, management implements a total quality management system into the organisation with the view of continuously improving processes. It then uses the guidelines contained in ISO 9000-1 and the various parts of ISO 9004 to assist them in the implementation of the system.

The control of services is as important as the control of manufactured products. In a service-orientated approach a customer is always placed first and the services must be designed in such a way that they meet customer expectations. Customer expectations must be clearly identified through proper research and
the services must be designed to meet identified needs. However, the services must also be delivered in such a way that they do not fail at the interface between customer and organisation. For this reason, any organisation involved in service rendering must ensure that its staff are properly trained to ensure that the service delivered to the customer meets his/her requirements.

To ensure that customer requirements are met, an organisation can develop an assurance system based on the elements contained in ISO 9001, ISO 9002 or ISO 9003 (customer motivated approach). The organisation must decide which of these international standards applies to its products or services and choose the applicable one.

To ensure that a consistently high quality product or service is supplied to customers, a quality management system must be implemented and documented in a quality manual, work indicators, quality plans and quality procedures. This document then forms the basis for certification by a certification body.

The current set of ISO 9000 standards is to be replaced in the year 2000. Draft standards have been issued, replacing the current ISO 8402, ISO 9000, ISO 9001, ISO 9002, ISO 9003 and the various parts of ISO 9004 into three standards, namely ISO 9000:1998, ISO 9001:2000 and ISO 9004:2000. All these standards adopt a process approach and four quality management processes are identified, namely:

- management responsibility;
- resource management;
- process management; and
- measurement and analysis improvements.

Although ISO 9000 can assist with the implementation and control of a quality management system and thereby help to achieve TQM, it is only a system. Any system is driven by people and the people in the organisation must take ownership of the quality system implemented in the organisation. To do so they must become quality people and this they can only become if they make quality part of their personal lives. Staff should adopt a personal excellence model for self-development and management should implement a process whereby staff make quality part of their personal lives. To ensure that this is done management will have to spent time, effort and money on staff development, including the adoption of a mentoring, rather than a pure training, approach.
Diensteverskaffers en die dienstekomponent van nie-diensteverskaffers speel 'n al belangrik rol dwarsdeur die wereld.

'n Diens kan van 'n produk onderskei word deurdat dit ontasbaar is. 'n Diensteverkaffer het baie keer die probleem dat diens misluk wanneer die kliënt en die organisasie met mekaar in aanraking kom. Die gevolge van swak diens of swak produkte word vir jare ervaar en vir die rede is dit belangrik dat organisasies seker maak dat die dienste of produkte wat hulle kliënte bereik van goeie gehalte is.

Die Internasionale Standaardeorganisasie (ISO) het die sogenaamde ISO 9000 reeks standaarde gevestig wat deur organisasies gebruik kan word om hulle kliënte (beide binne en buite die maatskappy) te verseker dat verskaffers aanhoudend aan hulle vereistes sal voldoen. Die ISO 9000 reeks is baie populêr in Europa en word al meer populêr in die Verenigde State van Amerika. Baie maatskappe dring daarop aan dat hulle verskaffers die ISO standaarde aanvaar en dwing hulle selfs soms om dit te doen. Indien ISO 9000 suksesvol geïmplementeer word, lei dit tot sertifisering deur 'n sertifiseringsliggaam wat bevestig dat die verskaffer aan die kwaliteitsbestuur vereistes, soos neergelê deur die ISO, voldoen.

Die ISO standaarde is nie voorskriflik hoe om 'n produk of diens te ontwikkel, te vervaardig of te lever nie maar vestig 'n raamwerk waarbinne die verskaffer sy dienste of produkte toets, werknemers oplei, rekords hou en gebreke verhinder of regmaak.

Dit behoort egter te help met die implementering van Total Quality Management (TQM) omdat dit 'n TQM stelsel dokumenteer.

Die ISO 9000 reeks help die organisasie wat 'n kwaliteitstelsel wil implementeer om, of 'n bestuursgemotiveerde benadering of 'n kliëntgemotiveerde benadering, te aanvaar. Indien die bestuursgemotiveerde benadering aanvaar word, implementeer bestuur 'n TQM stelsel in die organisasie met die oog daarop om voortdurend prosesse te verbeter. Dit gebruik dan die riglyne wat in ISO 9000-1 en die verskillende dele van ISO 9004 bevat word om dit te help om die stelsel te implementeer.
Die beheer van kwaliteit dienste is net so belangrik as dié van vervaardigde produkte. ‘n Diensgeorienteerde benadering plaas die klient altyd eerste en die diens moet so ontwerp word dat dit aan kliëntvereistes voldoen. Kliëntvereistes moet duidelik bepaal word deur behoorlike marknavoring en die diens moet ontwerp word om aan hierdie behoeftes te voldoen. Die diens moet egter so aangebied word dat dit nie misluk die oomblik as die organisasie en die klient met mekaar in aanraking kom nie. Daarom moet elke organisasie wat betrokke is by dienslewing, verseker dat sy personeel behoorlik opgelei is om te verseker dat die diens wat gelever word aan die klient se vereistes voldoen.

Om te verseker dat daar aan klientvereistes voldoen word, kan ‘n organisasie ‘n kwaliteitstelsel ontwikkel wat gebasseer word op die elemente wat in ISO 9001, ISO 9002 of ISO 9003 vervat word (kliëntgemotiveerde benadering). Die organisasie moet besluit welke van die internasionale standaarde op sy produk of dienste van toepassing is en moet dan die korrekte een kies.

Om te verseker dat volgehou hoë kwaliteit produkte of dienste aan kliënte gelever word, moet ‘n kwaliteitbestuurstelsel geïmplementeer en gedokumenteer word in ‘n kwaliteithandleiding, kwaliteitplanne, kwaliteitprosedures en werksoewings. Hierdie dokumente vorm dan die basis vir sertifisering deur ’n sertifiseringsliggaam.


♦ bestuursverantwoordelikheid;
♦ bronnebestuur;
♦ prosesbestuur; en
♦ meting en analyse verbeterings.

Hoewel ISO 9000 kan help met die implementering en beheer van ‘n kwaliteitbestuurstelsel en kan help om TQM te bereik, bly dit steeds slegs ‘n stelsel. Enige stelsel word deur mense bedryf en die mense in die organisasie moet eienaarskap neem van die kwaliteitstelsel wat in die organisasie geïmplementeer word. Om dit te doen moet hulle kwaliteit mense word en dit kan hulle slegs word as hulle kwaliteit deel van hulle menswees maak. Personeel behoort persoonlike uitnemendheds-modelle te aanvaar ten einde hulself te ontwikkel en bestuur behoort ‘n proses te implementeer, as deel van opleiding, om personeel in die opsig verder te ontwikkel en kwaliteit deel van hulle menswees maak. Om te verseker dat dit gebeur sal bestuur geld, tyd en inspanning op personeelontwikkeling moet spandeer. Bestuur sal ook mentorskap deel van die opleidingsproses moet maak.
**IMPLEMENTATION AND ADVANTAGES OF A TOTAL QUALITY MANAGEMENT SYSTEM IN SERVICE RELATED INDUSTRIES**

### LIST OF ACRONYMS

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>BSI</td>
<td>British Standards Institution.</td>
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<tr>
<td>BEM</td>
<td>Business Excellence Model.</td>
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<tr>
<td>CEO</td>
<td>Chief Executive Officer.</td>
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<tr>
<td>ETQA</td>
<td>Education and Training Quality Authority.</td>
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<tr>
<td>ISO</td>
<td>International Organisation for Standardization.</td>
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<tr>
<td>ISO 9001</td>
<td>ISO 9001:1994, Quality systems – Model for quality assurance in design, development, production, installation and servicing.</td>
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SABEF : South African Business Excellence Foundation.

TQM : Total Quality Management.

USA : United States of America.
IMPLEMENTATION AND ADVANTAGES OF A TOTAL QUALITY MANAGEMENT SYSTEM IN SERVICE RELATED INDUSTRIES

LIST OF FIGURES

CHAPTER 1
Figure 1.1 : Definitions of quality 1-6

CHAPTER 2
Figure 2.1 : Elements of quality assurance 2-30
Figure 2.2 : Quality management process 2-44
Figure 2.3 : ISO 9000's understanding of a process 2-51
Figure 2.4 : Supply chain relationship of processes, with product related and information related flow 2-52
Figure 2.5 : Components of a quality management system Based on ISO 9000 and ISO 10000 2-59
Figure 2.6 : ISO 9004-1, Quality management system 2-62
Figure 2.7 : Quality management system 2-65
Figure 2.8 : Typical quality system document hierarchy 2-67

CHAPTER 3
Figure 3.1 : Quality management process model 3-85
Figure 3.2 : Service quality loop 3-89
Figure 3.3 : Service design and service delivery 3-93
Figure 3.4 : Stages in design and management 3-96
Figure 3.5 : South African business excellence model 3-101

CHAPTER 4
Figure 4.1 : Personal excellence model 4-130
IMPLEMENTATION AND ADVANTAGES OF A TOTAL QUALITY MANAGEMENT SYSTEM IN SERVICE RELATED INDUSTRIES

CHAPTER 1
ORIENTATION

TABLE OF CONTENTS

LIST OF FIGURES ........................................ 1-2

1.1 BACKGROUND TO THE STUDY .................. 1-3
  1.1.1 The importance of services ................. 1-3
  1.1.2 Services and goods .......................... 1-3
  1.1.3 Building a competitive advantage through quality 1-4
  1.1.4 Definition of quality ........................ 1-5
  1.1.5 Introducing total quality management ...... 1-8
  1.1.6 Never underestimate the role of staff ...... 1-11

1.2 PROBLEM STATEMENT .............................. 1-12
  1.2.1 Services under attack ...................... 1-12
  1.2.2 Quality systems are often only linked to manufacturing 1-13
  1.2.3 Difficulties to implement a system ........ 1-13
  1.2.4 Lack in management and staff commitment 1-14
  1.2.5 Posing the questions ....................... 1-14

1.3 RESEARCH OBJECTIVES ......................... 1-16
1.4 RESEARCH METHODOLOGY ...................... 1-17
1.5 IMPORTANCE/BENEFITS OF THE STUDY ........ 1-18
1.6 RESEARCH DESIGN ............................... 1-19
1.7 STRUCTURE OF THE STUDY ...................... 1-19
IMPLEMENTATION AND ADVANTAGES OF A TOTAL QUALITY MANAGEMENT SYSTEM IN SERVICE RELATED INDUSTRIES

CHAPTER 1
ORIENTATION

LIST OF FIGURES

Figure 1.1 : Definitions of quality 1-6
IMPLEMENTATION AND ADVANTAGES OF A TOTAL QUALITY MANAGEMENT SYSTEM IN SERVICE RELATED INDUSTRIES

CHAPTER 1
ORIENTATION

1.1 BACKGROUND TO THE STUDY

1.1.1 THE IMPORTANCE OF SERVICES
World wide service organisations (or the service element of non-service organisations) are playing an increasingly important role. It is estimated that in the USA the service industry accounts for about 76% of its gross national product. (Ivancevich 1997:450). Services are America’s largest business category and one of the brightest spots in the economy. Worldwide there is the same tendency (Ivansevich 1997:464).

1.1.2 SERVICES AND GOODS
Services are distinguished from other goods in that they are intangible. Tangible products can be physically processed. A service is an intangible product that involves human, and in some cases, mechanical effort. In the case of a service it is instantly perishable because service and consumption occur at the same time. A tangible product, on the other hand, can be stored and used at a future time. Products or services can seldom be classified as purely service or purely goods because most products contain both a tangible and an intangible element. Therefore manufacturing, production, mining or any other process usually also provides a service. In many cases companies whom regard themselves as primary manufacturing or production orientated are building a competitive advantage around customer service. Modern customer related businesses (i.e. banking, insurance, and most professions) are trying to gain a competitive advantage by placing emphasis on the service which they render.
1.1.3 BUILDING A COMPETITIVE ADVANTAGE THROUGH QUALITY

In most organisations competition is rife. Organisations compete for customers, for patients, for resources, for funds and for people. In most cases the only competitive advantage which an organisation can gain is through the quality of its service or products. In many cases the quality of the service or product is the one factor which can distinguish one organisation from another and can lead to a definite competitive advantage. Throughout the world many companies and organisations have used quality strategically to win customers, gain resources or funding and be competitive.

By embarking on a quality drive, the organisation improves its performance, productivity, reliability, delivery and price. This principle applies not only to individual companies, but in many cases to industries and even to countries. The most famous example is possibly the Japanese where, after the second world war, Japanese companies learnt that by managing quality they could make huge in-roads into markets traditionally belonging to other countries.

Many companies are today recognising that:

◆ they must build upon the competitive elements of quality, reliability, delivery and price of which quality has become the most important;

◆ they must not take any actions which can let them gain a reputation for poor quality because it often takes a long time to change a reputation;

◆ reputations, good or bad, can quickly become national reputations; and

◆ quality can be learnt like any skill.
They are realising that it is vital for organisational survival that service permeates an organisation from chairperson to caretaker. They realise if there is a high commitment to service the pay-offs are immense if the organisation:

- tries to understand service from customers' perspective;

- commits itself to aligning its systems and procedures with service;

- recruits carefully;

- orients, trains and invests in employees to ensure that they understand what is meant by service and are willing and able to perform accordingly;

- provides consistent, positive modelling of desired attitudes and behaviours;

- gets out of the way of employees and frees them to take decisions and deliver the services; and

- sets goals and standards, provides feedback and rewards desired behaviour.

1.1.4 DEFINITION OF QUALITY

The term quality has a certain elusive element to it. Pirsig 1989:187 possibly sums up this elusiveness accurately when he states: "Quality ... You know what it is, yet you don't know what it is. But that's self-contradictory. But some things are better than others, that is they have more quality. But when you try to say what quality is, apart from things that have it, it all goes poof! There's nothing to talk about. But if you can't say what quality is, how do you know what it is, or how do you know that it even exists? If no one knows what it is, then for all practical purposes it doesn't exist at all. But for all practical reasons it really does exist. What else are the grades based on? Why would people pay fortunes for some things, and throw others in the trash pile?"
Obviously, some things are better than others – but what's the betterness? So round and round you go, spinning wheels and nowhere finding any place to get traction. What the hell is quality? What is it?"

Writers have defined quality in various ways, from manufacturing based to transcendent. Figure 1.1 sets out some definitions which have been given.

**Figure 1.1 Definitions of Quality**

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<tr>
<td>1.</td>
<td><strong>Manufacturing-based</strong></td>
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<td></td>
<td>&quot;Quality [means] conformance to requirements.&quot; [Philip B. Crosby]</td>
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<td></td>
<td>&quot;Quality is the degree to which a specific product conforms to a design or specification.&quot; [Harold L. Gilmore]</td>
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<td>2.</td>
<td><strong>Customer-based</strong></td>
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<td>&quot;Quality is fitness for use.&quot; [J.M. Juran]</td>
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<td>&quot;Quality is performance leadership in meeting customer requirements by doing the right things right the first time.&quot; [Westinghouse]</td>
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<td></td>
<td>&quot;Quality is meeting customer expectations. The Quality Improvement Process is a set of principles, policies, support structures, and practices designed to continually improve the efficiency and effectiveness of our way of life.&quot; [AT&amp;T]</td>
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<td></td>
<td>&quot;You achieve customer satisfaction when you sell merchandise that doesn't come back and a customer who does.&quot; [Stanley Marcus]</td>
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<td>3.</td>
<td><strong>Product-based</strong></td>
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<td>&quot;Differences in quality amount to differences in the question of some desired ingredient or attribute.&quot; [Lawrence Abbot]</td>
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<td></td>
<td>&quot;Quality refers to the amount of the unpriced attribute contained in each unit of the priced attribute.&quot; [Keith B. Leffler]</td>
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4. **Value-based**

"Quality is the degree of excellence at an acceptable price and the control of variability at an acceptable cost."  
Robert A. Broh

"Quality means best for certain customer conditions. These conditions are (a) the actual use and (b) the selling price of the product."  
Armand V. Freigenbaum

5. **Transcendent**

"Quality is neither mind nor matter, but a third entity independent of the other two... even though Quality cannot be denied, you know what it is."  
Robert Pirsig

“A condition of excellence implying fine quality as distinct from poor quality... Quality is achieving or reaching the highest standard as against being satisfied with the sloppy or fraudulent."  
Barbara W. Tuchman

Source: Ivancevich 1997:10

Perhaps the underlying message behind all the definitions can, in the words of Pirsig (1989:253) be summarised as follows:

**Quality is the response of an organism to its environment.**

An assessment of quality will therefore, inherently, have to determine whether customer requirements are met. Any organisation will, in an evaluation of quality, have to answer questions such as:

- Are the needs and expectations of our customers met?; and
- How is our organisation responding to the changing needs and expectations of our customers?
In services, customers are more intimately involved in the service delivery process than in manufacturing processes. Consumer criteria for service quality are very important. In the case of a service the customer's judgement is as important than in the case of a manufactured product.

Quality control of a service entails watching a process unfold and evaluating it against the consumer's judgement. The only completely valid standard of comparison is the customer's level of satisfaction, that's a perception, something appreciably more slippery to measure than the physical dimensions of a product (Romzekem & Schaaf 1989:14).

But consumers also judge service quality by taking aspects such as reliability, responsiveness, assurance and empathy into account.

1.1.5 INTRODUCING TOTAL QUALITY MANAGEMENT

To enable organisations to implement a systematic process of quality TQM has become increasingly popular. TQM is sometimes defined as creating an organisational culture committed to the continuous improvement of skills, teamwork, processes, product service quality and customer satisfaction. It is widely accepted that organisational culture is important for TQM to succeed. Personal commitment to systematic, continuous improvement needs to become an everyday matter. In this regard, concepts like:

- do it right the first time;
- be customer centered;
- make continuous improvements a way of life; and
- build teamwork and empowerment,

have all become part of TQM. Benchmarking and TQM process improvement tools such as flowcharts, cause and effect management, pareto analysis, control charts,
histograms, scatter diagrams and run charts have all become accepted methodologies to implement a TQM process.

Ceronio 1996:130-131 mentions 11 areas within an organisation which require alignment when determining the requirements for TQM, namely:

- quality begins with delighting all customers;
- the quality organisation has learnt how to listen to customers and helps customers to identify and articulate their needs;
- the quality organisation leads customers (internal and external) into the future by being proactive by anticipating future needs;
- flawless, customer-pleasing products and services result from well planned systems and processes that function faultlessly;
- in a quality organisation, the vision, values, systems, and procedures are consistent and complement each other;
- everyone in the quality organisation works in concert;
- teamwork in quality organisations is based on commitment to the customer and to continuous improvement;
- in the quality organisation everyone knows their jobs;
- the quality organisation uses data and a scientific approach to plan work, solve problems, make decisions and pursue improvements;
- the quality organisation develops a working partnership with its suppliers and customers; and
- the culture of the quality organisation supports and nourishes the improvement effort of every team and individual in the organisation under the visible, committed leadership of top management.

One of the leaders in the creation of more proactive work environments was W. Edwards Deming, who laid down 14 points for improving productivity and quality. The premise of Deming's ideas is that better quality eventually means more jobs. He
believes that quality improvement is a powerful engine driving out waste and inefficiency and that everybody gains if quality improves. His philosophy is that customers always come first, that instead of blaming the person the system must be fixed and that informed decisions must be taken on the basis of hard data. The 14 points that constitute the core of Deming's management are set out below:

1. Constant purpose (strive for continuous improvement in product and service to remain competitive by innovation, research, constant improvement and maintenance).

2. A new philosophy (management needs to awaken to the realities of a new economic age by demanding wiser use of all resources).

3. Give up on quality by inspection (inspecting for faulty products is unnecessary if quality is built in in processes from the beginning).

4. Avoid the constant search for lowest cost suppliers (build long term loyal and trusting relationships with single suppliers).

5. Seek continuous improvement (constantly improve production processes and service for greater productivity at lower cost).

6. Train everyone (make sure people have a clear idea of how to do their jobs).

7. Provide real leadership (leading is more important than telling).

8. Drive fear out of the workplace (let people ask questions about why and how. This makes them more secure).

9. Promote team work (let departments work together).
10. Avoid slogans and targets (use control charts and other processes to give directions and encouragement).

11. Get rid of numerical quotas (he rejects the practice of management by objectives and advocates that quality methods must be concentrated on).

12. Remove barriers that stifle pride in workmanship (i.e. poor management, inadequate instructions, faulty equipment and pressure to achieve numerical goals).

13. Education and self improvement are important (management and the workforce must be educated in new methods, including teamwork and statistical techniques).

14. Transformation of everyone's job (each level in the organisation is important for transformation to be effective).

(Deming 1986:23-96).

TQM therefore goes far beyond the philosophy and practices of quality assurance, i.e. assuring customers. It is a strategy which is concerned with changing the fundamental beliefs, values and attitudes of the organisation, harnessing the enthusiasm and participation by everyone, whether manufacturing or service orientated, towards an overall idea of “right first time” (Atkinson & Naden 1989:6).

1.1.6 NEVER UNDERESTIMATE THE ROLE OF STAFF

A culture of quality service must be developed in an organisation. However, when asking opinions about a company nothing seems to stir peoples' passions more than their dealings with employees. Whether it is a selfish flight attendant or a clueless switchboard operator, the calibre of a firm's frontline personnel has a huge impact on
its image. In service industries, almost by definition, helpful employees are the key to success.

In a manufacturing environment substantial time, effort and money goes into the planning of processes, purchasing the right equipment and maintaining and renewing it. In a service environment time, effort and money must be spent on staff development as this is, in fact, the "equipment" which is used to generate income. In a service environment management must therefore spend more time on developing and renewing human resources as the effective utilisation of these resources will increase the profitability of the service organisation.

Introducing a TQM system in a service organisation will not automatically lead to an improvement in service provision. The system, however, provides a basis against which performance can be measured.

The "tools and machines" are used, not only to implement the system, but to "produce" the right service, of the people working in the organisation, including management. In a service orientated organisation staff, and its management, is therefore vitally important.

1.2. PROBLEM STATEMENT

1.2.1 SERVICES UNDER ATTACK

The world economy has become dominated by services. Currently the USA is undergoing its next wave of restructuring, this time in the service sector. Deregulation and foreign investment has meant that USA service organisations have been faced with increased competition. Critics have warned these organisations they must prepare for dramatic change and improve productivity. Workers will have to become
more productive and organisations will have to respond to heightened competition through quality and productivity. (Ivancevich 1997:450).

1.2.2 QUALITY SYSTEMS ARE OFTEN ONLY LINKED TO MANUFACTURING

Emphasis on quality was originally aimed at improving the competitive advantage of manufacturing concerns by developing systems, which eliminated or reduced defects in products. The aim was to prevent such defects and the techniques which were developed were specifically aimed at preventing bad and under quality products reaching the public. Translating industrial techniques of quality control into the service industry idiom has not proved to be an easy task. In the United States an institution such as the Bank Marketing Association sought to bridge this gap when it created the Quality Focus Institute. Many service organisations believe that it is an enormous problem to improve service quality. But the reality is dawning that, as in the case of manufacturing concerns, systems must be developed by service related organisations to improve the quality of service.

1.2.3 DIFFICULTIES TO IMPLEMENT A SYSTEM

Many organisations falsely believe that it is difficult to implement a system of improved quality. Many are aware of the advantages of benchmarking and the tools which Deming have developed but find it extremely difficult to implement these processes into a service orientated organisation. Tools such as the ISO 9000 series developed by the ISO are seen as being difficult to implement and many organisations are not aware of the guidelines, such as ISO 9004-1 and ISO 9004-2, developed by the ISO to assist with the introduction of Quality Management Systems complying with the standards contained in ISO 9001, 9002 and 9003.
1.2.4 LACK OF MANAGEMENT AND STAFF COMMITMENT

It is today generally accepted that the drive towards quality must have a commitment at all layers in an organisation. More and more emphasis is placed on the chief executive of an organisation driving the thrust towards quality. Ongoing commitment of management is, however, a difficulty experienced by many organisations which endeavour to implement a quality system. However, as important, if not more, is a commitment of all staff towards quality. In many organisations lip service is rendered to service quality but very little of this becomes part of the actual conduct of employees. There have been moves towards more quantifiable measurement of outcomes and tighter management control. In addition, emphasis is being placed on employee empowerment. It has been suggested that there must be a thorough management commitment to empower employees to take greater responsibility for problem solving and decision making with some reduction in organisational hierarchy. Even though many organisations are introducing quality-improving techniques the real quality issue of today, namely the empowering of a company's workforce, has been largely ignored. Approaches such as respecting people, customer service relations and teamwork have all been advocated, but even though adopted in many organisations, the rendering of quality services is still lacking in many such organisations.

1.2.5 POSING THE QUESTIONS

The question which is to be addressed in this study is whether the adoption of a quality system for service related activities based on the principles of ISO 9000 and linked with a program of changing human behaviour in an organisation, can benefit a service organisation and what these benefits will be.

In this regard the advantages of an organised quality system will be discussed but the question is posed whether a system alone is good enough. Creating an awareness amongst employees of quality, combined with a systematic approach of improving quality of life of employees, should be part of the implementation of the system.
Service must become an integral part of the philosophy and culture of the organisation, but quality must also be made part of the human behaviour of each employee in an organisation.

The thrust of the study is therefore:

- to show that a successful quality system within a service organisation should be implemented following a systematic approach, such as that set out in ISO 9000; and

- to show that staff must become part of this process, not only by creating an awareness about the importance of quality within the organisation aiming at meeting customers' needs, but to take the process further and to make quality part of the personal lives of employees.

Historically employees are encouraged to become part of the quality system of the organisation and this he/she does while at work. However, at home the way the person conducts his or her own life might be far removed from that expected from a quality person.

You cannot have a quality person in one environment (work) and a non quality person in another environment (home). Just as quality and proper customer service must become part of an organisation's culture, so it must become part of the culture of the human beings working in the organisation. It is, today, generally accepted that a successful organisation must have a quality system and that there must be a commitment of staff and management to let it work. However, implementation has often failed, not because of the lack of an adequate system, but because of the lack of perceived commitment of staff. In this study it is pointed out that the perceived non-commitment is often the result of the fact that quality is not part of a way of life of employees and managers and until it is accepted that quality must become part of the
personal lives of employees and management, management will experience difficulties to implement TQM in any organisation.

The implementation of a system which aims at personal quality development of employees and managers will require a huge commitment to training from employers and will also require a change in attitudes on the training to be done.

1.3. RESEARCH OBJECTIVES

The overall objective of this study is to research the implementation of a Total Quality Management process in service activities, using the ISO 9000 standards and guidelines as foundation and to highlight the fact that quality people are needed to drive quality.

The secondary objectives are to:

1. determine how ISO 9000, particularly the guidelines contained in ISO 9004-1 and ISO 9004-2, can assist a service organisation to implement a TQM system;

2. outline how the “process” approach adopted in the draft ISO 9000 standards, which are to be implemented in 2000, can assist the service organisation to adopt a people driven approach in the implementation of a TQM system;

3. develop a process by which staff members and management make the principles embodied in a total quality management system, as embodied in ISO 9000 part of their own decision making process through a process of continuous self development and training thereby ensuring that quality people drive quality implementation in an organisation.
This investigation therefore adopts an integrated approach linking a formal system based on ISO 9000 with sustained personal development of staff.

1.4. RESEARCH METHODOLOGY

There are many articles and books written about service and quality. In most cases these articles and books:

- list the requirements for a quality system;
- list the advantages and disadvantages of TQM;
- point out that ISO 9000 is no longer a fad but a competitive advantage;
- deal with the methods to implement a quality system within an organisation; and
- define the advantages of developing and empowering employees to become part of the TQM process.

However, a more integrated approach must be adopted linking the implementation of TQM with personal development of staff through training, concentrating on aspects such as personal values, changing attitudes, the importance of personal quality decision making (i.e. deciding on whether a decision is a quality decision) as part of the decision making process of each individual and linking this process to the quality policies of the organisation.

In addition, a literature survey was done:

- at the library and library data base of the RAU; and
- using computer based information gained through the Internet.

Most literature make the point that service industries and service-related activities of non-service organisations are growing rapidly. Some articles and books have touched on internal service quality and the psychosocial work environment (Edvardsson, Larsson & Setterling 1997:252-263). Others have touched on aspects such as
teamwork processes and empowering a company's workforce (Carbone, 1993:57). Others deal with identifying and eliminating errors and improving processes to meet customer needs and establishing a clear procedure for handling complaints and appropriate corrective action while others have suggested that desired behaviour must be rewarded (Descza & Amaent 1992:3-9).

It is generally accepted that customer perception is an important determinant of service quality evaluation and that customer satisfaction is of the highest importance.

The bridge between the organisation and the customer is, in most cases, staff of the organisation and the task facing management is to ensure that this bridge remains firm. Few studies specifically address the strengthening of this bridge apart from saying that training is important. In this study, attention is given to the strengthening of the bridge through a process of developing the personal life qualities of staff.

1.5. IMPORTANCE / BENEFITS OF THE STUDY

Benefits resulting from the study will be the following:

♦ the ISO 9000 series of standards will be placed in a logical framework;

♦ the main requirements of ISO 9000 for the implementation of a quality management system will be discussed;

♦ the principles of ISO 9000 will be fitted into a practical management system for the service industry; and

♦ guidelines for a personal quality development system will be established.
1.6. RESEARCH DESIGN
The ISO 9000 series, articles and books dealing with the benefits of the implementation of quality systems and articles and books dealing with the human element and the effect thereof on the rendering of quality service are used as basis for this study.

A two-folded approach is therefore followed, namely:

♦ a study of existing literature and an analysis of the literature with a view of developing a model for the service industry based on the principles of ISO 9000; and

♦ identifying methods by which the staff of the organisation can play a bigger role in the quality drive of the organisation by becoming quality people themselves.

1.7. STRUCTURE OF THE STUDY
The structure of the study is related to the objectives to be achieved. The structure of this study follows a movement from gaining an understanding of ISO 9000 forming the basis to implement a TQM process, to developing staff to assist with such implementation and the advantages such an approach offers to the organisation and staff.

The study follows the following format:

♦ CHAPTER 1: Orientation

♦ CHAPTER 2: ISO 9000 in perspective
In this chapter the history of ISO 9000 is discussed. The various components of the ISO 9000 series is discussed and the series is divided into those elements and
guidelines dealing with external quality assurance and those dealing with internal
quality assurance.

♦ CHAPTER 3: A quality management system for services
The nature and characteristics of services, the need for quality service to gain a
competitive edge, the need for better quality services to improve productivity and the
service challenges of the 90's and beyond are discussed. Attention is given to how
ISO 9001:2000 and ISO 9004:2000 can assist in the development of a quality system
for service related activities.

♦ CHAPTER 4: Managing human resources
Studies have shown that perceptions of bad quality service are, in most cases, the
result of a failure in the interaction between customer and staff of the service provider.
ISO 9000 is there to help an organisation develop a TQM system. However, the
system, on its own, is of very little benefit unless there is total commitment by staff
and management to make it work. This commitment must be continuous. For it to be
continuous, quality must become a way of life for management and staff as this is the
only way to ensure that there is a continuous trend to quality improvement. A process
must therefore be implemented to develop staff holistically and to build quality of life
into such a process.

The requirements to develop staff and management to become quality people are
highlighted in this chapter. It is emphasised that for management and staff to
understand and become part of a quality system in any organisation they require more
than knowledge of the quality system, quality manuals and operations of the
organisations or even a commitment to quality. It is also emphasised that quality must
become part of the decision making process of each person and that a process must
be developed by the organisation in terms of which staff must develop a quality lifestyle
to ensure that staff render quality service.
IMPLEMENTATION AND ADVANTAGES OF A TOTAL QUALITY MANAGEMENT SYSTEM IN SERVICE RELATED INDUSTRIES

CHAPTER 2
ISO 9000 IN PERSPECTIVE

TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>SYNOPSIS</td>
<td></td>
<td>2-23</td>
</tr>
<tr>
<td>LIST OF FIGURES</td>
<td></td>
<td>2-24</td>
</tr>
<tr>
<td>2.1</td>
<td>INTRODUCTION</td>
<td>2-25</td>
</tr>
<tr>
<td>2.2</td>
<td>THE HISTORY OF ISO 9000</td>
<td>2-26</td>
</tr>
<tr>
<td>2.3</td>
<td>APPROACH ADOPTED IN ISO 9000</td>
<td>2-28</td>
</tr>
<tr>
<td>2.3.1</td>
<td>External quality assurance for service (Stakeholder approach)</td>
<td>2-29</td>
</tr>
<tr>
<td>2.3.2</td>
<td>Internal quality assurance for service (Management approach)</td>
<td>2-42</td>
</tr>
<tr>
<td>2.4</td>
<td>IMPLEMENTING A TQM SYSTEM WITHIN THE FRAMEWORK OF ISO 9000</td>
<td>2-47</td>
</tr>
<tr>
<td>2.4.1</td>
<td>ISO 9000-1 as roadmap for ISO 9000 family</td>
<td>2-47</td>
</tr>
<tr>
<td>2.4.2</td>
<td>Most important elements of ISO 9000-1</td>
<td>2-49</td>
</tr>
<tr>
<td>2.5</td>
<td>THE MANAGEMENT MOTIVATED APPROACH – THE BETTER SYSTEM</td>
<td>2-58</td>
</tr>
<tr>
<td>2.6</td>
<td>USING ISO 9004-1:1994 AS BASIS FOR THE MANAGEMENT MOTIVATED APPROACH</td>
<td>2-60</td>
</tr>
<tr>
<td>2.7</td>
<td>DOCUMENT THE SYSTEM</td>
<td>2-65</td>
</tr>
<tr>
<td>2.8</td>
<td>ADVANTAGES OF A QUALITY MANAGEMENT SYSTEM BASED ON ISO 9000 AND ISO 10000</td>
<td>2-68</td>
</tr>
<tr>
<td>2.8.1</td>
<td>A structured basis</td>
<td>2-68</td>
</tr>
<tr>
<td>2.8.2</td>
<td>Meeting customer needs</td>
<td>2-70</td>
</tr>
<tr>
<td>2.8.3</td>
<td>Placing the customer in the centre</td>
<td>2-70</td>
</tr>
</tbody>
</table>
2.8.4 People are important 2-71
2.8.5 Certification / registration 2-72
2.8.6 Management commitment 2-72
2.8.7 Defining processes 2-72
2.8.8 Continuous improvement 2-72

2.9 CONCLUSION 2-73

2.10 SUMMARY 2-73
IMPLEMENTATION AND ADVANTAGES OF A TOTAL QUALITY MANAGEMENT SYSTEM IN SERVICE RELATED INDUSTRIES

CHAPTER 2

ISO 9000 IN PERSPECTIVE

SYNOPSIS

An organisation which wishes to introduce a quality management system should aim to achieve at least five goals, namely:

- focussing on the customer;
- focussing its resources;
- introducing an incentive-based reward system;
- striving for continuous improvement; and
- committing the CEO and top management to the process.

To assist organisations to implement a total quality management system, the ISO published the ISO 9000 set of standards which are aimed at providing external and internal customers of the organisation with the assurance that the organisation can consistently provide a product or service conforming to set requirements.

The ISO 9000 set of standards enables organisations to adopt a stakeholder motivated or management motivated approach in the development of a quality management system. The stakeholder motivated approach is normally customer (demand) driven and the organisation develops a set of standards which assures its customers that it will meet their specific quality standards. In the case of the management motivated approach the organisation is proactive and develops a total quality management system aimed at meeting all its needs with the view of achieving TQM. Any organisation which develops a quality management system should reduce it to writing in a quality manual. A well-structured and documented quality system offer many advantages to an organisation.
IMPLEMENTATION AND ADVANTAGES OF A TOTAL QUALITY MANAGEMENT SYSTEM IN SERVICE RELATED INDUSTRIES

CHAPTER 2
ISO 9000 IN PERSPECTIVE

LIST OF FIGURES

<table>
<thead>
<tr>
<th>Figure</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Figure 2.1</td>
<td>Elements of quality assurance</td>
<td>2-30</td>
</tr>
<tr>
<td>Figure 2.2</td>
<td>Quality management process</td>
<td>2-44</td>
</tr>
<tr>
<td>Figure 2.3</td>
<td>ISO 9000's understanding of a process</td>
<td>2-51</td>
</tr>
<tr>
<td>Figure 2.4</td>
<td>Supply chain relationship of processes, with product related and information related flow</td>
<td>2-52</td>
</tr>
<tr>
<td>Figure 2.5</td>
<td>Components of a quality management system based on ISO 9000 and ISO 10000</td>
<td>2-59</td>
</tr>
<tr>
<td>Figure 2.6</td>
<td>ISO 9004-1, Quality management system</td>
<td>2-62</td>
</tr>
<tr>
<td>Figure 2.7</td>
<td>Quality management system</td>
<td>2-65</td>
</tr>
<tr>
<td>Figure 2.8</td>
<td>Typical quality system document hierarchy</td>
<td>2-67</td>
</tr>
</tbody>
</table>
CHAPTER 2

ISO 9000 IN PERSPECTIVE

2.1 INTRODUCTION

No organisation can introduce a TQM system unless it takes a definite decision to do so and unless it places procedures in place to ensure that the system is properly implemented and controlled. Numerous studies have been done which highlight the advantages of a TQM process. In essence TQM is the implementation of a continuous improvement process to address inefficiencies at all levels of the organisation.

It is a powerful vehicle in the transition from the traditional price, product or manufacturing focus to quality strategies driven by customer expectations. Improving quality and adopting a customer-focussed orientation are so fundamental that they must take root in the very essence of the organisation (Ceronio 1996:ii).

Ceronio (1996:1-3, quoting Klein 1991:83-84) lists five goals which must be achieved for the TQM process to be successful:

- customer focus (i.e. everyone must know what is required to satisfy internal and external customer needs);
- focussed resources (i.e. all significant processes and systems are in control and all resources are targeted to satisfy all customer needs);
rewards system (i.e. real rewards and incentives are structured so that achieving process control and customer satisfaction result in benefits for all employees of the organisation);

continuous improvement (i.e. systems are in place to continuously improve all processes in the direction of further meeting customers' present and future needs);

CEO commitment (the CEO is visibly committed to the TQM process and his/her leadership creates an environment conducive to continuous improvement).

It is not the aim of the study to reinvent well defined and documented studies such as those of Ceronio, but to discuss the practical implementation of TQM, using the tools provided in ISO 9000, and to investigate whether these tools will ultimately deliver a process which meets the five requirements mentioned above.

For TQM to be successful it must be extended to all parts of an organisation. In this process, people are vitally important. For people to become an effective part of the TQM process they must understand basic quality terms and must be able to apply them in their working environment.

People, however, in most cases, need a system according to which they can work, which system also provides assurance to the customer of the organisation that it has procedures in place which will ensure that customer needs are met. ISO 9000 provides such guidelines.

2.2 THE HISTORY OF ISO 9000
Consumers are not interested in the level of quality intended by the manufacturer or supplier, but are more interested in the maintenance of quality levels and want assurance that the product or service they are buying truly meets the quality standards they were initially offered. Because of this requirement, manufacturers and the
providers of services have to give attention to the quality of their product or service. Consumers want some form of assurance that the product or service they get meets their requirements. On the other hand, manufacturers sit with the problem that many modern day products are extremely difficult to assemble and, in many cases, make use of high technology components. The chances for faults creeping into products and incorrect or faulty components, or components not meeting specific requirements being assembled into other products, are extremely large.

Service providers have the additional problem that service rendering often fails at the interaction phase between customer and supplier, the result being that the customers’ perception is that bad service is given.

The modern European economies have a potential market place of 350 to 400 million people and in America there is a potential market of 250 million people. Selling into these markets therefore becomes extremely competitive for organisations and this means an increased reliance on internationally agreed quality procedures and recommendations in order to gain a foothold in these markets. This is where ISO 9000 becomes important.

Many organisations manufacture products or render services which are sold in many countries all over the world. To ensure their survival and also to ensure that consumers get what they need, the drive towards an internationally accepted quality system therefore became inevitable.

In countries such as the United Kingdom and the United States of America, various agencies started publishing a number of guidelines to quality assurance. In the United Kingdom, the BSI published a number of guides to quality assurance and published a document known as the BS5750 Series of Standards, supplying guidelines for internal quality management as well as external quality assurance and these were accepted by
manufacturers, suppliers and purchasers as being a reasonable minimum level of quality assurance that they could be expected to work to.

In the United States, they started working on the ANSI90 series. Other European countries also started developing their own sets of standards. Many of these countries broadly based their standards on that of BS5750.

In 1987 the ISO published their ISO 9000 (1987) set of standards which were heavily based on BS5750. When ISO 9000 was first published in 1987, it was ratified by the United Kingdom and republished by the BSI as the new BS5750 (1987) standard for quality management systems. Most European countries very quickly followed it.

In 1994, the ISO published the latest ISO 9000 series documents and at present this is the most recent publication. The next revision of ISO 9000 is scheduled for the year 2000 and draft revisions have been issued for comment.

2.3 APPROACH ADOPTED IN ISO 9000
ISO 9000 series identifies the basic disciplines of a quality management system that can be used by manufacturers, service providers, suppliers, distributors and end-users (large or small).

Suppliers can elect to use the ISO 9000 family in either a management motivated or stakeholder motivated way. The stakeholder motivated approach is the predominant practice in many nations and industry/economic centres. In that case, the supplier initially implements a quality system in response to immediate demands by customers or stakeholders. The selected quality system will conform to the requirements of ISO 9001, ISO 9002 or ISO 9003, as applicable. The effort is driven by external stakeholders with the supplier's management reacting to the demands of these stakeholders.
The management motivated approach normally results where the supplier's own management initiates the effort in anticipation of emerging market place needs. In this route, the various parts of ISO 9004 are normally used.

2.3.1 EXTERNAL QUALITY ASSURANCE FOR SERVICE (STAKEHOLDER APPROACH)

Quality Assurance is defined in paragraph 3.5 of ISO 8402 as "All the planned and systematic activities implemented within the quality system and demonstrated as needed to provide adequate confidence that an entity will fulfil the requirements for quality."

Figure 2.1 below graphically demonstrates the various elements contained in this definition.
Implement quality management by defining:
- quality policy;
- quality objectives; and
- responsibilities.

Implementing:
- quality planning;
- quality control;
- quality assurance; and
- quality improvement.

Meeting customer needs:
- qualitative; and
- quantitative.

Figure 2.1     Elements of quality assurance

Source: Own compilation
Quality Assurance is therefore the planned and systematic activities implemented within the quality system which provide confidence to the customer that the entity will fulfil the requirements for quality.

♦ The quality system
This involves planning and implementing organisational structures, procedures, processes and resources with the aim of implementing quality management. Quality management is those activities which determine quality policies, quality objectives and defining responsibilities. This the organisation achieves through quality planning, quality control, quality assurance and quality improvement.

♦ The entity
The entity can be a process, a product, an organisation, a system, a person or any combination of them.

♦ Requirements for quality
Customer needs, whether qualitative or quantitative must be met.

Where the stakeholder approach is adopted, the implementation of a comprehensive quality management system through detailed definitions of quality policies, objectives and responsibilities, through the implementation of quality planning, quality control, quality assurance and quality management, will not be embarked on. The organisation will concentrate on those elements which give assurance to customers that their requirements will be met.

2.3.1.1 THE NEED FOR QUALITY ASSURANCE
The stakeholder approach aims at implementing a quality system in response to immediate demands of customers. Customers (both within and outside the organisation) need confidence that the product or service which they receive is of a constantly high standard and will at all times meet their needs. Unless an organisation
develops methodologies to ensure that constantly high quality services or products are given to customers, there can not be such an assurance.

2.3.1.2 GIVING ASSURANCE TO CUSTOMERS

The only way in which any organisation can assure constantly good quality services or products to its customers, is to put a system in place which will ensure that products or services of a constantly high quality are supplied or rendered to customers. In many businesses, systems (whether formal or informal) are in place but in many cases they are not properly documented. A quality system identifies those processes and features which can help a business constantly meet its customer requirements. A system is about writing down how things are to be done, recording results to show what were done, evaluating how and why things are done and taking corrective action.

This the organisation achieves by developing a quality manual which states the organisation's quality objectives and describes its quality system. It will reflect documented quality system procedures which form the basic documentation used for the overall planning and administration of activities which impact on quality. However, in the case of the stakeholder approach the quality manual will be limited in that it focuses on those aspects which are needed to assure external customers that their needs will be met.

A well-structured quality system can:

- lead to improvement of performance, co-ordination and productivity within an organisation;
- help the organisation to focus on its objectives and customer expectations;
- meet customers' stated and implied needs;
- give management and staff confidence that intended qualities are being achieved and maintained;
- give objective evidence to customers of the organisation's capabilities;
open new market opportunities;
lead to certification or registration with a certification body within a country; and
enable smaller organisations to compete on the same basis as larger organisations.

However, if the organisation adopts the stakeholder approach, its quality system may be limited to those aspects which will satisfy the specific needs of external customers and a detailed quality management system may then not be put in place. In that case a comprehensive management system will not be implemented.

2.3.1.3 ISO REQUIREMENTS FOR QUALITY ASSURANCE
In the ISO 9000 series, three standards have been established for external quality assurance, namely ISO 9001, ISO 9002 and ISO 9003.

♦ ISO 9001
This is the model for quality assurance in design, development, production, installation and servicing.

♦ ISO 9002
This is the model for quality assurance in production, installation and servicing. It therefore does not apply to entities which do not have a design or development element.

♦ ISO 9003
This is the model which applies to quality assurance in final inspection and test (i.e. there are therefore no design, development or production element).

Obviously, the guidelines contained in ISO 9001 are the most comprehensive. ISO 9002 is less comprehensive than ISO 9001 in that it does not deal with design or
development and ISO 9003 is, in turn, less comprehensive than either ISO 9001 or ISO 9002 in that it does not deal with design, development or production.

ISO 9000-2 provides generic guidelines for the application of ISO 9001, ISO 9002 and ISO 9003. The service organisation wishing to use any of these standards for its quality management and quality assurance system must:

- determine which of the standards apply to its service, i.e. is it involved in the design of services (ISO 9001) or only the provisioning of services (ISO 9002). If its services are only a component of a manufacturing process (i.e. there is a high product content) and design of services is not involved provision must be made for rendering quality service; and

- determine which of the requirements apply to it (does it use inspection, measuring or test equipment). Those procedures which do not apply to it must not be incorporated into its system.

ISO 9001 lists twenty requirements which apply to a quality system with the view of giving external quality assurance. These are as follows:

1. **MANAGEMENT RESPONSIBILITY**

The responsibility of management is to develop and define a quality policy. They must ensure that all employees are trained so that they understand the objectives of the organisation and the commitment required to achieve these objectives.

The organisation must define responsibility and authority to people to make decisions that control all the elements of the quality system and they must make the necessary resources available to implement the quality policy and achieve its objectives.
A management representative with delegated authority must be appointed for arranging and overseeing the working of the quality system.

Management with executive responsibility must review the quality system from time to time.

2. QUALITY SYSTEM
To ensure that the quality system is effective, a quality manual must be developed. This manual must include the quality policy, describe the organisation and identify the quality system procedures with appropriate cross-references to more detailed documentation.

Documented quality system procedures are required for the applicable requirements of ISO 9001, ISO 9002 and ISO 9003 and should be consistent with the supplier's quality policy.

The supplier must show that planning activities have been performed and that means are established by which the requirements for quality will be met. ISO 10005 provides specific guidance on quality plans.

3. CONTRACT REVIEW
This is one of the supplier's primary interfaces with its customers. Documented procedures must be laid down which must include a review of customer requirements (i.e. as contained in its request for a tender, contract or order) and how customer requirements are reviewed and communicated within the organisation. Contract review is done prior to accepting a contract and/or order. It therefore implies that there must be a thorough understanding of the customer's needs from the initial contact, during the tendering process, receiving orders, the formulation of the contract or order and in all subsequent stages. The main point is that the supplier must understand the requirements of the customer. Top priority must be given to identifying customer
requirements. All staff in the organisation must know what customers expect from them and management must be confident that staff, particularly those involved at the interface with customers, can deliver the promises of the organisation.

Differences with customers must be resolved as quickly as possible. When customers' requirements change, it is advisable to reassess the contract review procedures.

4. DESIGN CONTROL
Services must be designed properly. Essential quality aspects and any legal or regulatory requirements such as safety, performance and dependability of a product must be established during the design and development phase. Deficient design of a product or service can be a major cause of quality problems.

5. DOCUMENT AND DATA CONTROL
Documents and data pertinent to design, purchasing, processing, quality standards, inspection of materials and other documents applying to the quality system must be properly stored and controlled. In addition, the quality system should provide clear and precise control procedures and define responsibility for approval, issue, distribution and administration of internal and external documentation and data (which may also not be quality related), including the removal or identification of obsolete documents. Controls must be imposed for the preparation, issue, handling and recording of changes to documents.

6. PURCHASING
The supplier of a quality product or service, in turn, needs quality products and services from its suppliers. For this reason, specific procedures must be laid down to control purchasing. These include evaluation of sub-contractors, proper ordering procedures and verification of purchased products/services.
7. **CONTROL OF CUSTOMER SUPPLIED PRODUCTS OR SERVICES**

An organisation must place mechanisms in place for the examination of products received from its suppliers, including checking quality, quantity, detecting any damaged or non-conforming products and periodic inspection during storage to detect any signs of deterioration and must also check whether contractual requirements have been met.

8. **PRODUCT IDENTIFICATION AND TRACEABILITY**

In some cases it is important for an organisation to keep track of products which it receives. If this is appropriate, procedures must be put in place to mark such products and to ensure that they can be traced.

9. **PROCESS CONTROL**

ISO 9000 is inherently about controlling processes. For this reason the organisation's planning for production, installation and servicing processes should consider each of the controlled conditions which are described in ISO 9001 and ISO 9002. It must put mechanisms in place to control the processes to prevent non-conformities from occurring rather than to try and catch non-conforming products or services at inspection stage. These may include procedures for accepting materials or items into the process and determining their characteristics while in process and the proper maintenance of process equipment and essential materials.

In the case of services, processes are as important as in manufacturing. Elements of production, installation and service may be involved but the difference lies in the fact that “production” may mean:

- “production” of an agreement (attorney);
- “production” of a set of accounts (accountant);
- “production” of a course (training provider); or
- “production” of a home loan, banking facility, hire purchase, etc (financial institution).
In the case of a service provider “installation” will be more concerned with processes which are in place to ensure proper service delivery at the interface between organisation and client. All these processes must be controlled and mechanisms must be in place to ensure that there is no failure of service delivery.

10. INSPECTION AND TESTING
The organisation must carry out inspection and test activities from receiving inspection to product/service delivery, installation and servicing. The organisation must establish and maintain documented procedures for these activities in order to verify conformity to specified requirements and that appropriate records are kept. It therefore includes receiving inspection and testing, in-process inspection and testing, final inspection and testing and the keeping of inspection and test records. Obviously, a service organisation may receive products which affect its deliveries (i.e. PC’s and other equipment it uses to produce a service). Mechanisms must be in place to check such products, and also services which other service providers may render to it. In addition, the process it has put in place to ensure proper delivery of its services must be inspected and audited.

11. CONTROL OF INSPECTION, MEASURING AND TEST EQUIPMENT
In some organisations control of inspection, measuring and test equipment is important, particularly where testing is done by using sophisticated measuring and test equipment. In such a case procedures must be put in place to ensure that such equipment are accurate according to set standards.

12. INSPECTION AND TEST STATUS
A system must be in place to ensure that required tests and inspections are done. The organisation must know what the status of its various services is, from initiation to delivery. In this regard, project management tools such as MS Project can be used to verify status of service during each stage.
13. **CONTROL OF NON-CONFORMING PRODUCTS/SERVICES**

If a final product/service is found not to conform to specified requirements, steps must be taken to prevent its use. This applies to the organisation's own products and those of its suppliers.

In the case of services, the implication is that an organisation must take steps to ensure that non-conforming services, particularly at the interface with customers, which do not meet its requirements, do not occur. This means that continuous steps must be taken to ensure that services are of the expected quality. The organisation must take steps to ensure that actions not conforming to standards are not repeated. In the case where a product (for example a course manual or a set of accounts) form part of the service process, these products must comply to standards and non-compliance must immediately be identified and rectified.

14. **CORRECTIVE AND PREVENTATIVE ACTION**

The supplier should have documented procedures for identifying and eliminating causes of actual or potential non-conformities in products/services, processes or the quality system. The causes must immediately be identified and corrective action must be taken. In addition preventative action must, as far as possible, be taken.

The quality manual of a service provider must lay down procedures for identifying and eliminating causes of actual and potential non-conformities in the service. It is vitally important that any service organisation determines causes of any non-conformities. Causes may be that proper procedures are not in place or that staff are not properly trained, are not motivated or working conditions are inadequate. Another reason may be that processes are not properly described.

As part of the quality manual, procedures should be documented to establish how to take corrective actions and how these should be carried out. More important, however, is the fact that preventative action should be taken to ensure that non-conformities do
not arise. Instruments that can be used in this regard are statistical process control; customer complaints and internal and sub-contractors source, products, processes and quality system information.

15. **HANDLING, STORAGE, PACKAGING, PRESERVATION AND DELIVERY**

The system should provide adequate planning, control and documentation for handling, storage, packaging, preservation and delivery of the product. In the case of a service organisation, the steps set out in ISO 9000-2 in this regard, must be implemented.

16. **CONTROL OF QUALITY RECORDS**

Quality records should give evidence directly or indirectly of whether or not a product or service meets specified requirements.

In the case of a service organisation, the supplier’s quality records must give evidence that the quality system elements have been implemented. If results have not proved satisfactory, quality records should indicate what have been done to correct the situation. Quality records should be properly protected from unauthorised access, protected from alteration and be maintained by the organisation.

17. **INTERNAL QUALITY AUDITS**

It is important that an organisation carries out regular internal audits to determine whether the various quality system elements are effective and suitable to achieve the stated quality objectives. In this regard, qualified auditors should be selected and assigned to the job. The audit activity must be carried out by personnel independent of those having direct responsibility for the activity being audited. One of the biggest criticisms against ISO 9000 is that too much emphasis is placed on auditing as a rigid application of ISO 9000 instead of embarking on a continuous system of self-assessment. SABEF (TQM International 1996:3) makes the following differences between audits and self-assessments:
Self-assessment enables the organisation to co-ordinate and link together all its efforts to achieve excellence through effective and continuous improvement. It is therefore seen not to be just another quality tool designed to help with specific problems or a short-term flavour of the month. It is aimed to develop and focus improvement efforts for many years to come.

18. TRAINING
All personnel (including newly hired, part-time and temporary personnel) must be trained to achieve quality objectives. For any service organisation, training in service rendering is vital for the eventual success of the organisation. Many service organisations also require a high level of technical proficiency in a product forming part of the service that is rendered. Training must focus on creating an awareness of quality and the importance thereof to the organisation, its personnel and the customer.

19. SERVICING
Many service organisations believe they do not need to provide after-sales service. After-sales service is as important to service organisations as to product organisations. A service organisation must clearly define the after sales service it must render; it
must plan them; must, where applicable, specify the design and function of special purpose tools and control measuring and test equipment; clearly lay down procedures in written form on how after sales service must be rendered and provide for adequate back-up; train personnel and make sure that they are competent; and get feedback on how services are rendered and how they can be improved.

20. STATISTICAL TECHNIQUES
Statistical methods can be used as far as data collection, analysis and application are concerned. These techniques are as useful to a service organisation as to a non-service (i.e. product) organisation. The methods which can be used includes graphical methods, statistical control charts, pareto analysis, analysis of variance, etc.

2.3.2 INTERNAL QUALITY ASSURANCE FOR SERVICE (MANAGEMENT APPROACH)
If the management motivated approach is adopted by an organisation the organisation implements a quality management system in anticipation of emerging market needs. In such a case a comprehensive quality management system is developed with the view of achieving TQM. This is the better approach. In such a case the determination of a quality policy, quality objectives and responsibilities and the implementation thereof through quality planning, quality control, quality assurance and quality improvement become vitally important.

Figure 2.1 above illustrates the elements of quality assurance. Where the management motivated approach is adopted by the organisation a comprehensive quality management system will be developed with the aim of meeting the aims and anticipated needs of all interested parties (external customers, staff, suppliers, shareholders and management).

The management motivated approach is pro-active. It is aimed at anticipating customer needs, adopts a quality management approach and strives towards TQM.
2.3.2.1 QUALITY MANAGEMENT APPROACH

The management system of any organisation will be influenced by the objectives of the organisation, its products/services and by the practices specific to that organisation. For that reason, quality systems will vary from one organisation to another. The purpose of quality management is to improve the systems and processes so that continual improvement of quality can be achieved.

Paragraph 3.2 of ISO 8402 defines quality management as all the overall management activities that determine:

- the quality policy (overall intentions and directions of the organisation with regard to quality);
- objectives; and
- responsibilities;

and implement them by means such as:

- quality planning (activities that establish the objectives and requirements for quality and for the implementation of quality system elements);
- quality control (operational techniques and activities which are used to fulfil requirements for quality);
- quality assurance (planned and systematic activities implemented within the quality system and demonstrated, as needed, to provide adequate confidence that an entity will fulfil requirements for quality); and
- quality improvement (actions taken throughout the organisation to increase the effectiveness and efficiency of processes in order to provide added benefits to both the organisation and its customers);

within the quality system (operational structure, procedures, processes or services needed to implement quality management).
Quality management therefore has two distinct elements, namely:

- determination of a quality policy, objectives and responsibilities; and
- implementation of the policies, objectives and responsibilities through quality planning, quality control, quality assurance and quality improvement.

ELEMENT 1 – DETERMINATION OF A QUALITY POLICY, OBJECTIVES AND RESPONSIBILITIES

Quality policy

The quality policy of the organisation must be laid down. A quality policy is defined in ISO 8402 as: "Overall intentions and directions of an organisation with regard to quality, as formally expressed by top management".
To implement this, management with executive responsibility must define and document its policies for quality.

Objectives
Objectives and commitments to the key elements of quality (i.e. fitness for use, performance, safety, dependability) must be documented.

Responsibilities
The organisation must be organised in such a way that the responsibilities, authority and the interrelation of personnel who manage, perform and verify work affecting quality must be defined and documented.

It is therefore clear that:

- there must be a well defined and documented quality policy;
- the quality objectives must be clearly documented; and
- responsibilities and authority for the implementation of the quality system must be clearly defined.

ELEMENT 2 – IMPLEMENTATION OF THE POLICIES, OBJECTIVES AND RESPONSIBILITIES
Implementation involves the elements set out below.

Quality planning
Paragraph 3.3 of ISO 8402 defines quality planning as those activities that establish the requirements for quality (i.e. the needs of all stakeholders and their translation into a set of quantitatively or qualitatively stated requirements for the characteristics of an entity to enable its realisation and examination) and for the application of the quality system (i.e. the organisational structure, procedures, processes and resources needed to implement quality management) elements.
Quality control
Quality control is defined in paragraph 3.4 of ISO 8402, as: "Operational techniques and activities that are used to fulfil requirements for quality". It therefore involves operational techniques and activities aimed both at monitoring a process and eliminating causes of unsatisfactory performance at all stages of the quality loop, in order to achieve economic effectiveness.

Quality assurance
Quality assurance is defined in paragraph 3.5 of ISO 8402, as: "All the planned and systematic activities implemented within the quality system, and demonstrated as needed, to provide adequate confidence that an entity will fulfil requirements for quality."

Internal quality assurance provides confidence to the management and staff of an organisation while external quality assurance (in contractual or other situations) provides confidence to the customers or other outside people dealing with the organisation.

Quality improvement
Quality improvement is defined in paragraph 3.8 of ISO 8402, as: "Actions taken throughout an organisation to increase the effectiveness and efficiency of activities and processes in order to provide added benefits to both the organisation and its customers."

Quality improvement therefore deals with improving effectiveness of systems, activities and processes to provide additional benefits to the organisation and its customers.

When the management motivated approach is adopted the organisation will therefore:

- determine quality policies, objectives and responsibilities; and
implement them through quality planning, quality control, quality assurance and quality improvement.

The organisation’s aim will, however, not only be to provide assurance to external customers, but to all stakeholders of the organisation, that their needs will be met through the implementation of a TQM system.

2.3.2.2 TQM SYSTEM
Paragraph 3.7 of ISO 8492 defines TQM as a management approach of an organisation which:

- is centered on quality;
- is based on the participation of all its members;
- is aimed at long term success through customer satisfaction; and
- benefits all members of the organisation and society.

Other than the stakeholder motivated approach, which focuses on quality assurance, the management motivated approach strives towards TQM, aiming to benefit all stakeholders of the organisation with the view of not only meeting aims/needs but also anticipated needs.

2.4 IMPLEMENTING A TQM SYSTEM WITHIN THE FRAMEWORK OF ISO 9000

2.4.1 ISO 9000-1 AS ROADMAP FOR ISO 9000 FAMILY
The organisation which adopts the management motivated approach towards quality will develop a comprehensive quality management system aimed at satisfying the needs of all stakeholders of the organisation. It will therefore integrate external
customer requirements into a comprehensive management system which addresses the needs of all stakeholders of the organisation.

Where it bases its system on ISO 9000 it will therefore integrate the stakeholder approach as contained in ISO 9001 or ISO 9002 or ISO 9003 (depending on the product or service it supplies) into a quality management and quality system based on the guidelines contained in ISO 9004-1, 9004-2, 9004-3 and 9004-4. The various parts of ISO 9004 deal with those elements which are needed to implement a quality management and quality system.

To assist the organisation to adopt the right approach, ISO 9000-1 addresses which of the standards should be applied by the organisation, taking into account its specific circumstances.

ISO 9000-1 therefore acts as the roadmap for the implementation of a quality management system for internal use (as amplified in the various parts of ISO 9004) and for quality assurance standards (as amplified in ISO 9001, ISO 9002 and ISO 9003) for external use. Any organisation which therefore wishes to introduce a quality management process must take note of:

- ISO 9000-1 : Roadmap
- ISO 9004 (various parts) : Quality Management and Quality System Elements
- ISO 9001 or ISO 9002 or ISO 9003 : External Quality Assurance Elements
2.4.2 MOST IMPORTANT ELEMENTS OF ISO 9000-1

To implement a quality management system the organisation so implementing must ensure that the system contains a number of elements. The elements identified in ISO 9000-1 are:

- principal concepts;
- role of documentation;
- quality system situations;
- selection and use of international standards on quality; and
- selection and use of international standards for external quality assurance.

2.4.2.1 Principal concepts

Paragraph 4 of ISO 9000-1 identifies a number of principal concepts which must be included in any quality system. These are set out below.

- **Key objectives and responsibilities for quality (paragraph 4.1)**

The organisation wishing to introduce a quality management system should include in it a number of elements, the aim of which are to:

- achieve, maintain and seek to improve continuously the quality of all its products and services in relationship to the requirements for quality;

- improve quality of its own operations;

- provide confidence to internal management and employees that the requirements for quality are being met;

- provide confidence to customers and other stakeholders that the requirements for quality are being met; and

- provide confidence that quality system requirements are fulfilled.
• **Satisfy needs of stakeholders** *(paragraph 4.2)*

The organisation must address the expectations and needs of all its stakeholders, i.e. its customers, employees, owners, suppliers and society as a whole.

• **Distinguish between quality system requirements and product requirements** *(paragraph 4.3)*

The ISO family distinguishes between quality system requirements and product requirements. It concentrates on quality system requirements and not on technical specifications. The quality system adopted by the organisation must therefore concentrate on quality system objectives to be satisfied.

• **Identify product categories** *(paragraph 4.4.)*

ISO 9000 identifies four generic product categories to which it applies, namely:

- hardware (a tangible, distinct product with distinctive form);
- software (an intellectual creation consisting of information expressed through supporting mediums);
- processed materials (tangible products generated by transforming raw material into a desired state); and
- services (the results generated by activities at the interface between a supplier and the customer and by supplier internal activities, to meet customer needs).

The organisation implementing a quality system must therefore clearly identify those products/services which it supplies/provides.

• **Facets of quality** *(paragraph 4.5)*

ISO 9000 identifies four facets which are key contributions to product quality namely:

- quality due to definition of needs for the product (i.e. defining and updating the product or service to meet market place requirements and opportunities);
- quality due to product design (i.e. designing into the product characteristics to enable it to meet market place requirements and opportunities and to provide value to customers and other stakeholders);

- quality due to conformance to product design (i.e. maintaining day-to-day consistency in conforming to product design and in providing the designed characteristics and values for customers and other stakeholders); and

- quality due to product support (support product throughout the product life cycle).

The goal of ISO 9000 is to meet the needs for all four facets of product quality.

The quality management system which is developed will normally address all four the above facets.

- Concept of a process (paragraph 4.6)
It is a fundamental principle of the ISO 9000 family that all work is accomplished by a process. Figure 2.3 below sets out ISO 9000's understanding of a process.

**Figure 2.3    ISO 9000's understanding of a process**

![Diagram](image)

(A value-adding transformation process involving people and other resources)

- **Opportunities to measure.**

**Examples**
- Invoices
- Computer software
- Liquid fuels
- Clinical devices
- Banking services
- Intermediate products

**Source:** ISO 9000-1:1994
Within organisations, there can be various processes. In all these processes there are opportunities to measure the inputs to ensure that quality is maintained.

Inputs or outputs can be of various types, for example product related or information related. Figure 2.4 demonstrates the supply chain relationship of processes, with product related and information related flow.

**Figure 2.4** Supply chain relationship of processes, with product related and information related flow

Source: ISO 9000-1:1994

Product related inputs or outputs can be raw materials, intermediate products, final products or sample products. These are the solid lines in Figure 2.4. On the other hand, information related (dashed lines in figure 2.4) inputs or outputs are product requirements, product characteristics and status information, support function communications, feedback on product performance and needs and measurement data from sampled products.
Quality management is accomplished by managing the processes in the organisation. The processes must be managed in two ways, namely:

- the structure and operation of the process itself within which the product or information flows; and
- the quality of the product or information flowing within the structure.

**Network of processes in an organisation (paragraph 4.7)**

Many processes are found in an organisation. The organisation must identify, organise and manage its network of processes and interfaces; highlight the main processes; and simplify and prioritise processes for quality management purposes. The fundamental basis of ISO 9000 is that the organisation creates, improves and provides consistent quality in its offerings through the network of processes. These processes, at the interfaces, should be the subject of analyses and continuous improvement. For this reason, the quality of executive management’s own processes, such as strategic planning, are very important.

**Quality system in relation to the network of processes (paragraph 4.8)**

A quality system consists of a number of elements. It is carried out by means of processes. For a quality system to be effective, these processes and the associated responsibilities, authorities, procedures and resources should be defined and deployed in a consistent manner. A quality system needs co-ordination and compatibility of its component processes and definition of its interfaces.

**Evaluating quality systems (paragraph 4.9)**

Where quality systems are evaluated, three questions must be asked:

- are the defined processes and the procedures properly documented?
- are the processes fully deployed and implemented as documented?; and
- are the processes effective in providing the expected results?
The quality system must therefore be evaluated from time to time. This must always be done in relation to expectations of stakeholders. Audits are an important element in the evaluation of the effectiveness of a quality system.

2.4.2.2 The role of documentation (paragraph 5)
This is an essential element for the implementation of a quality system. Documentation requires clarity of thought. In many organisations this is regarded as a cumbersome burden. However, for the quality system to be effective, it must be reduced to writing. If it is reduced to writing it enables the organisation to:

- achieve the required product quality;
- evaluate the quality system;
- improve quality; and
- maintain improvements.

2.4.2.3 Quality systems situations (paragraph 6)
ISO 9000 is intended to be used in four situations, namely:

- guidance for quality management (i.e. ISO 9004);
- contract between first and second parties (i.e. ISO 9001, ISO 9002 and ISO 9003);
- second party approval of registration (i.e. the supplier's quality system is assessed by the customer); and
- third party certification or registration (i.e. evaluation by a certification body such as the South African Bureau of Standards).

2.4.2.4 Selection and use of international standards on quality (paragraph 7)
Organisations should use the ISO 9000 family of International Standards in order to develop, implement and improve their quality systems in both the management motivated and stakeholder motivated situations.
Two types of guidance standards are contained:

- application guidance for quality assurance purposes is provided by several parts of ISO 9000; and
- specialised application guidance for quality management purposes is provided by the parts of ISO 9004.

Organisations adopting the management motivated approach will pay special attention to ISO 9004-1 and will refer and include in their management system those parts of ISO 9000 which are applicable to them, taking into account their particular needs.

The standards contained in the ISO 9000 series and which can be used by the organisation wishing to introduce a quality system are:

- ISO 9000-2 which should be selected when assistance is needed for the implementation and application of ISO 9001, ISO 9002 and ISO 9003;
- ISO 9000-3 which should be selected where an organisation develops software;
- ISO 9000-4 which should be selected when the organisation needs to provide assurance of the dependability (i.e. reliability, maintainability and availability) characteristics of a product;
- ISO 9001 which should be selected and used when the need is to demonstrate the organisations capability to control the processes for design as well as production of conforming product;
- ISO 9002 which should be used when the need is to demonstrate the organisation's ability to control the process for production of conforming product;
- ISO 9003 which should be used when conformance to specified requirements is to be assured by the organisation solely at final inspection and test;
- ISO 9004-1 should be used by any organisation intending to develop and implement a quality system;
ISO 9004-2 should be used by organisations that provide services or whose products include a service component;

ISO 9004-3 should be used by organisations whose products are prepared by transformations and which consists of solids, liquids, gasses or combinations thereof; and

ISO 9004-4 which should be used by an organisation wishing to improve its effectiveness.

Likewise, International Standard with numbers in the 10000 series may be used for reference. The 10000 series consists of:

- **ISO 10005**
  This standard addresses the generic need for a mechanism to relate requirements or quality system elements to the specific requirements of a particular product, project or contract. Its provisions are advisory. It is used for the preparation, review, acceptance and revision of quality plans;

- **ISO 10006**
  These guidelines are applicable to project management, large or small. Their aim is to ensure that there is quality of project processes and project products. To a large extent, these guidelines supplement those contained in ISO 9004-1;

- **ISO 10007**
  These guidelines are applicable to configuration management, i.e. the discipline applied over the life cycle of the product to provide visibility and control of its functional and physical characteristics;

- **ISO 10011-1**
  These guidelines should be selected when establishing planning, carrying out and documenting audits of quality systems. They provide guidelines for verifying existence
and implementation of elements of the quality system and for verifying the system's ability to achieve defined quality objectives;

- ISO 10011-2
  These guidelines should be selected when staff selection and training for quality system auditors is needed. They provide guidance for the qualification criteria for quality system auditors. They contain guidance of education, training, experience, personal attitudes and management capabilities needed to carry out an audit;

- ISO 10011-3
  These guidelines should be selected when planning the management of an audit programme;

- ISO 10012
  These guidelines should be selected when a product or process quality depends heavily on the ability to measure accurately. They specify the main features of the confirmation system to be used for the supplier's measuring equipment. They contain the quality assurance requirements for a supplier's measurement and equipment to ensure that measurements are made with the intended accuracy and consistency. They contain more detailed requirements in those find in ISO 9001, ISO 9002 and ISO 9003 and are presented with guidance for implementation;

- ISO 10012-2
  This part of ISO 10012 provides supplementary guidance on the application of statistical process control when this is appropriate for achieving the objectives of Part I.

- ISO 10015
  These guidelines should be selected when training programmes are implemented by an organisation.
Although, only as a draft document at this stage, this standard deals with guidelines to assist organisations and their personnel when addressing training issues which include commitment to continuous improvement.

2.4.2.5 Selection and use of international standards for external quality assurance (paragraph 8)
The supplier and the customer must decide on which international standard shall be used as the basis for quality assurance (i.e. ISO 9001, ISO 9002 and ISO 9003).

2.5 THE MANAGEMENT MOTIVATED APPROACH - THE BETTER SYSTEM
There can be no doubt that the management motivated approach is the best approach to ensure TQM. The organisation basing its system on ISO 9000 will therefore have to:

♦ analyse ISO 9000 and ISO 10000 to determine exactly which of the elements contained in them must be included in its management system; and
♦ decide which of the quality assurance standards (ISO 9001, ISO 9002 or ISO 9003) applies to its products/services.

It will incorporate the applicable standards into a management system which will be developed as a written document, ensuring that management and staff and all other stakeholders can determine the quality policies and objectives of the organisation.

Figure 2.5 below graphically sets out the components of a quality management system based on ISO 9000 and ISO 10000.
When developing a structured management system the organisation will address those quality elements important to it and will incorporate into its system those parts of ISO 9000 and 10000 which it deems appropriate to it, taking into account its products/
In introducing a quality system management the organisation must, in the design of the system ensure that a number of criteria are met, namely:

- set objectives and responsibilities for quality;
- satisfy needs of stakeholders;
- concentrate on quality system requirements;
- define the products/services the system applies to;
- meet the four facets of quality (satisfy customer needs, product design, maintaining consistency and product support);
- identify processes (processes themselves and products/services flowing through processes) which must be controlled;
- manage its networks of processes and simplify and prioritise them;
- define and deploy processes and associated responsibilities in a consistent manner;
- evaluate the quality system;
- document the system, procedures and processes; and
- decide on which standards to use.

2.6 USING ISO 9004-1:1994 AS BASIS FOR THE MANAGEMENT MOTIVATED APPROACH

The various parts of ISO 9004 deal with those elements which should be included into a quality management system. ISO 9000-1 is the roadmap for the implementation of quality management for internal and external use.

The ISO 9004 consists of four parts namely:

ISO 9004-1:1994  Quality management and quality system elements – Part I – Guidelines (it contains generic guidelines);
An organisation adopting the management motivated approach will rely heavily on the guidelines contained in ISO 9004-1. ISO 9004-1 is divided into four main parts which are:

- management responsibility;
- quality system elements;
- financial considerations of quality system; and
- quality system operational elements.

Figure 2.6 below schematically summarises the four main parts and the various elements contained in each part.
PART 1  MANAGEMENT RESPONSIBILITY

Paragraph

4  Quality Objectives  Quality System  Quality Policy

PART 2  QUALITY SYSTEM ELEMENTS

5  EXTENT  STRUCTURE  DOCUMENTATION OF QUALITY SYSTEM  AUDITING  REVIEW AND EVALUATION  QUALITY IMPROVEMENT

1. Input from market important to improve products and quality systems.
2. Define and document quality activities.
3. Define responsibilities.
4. Develop organisational structure.
5. Provide resources & personnel.
6. Exercise control over all activities affecting quality.
7. Document procedures.

1. Document all elements (i.e. policies and practices).
2. Develop quality manual.
3. Prepare quality plans.
4. Keep quality records.

1. Develop audit plan.
2. Extent of audits.
4. Follow-up.

1. Independent reviews.
2. Comprehensive.
3. Documented.

1. Promote continuous improvement.
2. Increase effectiveness and efficiency.
3. Create environment for improvement.
PART 3  
FINANCIAL CONSIDERATIONS OF QUALITY SYSTEM
Measure effectiveness of quality system in financial terms

3 Approaches

- Quality Cost Approach
- Process Cost approach
- Quality Loss approach

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PART 4  
QUALITY SYSTEM OPERATIONAL ELEMENTS

7-20

7 QUALITY IN MARKETING
1. Marketing requirements.
2. Defining product specification.

8 QUALITY IN SPECIFICATION AND DESIGN
1. Translate needs into specifications.
2. Define responsibility for design.
3. Test and measure product.
4. Review design at each phase.
5. Evaluate design at significant stages.
6. Review final design.
7. Review market procedures.

9 QUALITY IN PURCHASING
1. Plan activities.
2. Define requirements.
3. Select suppliers.
4. Agree on quality assurance.
5. Agree on verification methods.
6. Provide for dispute resolution.
7. Control received materials.
8. Keep records.

10 QUALITY OF PROCESSES
1. Plan process control.
2. Check whether processes are capable.
3. Where needed, products must be controlled and verified.
4. Plan to handle products.
### CONTROL OF PROCESS (11)
1. Control materials and parts and identify them.
2. Control and monitor equipment.
3. Plan and approve processes.
4. Control documents.
5. Authorise process changes.
6. Control non-conforming products.

### PRODUCT VERIFICATION (12)
1. Ensure quality of incoming material.
2. Control processes to verify conformity.
3. Verify finished products.

### CONTROL MEASURING, INSPECTION AND TEST EQUIPMENT (13)
1. Control all such elements.
2. Bring in proper procedures to control, measuring, inspection and test equipment.
3. Take corrective action.

### CONTROL NON-CONFORMING PRODUCTS (14)
1. Set out steps in documented procedures.
2. Identify non-conforming materials.
3. Separate from other products.
4. Review to check whether it can be accepted.
5. Dispose as quickly as possible.

### CORRECTIVE ACTION (15)
1. Take steps to measure or prevent recurrence.
2. Assign responsibilities to someone.
3. Evaluate significance of problem.
4. Investigate causes.
5. Get to root cause.
6. Evaluate causes.
7. Control procedures.
8. Record changes.

### POST PRODUCTION ACTIVITIES (16)
1. Store properly.
2. Deteriorated products must not be delivered.
3. Lay down procedures.
4. Control all equipment needed.
5. Keep info on complaints.

### QUALITY RECORDS (17)
1. Keep proper filing systems.
2. All quality records must be properly controlled.
3. Records must be of good standard.

### PERSONNEL (18)
1. Identify need for training and train appropriately.
2. Exec. Personnel must be trained – quality system.
3. Supervision of operating personnel.
5. Motivate staff for quality of performance.

### PRODUCT SAFETY (19)
Identify safety aspects.

### USE OF STATISTICAL METHODS (20)
Identify and apply modern statistical methods to control quality processes.

Source: Own Compilation
Where a management motivated approach is adopted the management system which is developed will encompass all the parts contained in ISO 9004-1. The organisation will, in developing a comprehensive and effective in-house quality system, select those elements which apply to it. In this regard it will take into account factors such as the market being served, nature of the product or service, production/service processes and customer and consumer needs.

2.7 DOCUMENT THE SYSTEM

The quality management system, including all processes and policies of the organisation, must be reduced to writing. A proper quality management system will provide quality assurance to all stakeholders (external and internal) of the organisation and will ensure that quality is controlled in all processes within the organisation. To ensure that this happens a quality manual with accompanying quality procedures, work plans and work instructions must be developed.

Figure 2.7 below sets out the main components of such a system.

Figure 2.7 Quality management system

Source: Tricker 1997: 75
The aim of the quality management system is therefore to provide quality control and quality assurance. This it does via a quality manual with accompanying work instructions, quality plans and quality procedures.

A successful organisation will ensure that systems are in place for it to:

- be able to offer services that satisfy customers' needs;
- meet the relevant standards and specifications of a contract;
- make products or services available at competitive prices;
- supply these services and products at a cost that will still give the business a profit; and
- ensure that the product/service is of a high quality.

In many cases, an organisation must supply proof that it can do just this. This is done by showing it meets the requirements of ISO 9000 using its quality manual, work instructions, quality plans and quality procedures as evidence.

A quality manual is nothing else but a record of the form of the organisation's quality management. The quality manual is therefore a:

- rule book by which an organisation functions;
- source of information from which the client may derive confidence (quality assurance);
- means of defining the responsibilities and inter-related activities of every member of the company; and
- vehicle for auditing, reviewing and evaluating the company's quality management system.

Because the quality manual sets out the quality system of the organisation, it should include:
A quality manual will cover work instructions, quality plans and quality procedures. A typical quality system documentation hierarchy is set out in Figure 2.8 below.

Figure 2.8  Typical quality system document hierarchy

- **Quality Manual** (Level A)
  - Describes the quality system in accordance with the stated quality policy and objectives and the applicable standard.

- **Documented quality system procedures** (Level B)
  - Describes the activities of individual functional units needed to implement the quality system requirements.

- **Other quality documents** (work instructions, forms, reports, etc.) (Level C)
  - Consists of detailed work documents.

Source:  ISO 10013:1995
The order of development of this hierarchy in an individual organisation is dependent on that organisation's circumstances but usually starts with the development of the organisation's quality policy and objectives.

To be truly effective, the quality manual must therefore:

- communicate the organisation's quality policies, procedures and requirements;
- describe and implement an effective quality system;
- provide improved control of practices and facilitating assured activities;
- provide document bases for auditing the quality system;
- provide continuity of the quality system and its requirements;
- provide guidance for the training of personnel in the quality system requirements and methods of compliance;
- present a quality system for external purposes, i.e. demonstrating compliance with ISO 9001, ISO 9002 or ISO 9003; and
- demonstrate compliance of the quality system with quality requirements in contractual situations.

When writing a quality manual it is essential that all staff is part of the process to ensure that they take ownership of it.

2.8 ADVANTAGES OF A QUALITY MANAGEMENT SYSTEM BASED ON ISO 9000 AND ISO 10000

2.8.1 A STRUCTURED BASIS

ISO 9000 is an endeavour by the ISO to lay down a structured base for the implementation of a quality management system in an organisation. It is therefore really about how to manage in a total quality way. It endeavours to ensure that the technical, administrative and human factors affecting the quality of an organisation's
products or services are under control, whether these products are hardware, software, processed materials or services. Its aim is the reduction, elimination and prevention of non-conformities. To ensure that this happens, ISO 9004-1 works on the premise that a systematic approach must be adopted and it then divides this approach into the elements set out above. Obviously, these elements vary in importance from one activity to another or from one product to another. A quality system must, in the view of ISO 9004-1, meet two requirements:

- customers' needs and expectations; and
- the organisation's needs and interests.

If the quality management system is properly implemented there are implications for both the customers and the organisation. These are set out below.

- **Benefits**
  Implication for customer - reduced costs, improved fitness for use, increased satisfaction and growth in confidence.
  Implication for organisation - increased profits and market share.

- **Cost considerations**
  Implication for customer - consideration is given to safety, acquisition cost, operating, maintenance, downtime and repair costs, and possible disposal costs.
  Implication for organisation - consideration is given to cost due to marketing and design deficiencies, including unsatisfactory product, rework, repair, replacement, reprocessing, loss of production, warranties and field repair.
**Risk considerations**

Implication to customer - consideration is given to risks such as those pertaining to the health and safety of people, dissatisfaction with product, availability, marketing claims and loss of confidence.

Implication to organisation - consideration is given to risks related to deficient products/services which lead to loss of image or reputation, loss of market, complaints, claims, liability and waste of human and financial resources.

ISO 9000 is about how to manage in a total quality way. Any organisation which base its processes for quality on ISO 9000 and adopt the management motivated approach is in fact introducing a TQM system. If it does this it is in fact:

- focussing on customers;
- controlling its processes;
- benefiting all employees;
- seeking continuous improvement; and
- committing management from CEO level downwards.

### 2.8.2 MEETING CUSTOMER NEEDS

An organisation primarily introduces a quality system to meet customer requirements. The purpose is to improve profitability and reputation. Because the premise of quality is meeting customer requirements, this has wide implications for the organisation. It must implement a system which will ensure that the product or service is available in a reliable and cost effective manner to the customer and that this reliability and cost effectiveness will be maintained for all products or services.

### 2.8.3 PLACING THE CUSTOMER IN THE CENTRE

For the organisation to be effective, each part of it must work properly together. A common goal of all people within the organisation must be to meet customer
requirements. All departments in the organisation must understand that the prime goal of each department and the organisation is to meet customer requirements. By following this approach, the customer is brought into every facet of the organisation's life. Each and every person within an organisation who does some or other act, or is involved in some or other process, which improves or limits the organisation's ability to meet customer requirements must have a clear understanding of his/her obligations towards customers.

2.8.4 PEOPLE ARE IMPORTANT

ISO 9000 deals with processes. To ensure that TQM works, these processes must be managed. In this process, people play a vitally important role. The message which management must carry to all people in the organisation is that each process is part of meeting customer requirements. A process is the transformation of a set of inputs adding value. These inputs can be in the form of materials, procedures, methods, information, people, skills, knowledge, training, plant or equipment which lead to outputs in the form of products, services, information or paper work. These outputs are transferred to someone who is the customer. To release an output which meets the requirements of the customer it is necessary to define, monitor and control the inputs to the process and this is what ISO 9000 endeavours to do.

To ensure that the requirements of customers are met, each person in the quality chain must ask himself or herself the following output related questions:

♦ who are my immediate customers?;
♦ what are their true requirements?;
♦ how can I find out what their requirements are?;
♦ how can I measure my ability to meet their requirements?;
♦ do I have the necessary capability to meet their requirements?;
♦ do I continually meet the requirements?; and
♦ how do I monitor changes in the requirements?
However, because a process does not only deal with outputs but also with inputs, the same person must ask himself or herself the following input-related questions:

- who are my immediate suppliers?
- what are my true requirements?
- how do I communicate my requirements?
- can my suppliers meet the requirements? and
- how do I inform them of changes in requirements?

2.8.5 CERTIFICATION/REGISTRATION
A properly documented quality management system can be registered with or certified by a certification/registration body. Certification/registration may be required by certain customers when, for example, contracts are tendered for.

2.8.6 MANAGEMENT COMMITMENT
A well-structured and documented quality system requires top management commitment for its proper implementation. Management, and for that matter all staff, are therefore continuously made aware of the importance of quality and this leads to management commitment.

2.8.7 DEFINING PROCESSES
A well-structured quality system will lead to well defined processes. This will enable the organisation to streamline processes, integrate them and control them. In turn, this leads to costs reductions and increased profits.

2.8.8 CONTINUOUS IMPROVEMENT
The organisation with a well developed quality management system, which has adequate auditing and assessment procedures in place, will be in a position that it continuously strives to work improvement. The systems in place will identify areas
which need addressing and management/staff will continuously improve processes to reduce non-compliance.

2.9 CONCLUSION

An organisation wishing to embark on a TQM process must do so with the objective of:

♦ satisfying the needs of its customers;
♦ assuring itself and all its staff that it is capable of fulfilling its promises, by controlling its processes, continuously improving its processes, rewarding work well done and making a total commitment to quality; and
♦ driving their process from CEO level.

To ensure that this happens the organisation must implement a TQM system and should use a well documented system which it can base on the various standards which are contained in the ISO 9000 series. The ISO 9000 series should not be regarded as the “be all” for quality. Its usefulness, however, lies in the fact that it is becoming a world wide norm for quality. To some extent it is a cumbersome system, but many of the problems are being addressed in the current revision of the series which will be known as ISO 9001:2000, Quality Management System – Requirements; ISO 9004:2000, Quality Management Systems – Guidelines and ISO 9000:1998, Quality Management Systems – Concepts and Vocabulary.

2.10 SUMMARY

ISO 9000 allows organisations to either adopt a stakeholder motivated or management motivated approach when a quality management system is implemented.

A stakeholder motivated approach is narrower than a management motivated approach in that it aims to provide assurance to external stakeholders while a management motivated approach aims at meeting current and future needs of all
stakeholders and places particular emphasis on the development of internal systems which must lead to TQM.

The various quality assurance standards, quality management and quality system elements, and guidelines contained within ISO 9000 and ISO 1000 are used by an organisation wishing to develop a quality management system.

Such a system must be properly documented and if properly documented, implemented and accompanied by the necessary commitment of management and staff to let it work, it offers many advantages to organisations.
IMPLEMENTATION AND ADVANTAGES OF A TOTAL QUALITY MANAGEMENT
SYSTEM IN SERVICE RELATED INDUSTRIES

CHAPTER 3
A QUALITY MANAGEMENT SYSTEM FOR SERVICES

<table>
<thead>
<tr>
<th>TABLE OF CONTENTS</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>SYNOPSIS</td>
<td>3-76</td>
</tr>
<tr>
<td>LIST OF FIGURES</td>
<td>3-77</td>
</tr>
<tr>
<td>3.1 INTRODUCTION</td>
<td>3-78</td>
</tr>
<tr>
<td>3.2 THE IMPORTANCE OF SERVICES IN MODERN ECONOMIES</td>
<td>3-80</td>
</tr>
<tr>
<td>3.3 ISO 9000 FROM 2000 ONWARDS</td>
<td>3-82</td>
</tr>
<tr>
<td>3.4 THE ISO QUALITY MANAGEMENT IN MORE DETAIL</td>
<td>3-87</td>
</tr>
<tr>
<td>3.4.1 Management responsibility</td>
<td>3-87</td>
</tr>
<tr>
<td>3.4.2 Process management</td>
<td>3-88</td>
</tr>
<tr>
<td>3.4.3 Measurement and analysis improvement</td>
<td>3-97</td>
</tr>
<tr>
<td>3.5 CONCLUSION</td>
<td>3-110</td>
</tr>
<tr>
<td>3.6 SUMMARY</td>
<td>3-111</td>
</tr>
</tbody>
</table>
IMPLEMENTATION AND ADVANTAGES OF A TOTAL QUALITY MANAGEMENT SYSTEM IN SERVICE RELATED INDUSTRIES

CHAPTER 3

A QUALITY MANAGEMENT SYSTEM FOR SERVICES

SYNOPSIS

In the 21st century organisations such as the ISO will play an increasingly important role in quality development. Increased emphasis will be placed on management for quality and organisations will have to clearly define their philosophies on which they base quality improvement efforts. Organisations will adopt service orientated approaches as foundation for their quality management system.

In anticipation of this trend ISO has published a draft set of criteria, known as IUSO 9000:1998, IOS 9001:2000 and ISO 9004:2000 for implementation in 2000. These standards are based on a process model and must, at all times, be aimed at meeting customer requirements.

There are four key elements which must be addressed to meet customer needs, namely:

♦ management responsibility;
♦ resource management;
♦ process management; and
♦ measurement and analysis improvement.
CHAPTER 3
ELEMENTS OF A QUALITY MANAGEMENT SYSTEM FOR SERVICES

LIST OF FIGURES

<table>
<thead>
<tr>
<th>Figure</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Figure 3.1:</td>
<td>Quality management process model</td>
<td>3-85</td>
</tr>
<tr>
<td>Figure 3.2:</td>
<td>Service quality loop</td>
<td>3-89</td>
</tr>
<tr>
<td>Figure 3.3:</td>
<td>Service design and service delivery</td>
<td>3-93</td>
</tr>
<tr>
<td>Figure 3.4:</td>
<td>Stages in design and management</td>
<td>3-96</td>
</tr>
<tr>
<td>Figure 3.5:</td>
<td>South African business excellence model</td>
<td>3-101</td>
</tr>
</tbody>
</table>
IMPLEMENTATION AND ADVANTAGES OF A TOTAL QUALITY MANAGEMENT SYSTEM IN SERVICE RELATED INDUSTRIES

CHAPTER 3
ELEMENTS OF A QUALITY MANAGEMENT SYSTEM FOR SERVICES

LIST OF FIGURES

| Figure 3.1: Quality management process model | 3-85 |
| Figure 3.2: Service quality loop | 3-89 |
| Figure 3.3: Service design and service delivery | 3-93 |
| Figure 3.4: Stages in design and management | 3-96 |
| Figure 3.5: South African business excellence model | 3-101 |
IMPLEMENTATION AND ADVANTAGES OF A TOTAL QUALITY MANAGEMENT SYSTEM IN SERVICE RELATED INDUSTRIES

CHAPTER 3
A QUALITY MANAGEMENT SYSTEM FOR SERVICES

3.1 INTRODUCTION
The last half of the twentieth century can possibly be regarded as the revolutionary phase of quality. During this stage, the so-called "quality gurus" such as PB Crosby, WE Deming, K Ishikawa and JM Juran had a huge influence on quality thinking, development and quality awareness.

The future will possibly more be in the hands of organisations such as the National Institute of Standards and Technology, the European Quality Foundation and ISO Technical Committee 176.

Although many people are disdainful of ISO 9000, most agree that it forms a good foundation on which to build a quality system. An understanding is developing that ISO 9000 is not an end in itself but really the first step in a process. A quality management system must add value to what companies do and must have visible bottom line benefits. If this is not achieved, management is not going to support it for long.

Any country, industry or organisation must accept that intense international competition is going to become the norm and not the exception in the 21st century. Consumer and customer demands are going to increase relentlessly. These in itself, are going to become great drivers for quality.
The lessons learned from the gurus and role models of quality, clearly point out that to attain world class quality requires changes in managing for quality and that management will have to take account of factors such as:

- the entire management hierarchy must be trained on how to manage for quality;
- placement of quality must move to top management levels;
- business plans must include quality goals and these must be integrated into the management of the business;
- quality improvement is a continuous approach and an ongoing process;
- the workforce is going to become increasingly important to attain quality and empowerment of the workforce is going to be more important than ever before: "The key that has been identified to be a prerequisite for maximum sustainable wealth criterion is the development of human potential with strong values and commitment" (Ceronio 1996: 312 – referring to various authors);
- compliance to international standards such as ISO 9000 and others, in its own, is not a license to success. These systems are guidelines only but management will have to accept that there will have to be much greater participation of the workforce than is set out in ISO 9000;
- more emphasis will have to be placed on training top management and on greater leadership of management; and
- more emphasis will have to be placed on service to people. Ceronio (1996:308) states: "Serving people is both an obligation and a privilege. It is the foundation for a humane society", and further down the page: "For an organisation, serving customers is a moment of truth, an opportunity for the company to demonstrate its credibility and capability. Delivering value to customers earns the organisation respect and ensures that customers will return. It also binds employees together in a meaningful common mission; it is the essence of a shared vision and the ultimate bottom line."
Quality practitioners and those companies involved in quality will have to realise that ISO 9000 on its own does not improve processes, product services or get customers. It must be supported by a total commitment from management, by quality awareness programmes within companies, by empowering employees and better use of technology. Incorporation of good quality management practices will therefore have to become an integral part of the management process.

Quality standards as set out in standards such as ISO 9000 are therefore foundational and not the ultimate in total quality management practice. This distinction must be understood to implement a good quality system.

Quality will have to become a way of doing business and must not be seen purely as a discipline. It will have to become part of all the business processes of the organisation and be part of everyone’s job and not only the job of the quality manager. In the next millennium, people will have to develop themselves in such way that they can create quality on their own. In organisations quality is driven by people, whether management or staff. It does not happen on its own. Because people are an inherent part of the process, organisations implementing quality systems will have to spend more time, money and effort on staff development. This will have to include more self-development, more self expression and less control.

The challenges which organisations such as ISO will face in the next millennium is to adapt to a changing environment. The ISO’s approach to new circumstances is dealt with in this chapter.

3.2 IMPORTANCE OF SERVICES IN MODERN ECONOMIES

The challenge facing many organisations is how they can become more customer orientated. Central to customer orientation is meeting customer needs. The organisation, whether manufacturing or service related, or both is there to secure its customers – this is its moment of truth (Ceronio.1996:308).
To ensure that it meets this challenge with confidence, the organisation must adopt a service management approach.

Service management is the bedrock of ideals, principles and philosophy of management on which to base an effective service/quality improvement effort. It is about a new way of thinking, managing and taking action, called service management (Collier 1994:28). Management must adopt new ways of thinking and it must take action, based on the principles of service management. Management must package time, information and service with tangible attributes (i.e. a consumer benefit package must be offered). By doing this the organisation can gain a competitive advantage.

Quality must not be seen as an end in itself, but it must be clearly positioned as a means for achieving improved business performance and competitiveness. Business improvement must be the primary outcome focus, not only for the service orientated organisation but for any organisation. Management achieving business improvement is the responsibility of management, which must take steps such as:

- giving clear leadership at the top and at all levels in an organisation;
- integrating all activities through effective planning and deployment processes;
- collecting, analysing and using data for control and improvement;
- creatively involving all people in an organisation;
- focussing on the understanding of customer needs and expectations as well as customer's perceptions of performance; and
- controlling and continuously improving processes in the total management system to achieve this.

(Collier 1994)

In the case of a service organisation, service rendering normally fails at the interface between the customer and the service provider. Management must therefore place...
emphasis on doing the right things right. To do this, staff must know what is right and they must know how to do it right.

This can only be done if a management system is developed which places emphasis on training staff on what is right and how things must be done right.

To enable this to be done a systematic, planned approach must be adopted by management and ISO 9000 can give guidance in this regard. It is imperative to understand that ISO 9000, on its own, is no guarantee of success. ISO 9000 must be used as the foundation on which a proper management system must be built but it is imperative that management must see this as a tool for continuous quality and quality improvement and not as a means in itself.

3.3 ISO 9000 FROM 2000 ONWARDS

One of the criticisms against the current ISO 9000 series is the fact that it is, to some extent, a cumbersome system. There is duplication in the various standards and guidelines of the ISO 9000 series.


The ISO has acknowledged that customer needs are the force driving the revision of these standards. In the review process, it conducted a global survey of 1120 users and customers to understand their needs. A number of user and customer needs were determined from the analyses of these questionnaires. Some of the needs identified were:

- the revised standards should have a common structure based on a process model;
ISO 9001 should address effectiveness while ISO 9004 should address both efficiency and effectiveness;

- the revised standards should be simple to use;
- the revised standards should facilitate self-evaluation;
- the revised standards should be suitable for all sizes of organisations while the manufacturing orientation of the current standards should be removed; and
- there must be enhanced compatibility with ISO 14000 series of environmental management system standards.

The current ISO 9000 family contains some 20 standards and documents. To eliminate this proliferation of standards, the draft ISO 9000:1998 family of standards consists of four primary standards supported by a number of technical reports. The four primary standards envisaged are:

- ISO 9000, Quality Management Systems — Concepts and vocabulary;
- ISO 9001, Quality Management Systems — Requirements;
- ISO 9004, Quality Management Systems — Guidelines;
- ISO 10011, Guidelines for auditing quality systems.

The current ISO 8402 will become the future ISO 9000 standard while ISO 9001, ISO 9002 and ISO 9003 will be consolidated in a single revised ISO 9001 standard.

The revised ISO 9004 will not be an implementation guide to the revised ISO 9001. ISO 9001 addresses the quality management system requirements for an organisation to demonstrate its capability to meet customer requirements. ISO 9004 leads beyond ISO 9001 towards the development of a comprehensive quality management system.

The revised ISO 9004 is based on eight quality management principles, namely:

- customer focus;
leadership;
- involvement of people;
- process approach;
- systems approach to management;
- continuous improvement;
- factual approach to decision making; and
- mutually beneficial supplier relationships.

Because the aim of ISO 9004 is the development of a comprehensive quality management system these principles should be incorporated into the system developed by an organisation. To assist organisations to achieve this the new standards use a simple process based structure.

The major clause titles in the new standards reflect the eight quality management principles mentioned above and are contained in the quality management process model set out in Figure 3.1 below.

This chapter deals with three of the four processes which should be addressed in a service related environment. Because of its importance the fourth, resource management, is dealt with in the next chapter.
This model demonstrates both vertical and horizontal process integration in a closed loop manner.

**VERTICAL LOOP EXAMPLE**

Management defines requirements under management responsibility, necessary resources are determined and applied within resource management, processes are established and implemented under process management, results are measured, analysed and improved through measurement analysis and improvement and the whole process is closed through the process of management review. The cycle returns to management responsibility for change, authorisation and initiation of improvement.
HORIZONTAL LOOP EXAMPLE

The model recognises the fact that customers play a significant role during process input of needs and requirements, the identified product and/or service realisation processes are then exercised and customer satisfaction is evaluated at process output. Output data are used to improve the customer inputs, completing the closure of the horizontal process loop.

The principle of a process model is placed in the centre of both ISO 9001:2000 and ISO 9004:2000. Both standards are divided into four main headings, namely:

- management responsibility;
- resource management;
- process management; and
- measurement analysis and improvement.

The standards do not address requirements for other management disciplines such as environmental management, occupational health and safety management or financial management. These should be integrated into a total management system. In the development of a management strategy the organisation will have to take account of the factors which are not covered in the new ISO 9000 model developed by the ISO.

Attention must, for example, be given to the influence of the organisation and its activities on the environment in which it operates. In this regard, the guidelines contained in the ISO 14000 series, which deal specifically with environmental matters, can be of assistance to the organisation. The organisation must also ensure that its financial management and information management systems can cope with the demands of TQM and also supply management with the financial information they need to ensure that the organisation remains profitable and that solutions and systems remain cost effective.
3.4 THE ISO QUALITY MANAGEMENT IN MORE DETAIL

In the rest of this chapter, three of the principal processes contained in the ISO 9000:2000 and ISO 9004:2000 are discussed. Resource management, particularly human resource management, is discussed in Chapter 4 because of its importance for sustainable TQM.

3.4.1 MANAGEMENT RESPONSIBILITY

Management is responsible for establishing a quality policy for services and must be committed to the development and effective operation of a quality system. Management must lead the process, plan for the future, develop a culture for continual improvement and utilise resources as best as possible. The duty is on management to establish the quality system structure. In this process responsibilities and authorities should be defined for all personnel whose activities influence service quality. Requirements for a quality system must be developed.

Unfortunately in South Africa, as in many other countries, lip-service is often paid to this principle. Management often thinks that when developing a quality system, responsibility passes to their subordinates to maintain the system. This is a fatal mistake. A quality system cannot work unless top management is an integral part of the process.

Management review is also important. This review is often undertaken by persons independent of the organisation, but management must remain part of the process.

In brief, it means that management assumes responsibility for quality in the organisation. It guides the organisation to meet the objectives set out below.

3.4.1.1 Establishing a quality policy

The highest level of management is given the responsibility to develop and document a quality policy relating to aspects such as:
commitment to quality at all levels;
- competitor analysis;
- needs of interested party;
- capability;
- communication;
- use of resources; and
- risks/opportunities.

3.4.1.2 Stating quality objectives
To achieve the stated quality policy, management must clearly lay down quality objectives. These objectives should include the following:

- setting targets;
- establishing measurable quality indicators; and
- evaluating achievements.

3.4.2 PROCESS MANAGEMENT

3.4.2.1 THE SERVICE QUALITY LOOP
ISO 9000 places importance on processes. Process control is important for all service related activities. Quality system procedures should be established to specify the performance requirements for all service processes, including the three main service-related provisioning processes, namely marketing, design and service delivery. This can be shown to be operating in a service quality loop which is set out in Figure 3.2 below.
Figure 3.2  Service Quality Loop

These processes influence the perception of the customer about the quality of the service he/she is receiving. But the perception is also influenced by the actions the service organisation takes to improve quality which actions are the result of:

- assessments by the organisation of the service it is rendering;
- assessments of customers of the service; and
- quality audits.
Feedback mechanisms must therefore be put in place to ensure that information goes back to management to ensure that continuous steps towards quality improvement are taken.

In addition, a number of other steps must be taken:

♦ quality documentation and records must be kept;

Proper records must be kept of the quality system. These include a quality manual, a quality plan, written procedures, quality records, providing information on the degree of achievement of the quality objectives, level of customer satisfaction, the results of the quality system review and improvement of the service, analysis to identify quality trends, corrective action taken, sub-contractors' performance analyses, personnel records and competitive comparisons, etc.;

♦ documentation must be properly controlled; and

♦ internal quality audits should be performed periodically to verify the implementation and effectiveness of the quality system and adherence to service specifications.

3.4.2.2 THE FOCAL POINT

The customer is the focal point of all the actions the service organisation takes. To ensure that the interaction between customer and service organisation personnel is effective, management must ensure that the image which personnel at all levels present is to the advantage of the organisation. For this reason, personnel with direct customer contact must be extensively trained.

3.4.2.3 THE DESIGN OF SERVICES PROCESS

ISO 9004:2000 recommends a number of activities which the provider of services must embark on to ensure a quality service is provided. These are set out in 3.4.2.3.1 and 3.4.2.3.2 below.
3.4.2.3.1 Activity 1 – Marketing process

The responsibility rests on management to establish procedures for planning and implementing market activities. These include a large number of activities all of which have impact on the quality service the organisation is rendering such as:

- establishing needs of customers;
- developing complimentary services needed;
- measuring competitor activities and performance;
- reviewing of legislation;
- analysing and reviewing customer requirements;
- consulting with all departments to confirm their commitment and ability to meet service quality requirements; and
- applying quality control.

Apart from quality market research and analysis, the service organisation’s abilities should be explicitly stated. Aspects such as warranties should be documented and these should be included in a service brief. These define customers’ needs and the capabilities of the organisation.

The organisation must, prior to the development of a service, implement procedures for planning, organising and implementing the launch of the service and, where applicable, its withdrawal.

Quality in advertising must ensure that exaggerated or unsubstantiated claims for service are not advocated.

3.4.2.3.2 Activities 2 & 3 – Service design and service delivery

In a manufacturing environment substantial time, effort and money will normally be spent on designing the product. In a service organisation the product is the service. This service cannot just be rendered. It must be designed in such a manner that it
continuously meets customer needs.

Proper design of the service is therefore vitally important. In many cases the design of the service might not be observed by the customer but, notwithstanding this, the service must be properly designed. Service specifications must be developed which define the services to be provided. Management should assign responsibilities for service design and those who design the services must be aware of their responsibilities. This includes proper planning, specifying products and services to be procured for the service delivery process; implementing design reviews; validating the service delivery process and updating service specifications.

A service specification should contain a complete and precise statement of the service to be provided. Ramaswamy 1996:13 states that the service design process ensures that a level of performance is delivered that consistently meet customers' expectations (i.e. stability and responsibility). To achieve this, it must be systematically designed and methodologically managed.

However, the organisation must also plan the delivery process. This is as important as the design process because the delivery process normally involves interaction with customers. If this interaction is not properly controlled the advantages of proper design might be lost because the customer might only remember the service delivery failure.

The design process is the elements which are planned into the service while the delivery process is the way in which it is delivered. According to Ramaswamy (1996:15) successful organisations are those who can integrate these two elements successfully.

Service delivery specifications should contain service delivery procedures describing the methods to be used in the service delivery process. The service delivery process normally occurs at the interface between the customer and the organisation while the
service design process occurs out of sight of the customer. During the design stage attention is given to designing the service so that it will meet customer expectations. The delivery process must ensure that the service, as delivered, meet expectations. Figure 3.3 below sets out these two stages in the service cycle.

Figure 3.3 Service design and service delivery

![Diagram of service design and service delivery]

Source: Ramaswamy 1996:14

Both service delivery and service design will impact on the customer's perception of the quality of the service provided. Because the encounters with the customer...
normally occurs during the delivery process the organisation designing and delivering the service must ensure that both these processes are controlled to minimise non-conformity to specifications. However, because circumstances cannot always be the same the delivery process must ensure that the person delivering the service can cope with changing circumstances. This is acknowledged by Ramaswamy when he states:

"Each service encounter brings new customers. The perceived performance of the service can be influenced by the circumstances of the service encounter. The challenge faced by the service manager is to contain the extent of variability in the delivery of the service so that the performance levels of the processes are generally predictable, but still maintain the flexibility to deal with special cases and individual situations." (Ramaswamy 1996:16)

In designing the service, the organisation can develop check lists and methods to control the processes which are involved in the design of the service. The only real way to ensure that there is little or no variability in the delivery of the service is to continuously train those people involved in the delivery of the service. The organisation must therefore blend two fundamentally dissimilar concepts. It requires the integration of the generic with the individual, the expected with the spontaneous, the tangible with the intangible. Neither good design or good delivery alone is adequate - although, depending on the service situation, one or the other component may be the predominant determinant of customer satisfaction.

Ramaswamy 1996:18 lists five important principles which he believes must be incorporated into the design and delivery processes, namely:

- involve customers in all stages of design process;
- determine specifications from customers, not internally or from previous designs;
- determine technical aspects of design from customer provided specifications;
♦ use a multi-functional team to design the service; and
♦ test design in the market place.

These principles form part of both the service design process and the process of managing the services, the latter which concentrates on the delivery of services. Figure 3.4 below sets out the stages in these two processes.
Figure 3.4  Stages in design and management

SERVICE DESIGN

1. Defining design attributes
2. Specifying design performance standards
3. Generating and evaluating design concepts
4. Developing design details

SERVICE MANAGEMENT

5. Implementing the design
6. Measuring performance
7. Assessing satisfaction
8. Improving performance

1. Who are key customers? What are their needs? What are attitudes required to meet needs? Quality attitudes.
2. Identify outcomes (desired performance level) for each attitude. What do competitors do? Specify design performance standards.
3. What are key features needed to provide the service? Assemble these into processes and document them. Evaluate and select concept for design.
4. Position concept into design components. Generate design alternatives for each Component. Evaluate and select (after predicting performance).
5. Develop implementation plan.
7. Measure customer satisfaction to their expectations and compare with competitors. Validate against stage 2.
8. Improve.

Source: Ramaswamy 1996:27
The design process and the service delivery process will include aspects such as ensuring that proper products/services are purchased (inferior products may affect service delivery), quality control is designed as an integral part of marketing design and service delivery, services are reviewed and re-designed according to specific procedures and new and modified services undergo validation to ensure that they are fully developed and meet the needs of customers. No changes in design of services must be allowed unless properly documented while specific steps must be taken to determine whether customers are happy with the service delivered.

Non-conforming services must be identified as quickly as possible and the necessary corrective action taken. To achieve this, data must be collected and analysed. Modern statistical methods can assist to gain a better understanding of customer needs. A programme for continuous improvement of service quality must be introduced by the organisation.

3.4.3 MEASUREMENT AND ANALYSIS IMPROVEMENT

An organisation must ensure that it measures its performance and the steps it takes to improve performance.

The basis for measurement and preventative and corrective action is the expectations of customers. The organisation must be measured on the expectations of the customers and how these are fulfilled. To achieve this, obtaining information from customers is important. Information obtained must be used to adapt the services to bring them into line with customer requirements. If this is done, customers are retained and profits should increase.

3.4.3.1 THE SERVQUAL MODEL

The SERVQUAL Model is often used to measure quality of customer service. Service quality, as perceived by the customer, is the result of five gaps:
GAP 1: The gap between customers' expectations and management's perception of customer expectations;

GAP 2: The gap between management's perception of customers' expectations and service quality specifications;

GAP 3: The gap between service quality specifications and actual service delivery;

GAP 4: The gap between actual service delivery and external communication to customers; and

GAP 5: The gap between the expected services and perceived services (this is critical for creating satisfied customers).

(Zeithaml.1990:131)

Customers compare dimensions between expectations and perceptions. These dimensions are:

- reliability (i.e. consistence of performance);
- responsiveness (i.e. willingness of employees to render service);
- competence (required skills);
- access (approachability);
- courtesy (politeness);
- communication (keeping customers informed in a language they understand);
- credibility (trustworthiness);
- security (freedom of risk);
- understanding / knowing the customer (effort to understand); and
- tangibles (physical evidence of the service).

(Parasuraman.1985:31-33)
In 1991, Parasuraman reduced the ten dimensions to five. The reason was to have a simpler model and to group dimensions together which belong together. Dimensions such as access, courtesy, communication, credibility and understanding the customers were combined under one dimension, namely empathy. The amended dimensions endeavour to simplify the measuring process and are:

- tangible (appearance of physical facilities, equipment, personnel and communication material);
- reliability (ability to perform service);
- responsiveness (willingness to help customers);
- assurance (knowledge and ability to convey confidence); and
- empathy (caring).

(Parasuraman.1991 : 420-450)

To measure performance the service organisation must therefore address the gaps for each of the dimensions. For example: What do customers expect from our facilities? What does management think customers expect? If there are gaps, these gaps must be closed.

The organisation must therefore strive to narrow the gaps between the desired levels and actual levels. The processes within the organisation must be aimed at taking action to let the organisation achieve the desired level.

3.4.3.2 AUDITS

The various parts of ISO 10014 lay down guidelines for auditing quality systems, the qualification criteria for quality system auditors and the management of audit teams.

Any organisation which implements a quality system must make sure the system complies with the requirements and needs of the organisation. To achieve this it must regularly audit its quality systems. Such auditing must be done regularly and be
conducted by persons independent of the processes being audited. When audits are done the aim must be to:

- verify the existence and implementation of quality system elements;
- verify the system's ability to achieve defined quality objectives; and
- act as an instrument from which corrective and preventative actions can be determined.

The results must be documented. Audits must be properly planned and executed. It is important that trained persons conduct the audit.

### 3.4.3.3 SELF-ASSESSMENT

Many organisations have a negative perception about quality as they see it as a policing system. This negativity should not become an impediment to the introduction of a properly documented quality system. To overcome such negative perceptions more emphasis is being placed on encouraging organisations to develop organisational excellence through self development. In the USA the ASQC administers the Malcolm Baldrige National Quality Award which is an annual award that recognises United States companies that excel in quality management and quality achievement. Companies participating in the award process submit applications which are based on quality excellence criteria. Each applicant is expected to provide information and data on the company's quality processes and quality improvement. Applications are reviewed and evaluated by members of the award board and examiners. The award criteria are built on a number of core values and concepts, namely:

- customer driven quality;
- leadership;
- continuous improvement;
- full participation;
fast response;
- design quality and prevention;
- long-range outlook;
- management by fact;
- partnership development; and
- public responsibility.

A similar approach has been developed by SABEF. They have built the BEM against which the organisation applying must evaluate itself according to a number of criteria.

SABEF uses the BEM as a framework for assessing the excellence of an organisation. The model is based on the concept that an organisation will achieve better results by involving all the people in the organisation in continuous improvement of their processes. Figure 3.5 sets out the BEM.

Figure 3.5: South African business excellence model

Source: South African Excellence Foundation. 1998:13
The BEM is based on the premise that impact on society, customer satisfaction, people (employee) satisfaction and suppliers and partnership performance are achieved through leadership, driving policy and strategy, processes, people management and resources and information management, leading ultimately to excellence in business results (South African Excellence Foundation. 1998:12).

An organisation must endeavour to be the best in its class and must achieve this through self assessment.

Self-assessment is a structured and planned approach. It enables an organisation to:

- assess its performance objectively against a number of internationally recognised criteria;
- identify its strengths;
- single out areas for improvement, i.e.:
  - how does the organisation operate?; and
  - what are the results of what the organisation has achieved as seen by all those who have an interest in the organisation, i.e. customers, staff, the community at large and those who fund the organisation?
- set improvement plans in action; and
- repeat the process.

(South African Excellence Foundation 1998:7)

Self assessment is a comprehensive, systematic and regular review of an organisation’s activities and results referenced against a model of business excellence. It allows the organisation to identify its strengths and weaknesses and culminates in planned improvement actions which are then monitored for progress.

The BEM as set out in Figure 3.5 consists of eleven elements. Each element is a criterion that can be used to assess an organisation’s progress towards excellence.
The first six criterion are called enablers and the last five the results. Each criterion is, in turn, subdivided into several criterion parts, and these are supplemented by a number of areas to address. Each criterion is given a rating which is used for:

- evaluating applications for the SABEF award and prizes;
- internal assessment of strengths and weaknesses; and
- external comparison with scores attained by the "best in class". In this regard organisations compare their scores against those achieved by the European Quality Award applicants from 1992 to 1996. A chart is given of the ranges of scores achieved by the award applicants for each criterion.

(South African Excellence Foundation. 1998:70)

The enablers are concerned with how the organisation approaches each of the criterion parts. To make an assessment of the enabler, criteria information is required on the excellence of the approach used and the design and development of the approach. Each enabler is broken down into a number of criterion parts which need a response. Each criterion part is supplemented by a list of areas to address. The organisation must respond only to those relevant to it and can add others to be addressed. The enablers count 500 points and the results 500 points. The various criteria are given the points allocated to them as set out in Figure 3.5.

Each of the other criterion adapts a similar approach, i.e. definition, criterion parts and areas to address in each criterion part. The criteria are briefly discussed below.

CRITERION 1 - LEADERSHIP (10%)

Definition:
This is how the behaviours and actions of the executive team and other leaders inspire, support and promote a culture of business excellence.

Criterion Parts:
Self assessment must demonstrate how leaders:
1. visibly demonstrate their commitment to a culture of business excellence;
2. support improvement and involvement by providing appropriate resources and assistance;
3. are involved in customer and supplier chains;
4. recognise and appreciate people’s efforts and achievements; and
5. address public responsibilities and practice good citizenship.

Each criterion part is awarded 20 points.

In each criterion part a number of areas must then be addressed. I.e. in criteria part 3, areas which could be addressed can include how leaders:

- meet, understand and respond to needs;
- establish and participate in partnership; and
- establish and participate in joint improvement activities.

The same approach is adopted for each criterion part contained in all eleven criteria.

CRITERION 2 - POLICY AND STRATEGY (7%)

Definition:
This is how the organisation formulates, deploys, reviews and turns policy and strategy into plans and actions.

Criterion parts:
Self-assessment must demonstrate:

1. how policy and strategy are based on information which is relevant and comprehensive;
2. how policy and strategy are developed;
3. how policy and strategy are communicated and implemented; and
4. how policy and strategy are regularly reviewed, updated and improved.
In each criterion part a number of areas must be addressed. Each criterion part is allocated 17.5 points.

**CRITERION 3 - CUSTOMER AND MARKET FOCUS (6%)**

**Definition:**
How the organisation determines needs, requirements and expectations; enhances relationships and determines satisfaction of customers and markets.

**Criterion parts:**
Self-assessment must demonstrate:

1. how customer and market intelligence is determined;
2. how customer and market information is collected and used;
3. how the organisation maintains accessibility to customers and manages complaints; and
4. how customer satisfaction is determined.

In each criterion part a number of areas must be addressed. Each criterion part is allocated 15 points.

**CRITERION 4 - PEOPLE MANAGEMENT (9%)**

**Definition:**
How the organisation releases the full potential of its people.

**Criterion parts:**
Self-assessment must demonstrate:

1. how people resources are planned and improved;
2. how people capabilities are sustained and developed;
3. how people agree on targets and continuously review performance;
4. how people are involved, enabled, empowered and recognised;
5. how people and the organisation have an effective dialogue; and
6. how people are cared for.

In each criterion a number of areas must be addressed. Each criterion part is allocated 15 points.

CRITERION 5 - RESOURCES AND INFORMATION MANAGEMENT (6%)
Definition:
How the organisation manages and uses resources and information effectively and efficiently.
Criterion parts:
Self-assessment must demonstrate:

1. how financial resources are managed;
2. how information resources are managed;
3. how comparative information and data are selected and used;
4. how partnering and supplier relationships and materials are managed;
5. how buildings, equipment and other assets are managed; and
6. how technology and intellectual property are managed.

In each criterion a number of areas must be addressed. Each criterion part is allocated 10 points.

CRITERION 6 - PROCESSES (12%)
Definition:
How the organisation identifies, manages, reviews and improves its processes.
Criterion parts:
Self-assessment must demonstrate:

1. how key processes to the success of the organisation are identified;
2. how processes are systematically managed;
3. how processes are reviewed and targets are set for improvement;
4. how processes are improved using innovation and creativity;
5. how processes are changed and the benefits evaluated; and
6. how support processes are designed, managed and improved.

In each criterion part a number of areas must be addressed. Each criterion part is allocated 20 points.

CRITERION 7 - IMPACT ON SOCIETY (6%)

Definition:
What the organisation is achieving in satisfying the needs and the expectations of the local, national and international community at large. This includes the perception of the organisation’s approach to quality of life; environment and the conservation of global resources; organisation’s own internal measures of effectiveness; its relations with authorities and bodies which affect and regulate its business.

Criterion parts:
Self-assessment should demonstrate the performance of the organisation in satisfying the needs, requirements and expectations of society. This should be shown by presenting results, trends, targets and comparisons with competitors or best in class organisations. Information on the relevance of the measurement to society should also be presented. This could include:

1. society’s perception of the organisation; and
2. additional measurements of the organisation’s impact on society.

In each criterion part a number of areas must be addressed. Criterion 1 is awarded 15 points and criterion 2, 45 points.
CRITERION 8 - CUSTOMER SATISFACTION (17%)
Definition:
What the organisation is achieving in relation to the satisfaction of its external customers.
Criterion parts:
Self-assessment should demonstrate the performance of the organisation in satisfying the needs and expectations of its external customers. This should be shown by presenting results, trends, targets and comparisons with competitors or best-in-class organisations. Information on the relevance of the measurement to the customer should also be presented.

Self-assessment should demonstrate:

1. the customer's perception of the organisation's products, services and customer relationships; and
2. additional measurements relating to the satisfaction of the organisation's customers.

In each criterion part a number of areas must be addressed. Criteria part 1 is awarded 128 points and criterion part 2 is awarded 42 points.

CRITERION 9 - PEOPLE SATISFACTION (9%)
Definition:
What the organisation is achieving in relation to the satisfaction of its people.
Criterion parts:
Self-assessment should demonstrate:

1. the people's perception of the organisation; and
2. additional measurements relating to people satisfaction.
Again, a number of areas must be addressed in each criterion part. Criterion part 1 is awarded 68 points and criterion part 2, 22 points.

CRITERION 10 - SUPPLIER AND PARTNERSHIP PERFORMANCE (3%)
Definition:
I.e. what the organisation is achieving in relation to the management of supplier and partnering processes.
Criterion parts:
Self-assessment should demonstrate:

1. the organisation's perception of its suppliers' and partners' performance; and
2. additional measurements relating to the performance of the organisation's suppliers and partners.

Again, a number of areas to be addressed are recommended. Criterion part 1 is awarded 23 points and part 2, 7 points.

CRITERION 11 – BUSINESS RESULTS (15%)
Definition:
What the organisation is achieving in relation to its planned business objectives and in satisfying the needs and expectations of everyone with a financial interest or other stake in the organisation.
Criterion parts:
Self-assessment should demonstrate:

1. financial measurements of the organisation's performance; and
2. additional measurement of the organisation's performance.

A number of areas must again be addressed. Each criterion part is awarded 75 points.
A number of approaches are recommended which can be used for self assessment. The approach to be adopted will depend on the needs of the organisation. The criteria, criterion parts and areas to be addressed are set out in detail in South African Excellence Foundation. 1998:16-37.

3.5 CONCLUSION

A quality management system aimed at ensuring maximum customer satisfaction must always put customers in the centre. Management must drive the process, from laying down the quality policy to optimum use of resources, including staff, and the implementation of a quality system by structuring it in such a way that the most important processes are properly designed.

Important processes must be properly controlled for the service to be effective and meet customer needs. Because people (staff) are part of every stage in the service delivery process, the highest possible priority must be placed on ensuring that staff are capable of delivering the desired service. The service organisation must ensure that every staff member is adequately trained to ensure that he/she has the required competencies to ensure that he/she can deliver the desired service. This entails clearly defined skills requirements for each staff member, measuring staff performance against desired competencies and bridging any gaps there may be as quickly as possible.

A service quality management system should:

- lead to continuous improvement of quality of services;
- meet stakeholders’ expectations;
- meet all the facets which contribute to service quality;
- identify and manage all important processes;
- evaluate and assess;
- be properly documented; and
3.6 SUMMARY

Organisations, not persons, will in future play an increasingly important role in quality thinking and development. In future, organisations will have to manage for quality and will have to adopt a service orientated approach in their management thinking.

To some extent this approach has been anticipated by the ISO in its draft standards published for comment and to be implemented in 2000. The new structure is process-based and rests on four principles, namely:

- management responsibility;
- resource management;
- process management; and
- measurement analysis and improvement.

It is management's responsibility to ensure that these principles are incorporated into a well developed and structured quality system.
### IMPLEMENTATION AND ADVANTAGES OF A TOTAL QUALITY MANAGEMENT SYSTEM IN SERVICE RELATED INDUSTRIES

**CHAPTER 4**

**MANAGING HUMAN RESOURCES**

#### TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>SYNOPSIS</td>
<td>4-113</td>
</tr>
<tr>
<td>LIST OF FIGURES</td>
<td>4-114</td>
</tr>
<tr>
<td><strong>4.1</strong> INTRODUCTION</td>
<td>4-115</td>
</tr>
<tr>
<td><strong>4.2</strong> MAKING QUALITY PART OF THE CULTURE OF THE ORGANISATION</td>
<td>4-117</td>
</tr>
<tr>
<td>4.2.1 The organisation must adopt a service management approach</td>
<td>4-117</td>
</tr>
<tr>
<td>4.2.2 Doing things 100% right, 100% of the time</td>
<td>4-121</td>
</tr>
<tr>
<td><strong>4.3</strong> QUALITY MUST BECOME PART OF LIVES OF STAFF</td>
<td>4-128</td>
</tr>
<tr>
<td>4.3.1 The SA worker – coming from a weak educational Background</td>
<td>4-128</td>
</tr>
<tr>
<td><strong>4.4</strong> ADVANTAGES OF A PERSONAL EXCELLENCE MODEL</td>
<td>4-136</td>
</tr>
<tr>
<td><strong>4.5</strong> CONCLUSION</td>
<td>4-137</td>
</tr>
<tr>
<td><strong>4.6</strong> SUMMARY</td>
<td>4-138</td>
</tr>
</tbody>
</table>

4-112
IMPLEMENTATION AND ADVANTAGES OF A TOTAL QUALITY MANAGEMENT SYSTEM IN SERVICE RELATED INDUSTRIES

CHAPTER 4
MANAGING HUMAN RESOURCES

SYNOPSIS

A quality management system is driven by people. For an organisation to successfully implement a TQM system, the organisation must adopt a service management approach which places emphasis on empowering employees and ensuring service management career paths for them.

An organisation implementing a quality management system must develop a quality culture in the organisation. To enable it to do this, it must have the total commitment of its staff and it can gain this by following the example of Federal Express which has identified a number of principles to gain such commitment, namely:

♦ define quality goals;
♦ measure absolute service failures;
♦ adopt a staff-first approach;
♦ aspire to 100% customer satisfaction;
♦ adopt a flat organisational structure; and
♦ communicate with staff.

To ensure that this happens, management must accept and rise to new challenges. The bulk of the South African workforce come from a weak educational background. To overcome this, more emphasis must be placed by management on the development of its staff. A personal excellence model should be developed for staff. Such an approach requires huge commitments from management but the advantages gained from such a process, far outweigh the time and effort spent on it.
IMPLEMENTATION AND ADVANTAGES OF A TOTAL QUALITY MANAGEMENT SYSTEM IN SERVICE RELATED INDUSTRIES

CHAPTER 4
MANAGING HUMAN RESOURCES

LIST OF FIGURES

Page

Figure 4.1 : Personal excellence model 4-130
4.1 INTRODUCTION

ISO 9001:2000 and ISO 9004:2000 adopt a process approach to quality. One of the main elements of these draft standards is resource management.

Resources include physical resources such as land, buildings and equipment and resources such as capital, all of which must be properly managed and controlled. However, one resource which needs specific consideration, particularly in a service environment, is human resources. The management of human resources is important to any organisation, whether manufacturing or service orientated. For this reason particular attention must be given to this aspect in any quality management system.

In a service organisation, the behaviour of staff directly impacts on the quality of service. For this reason service organisations must ensure that personnel renders proper services and to achieve this:

- personnel must be selected on the basis of capability to satisfy the defined job specifications;
- the work environment must foster excellence and a secure work relationship;
- the potential of every member of the organisation must be realised by consistent creative work methods and opportunities for greater involvement;
- the tasks to be rendered must be understood;
- personnel must feel part of the quality of service;
contributions from staff must be encouraged;
motivators must be assessed from time to time;
career planning and development is vitally important; and
decisions must be taken to update the skills of personnel.

(Collier.1994:28)

An organisation can only achieve these goals if it places strong emphasis on the
development of staff and management and it must:

- train executives in quality management;
- train all personnel, not only in quality principles, but also in those competencies
  they need to ensure they perform their jobs properly;
- educate staff on the quality policies, objectives and concepts of customer
  satisfaction;
- embark on a quality awareness programme;
- establish procedures to check the training levels of staff;
- develop creative skills of staff;
- determine the requirements for formal qualifications; and
- evaluate development needs and potential.

Because quality is often seen as a process which control the quality of products of an
organisation, many textbooks discuss topics such as facilities, planning and design but
give little attention to the development of human resources. Very little attention has,
for example, been given to encourage ideas of workers or encouraging innovation and
creativity. Ceronio advocates that manufacturers should count on the ideas and
judgement of production workers, which inherently requires a re-think about education
and training. “Specifically training programmes tailored to the technical, administrative,
and psychological needs of workers must be designed” (Ceronio 1996: 235). On-the-
job training and mentoring must, according to him, form part of this process. A TQM
focussed learning organisation is conceived as one able to sustain consistent internal
innovation with the immediate goals of improving quality, enhancing customer or supplier relationships, or more effectively executing business strategy through the involvement of all employees, with the ultimate objective of sustaining profitability (Ceronio 1996:236)

However, selection and training does not necessarily mean that the organisation will render quality services or supply quality products. What is required is a total commitment to quality. This the organisation can only achieve if:

◆ quality becomes part of the culture of the organisation; and
◆ staff make quality part of their personal lives.

This requires a huge commitment to training by management.

4.2 MAKING QUALITY PART OF THE CULTURE OF THE ORGANISATION

One of the greatest problems experienced in a service organisation is the failure of quality at the interface between the customer and personnel of the organisation. ISO 9000 places the responsibility of quality in the highest management structures of the organisation. Quality implementation involves people and because people are involved, management must ensure that its staff is committed to a quality approach.

To achieve this the following steps must be taken:

4.2.1 THE ORGANISATION MUST ADOPT A SERVICE MANAGEMENT APPROACH

An organisation must adopt a service management approach. To do this, two strategic decisions must be taken, namely:
• empower employees; and
• work out service management career paths.

Empowered employees are employees who have been trained or given the opportunity to acquire skills and assume responsibility. To assist them in this process, planning should be done of their future career paths within the organisation, not only to lead to personal growth, but also to let organisation plan future personnel needs.

4.2.1.1 Empowering employees
The approach of Collier 1994 to empower employees can be summarised as follows:

• service strategies must not outpace empowerment, execution capabilities and availability of qualified people. High emphasis must therefore be placed on finding qualified people and developing them to cope with the growth and service strategies of the organisations;

• management must define the organisation's structure and it must be organised the service management way (i.e. top priority must be placed on meeting staff needs);

• information systems and technical capabilities must be provided to support empowered employees (this means that the organisation must develop an information and technological infrastructure which allows employees to meet both personal and company commitments);

• management must authorise and assign processes, encounters and customer ownership to specific employees and managers (i.e. employees must assume ownership of customers and to service those customers);

• outstanding training is essential;
management must make sure that each employee understands his/her role and contribution to the organisation;

empowered employees must know customers' needs and must be a source of innovation and change (i.e. employees must be encouraged to innovate and to come up with new suggestions);

management must build an employee selection and promotion system that employs the right people, rewards good employee behaviour, decisions and actions and provides feedback for continuous improvement;

It is vitally important that employees must be able to perform the tasks assigned to them. In essence, it basically means that the right people must be chosen for all jobs identified in the organisation.

In South Africa legislation such as the Employment Equity Act does not always encourage organisations to appoint the best qualified people. In fact, legislation such as the Employment Equity Act means that people should be appointed not because of qualifications and experience but on potential.

Potential can never replace experience, qualifications and the existing ability to do a job. A country such as South Africa, forming part of the global community of nations, all striving to capture markets, cannot afford to lag behind its economic competitors. If a country such as the USA, which is already a world economic leader, is looking for an economic knock out punch against competitors (Collier.1994:28), how can South Africa afford to redress past inequalities by adopting policies which may impede competitiveness? To be competitive the right people must be employed. Then organisations can focus on growth, creating more job opportunities and will have the resources, both financial and human, available to develop all employees as quickly as possible.
If socio-political considerations are going to play a part in the selection process of employees (which is a reality) then South Africa will have to embark on a massive campaign of retraining its employees and placing quality in the centre of these training programmes.

In the 1950's, Japan adopted the approach to make quality part of the vocabulary of each Japanese person. Within two decades the perception that goods coming from Japan are of bad quality changed to one that Japan can manufacture products which can compete with those of any country in the world. Quality gurus such as Deming and Juran had a huge influence on Japanese quality thinking. South Africa is in the position that it can use the experience gained in other countries to its advantage but then it must accept that unless there is clear evidence to the contrary, it cannot use some principles and abort others, because it is politically expedient to do so.

To ensure that the Japanese experience is accelerated and that political realities are accepted, top priority will have to be placed on a process where all employees in all organisations in South Africa will have to be trained on:

- quality awareness;
- improving technical competencies;
- self development; and
- understanding the organisation in which they work within the macro-economic context.

A commitment to a service management approach for empowering employees will not work unless it is implemented in practice. South Africa will have to go much further as far as training is concerned than more advanced economies, because of the fact that employers are forced to employ people who may not necessarily be the best qualified for the job. Unless this is done, industries in South Africa are literally going to sit with thousands of passengers who are ineffective and who are in the organisation without
really making a contribution.

4.2.1.2. Service management career paths

Staff planning in the organisation will have to take into account aspects such as:

♦ current staff needs;
♦ determining exactly what the organisation wishes to achieve in future; and
♦ what future staff's needs will be to meet its objectives.

Planning will then have to be done as to what must be done to develop current staff to meet future needs. Staff will have to be assessed to determine potential to meet future defined needs. Training must then focus on ensuring that such persons will be able to meet future challenges. By adopting such an approach staff know how they must develop to meet future needs. It makes them future focused – something which is often lacking in staff. To some extent the future of staff is also put in their own hands, which also makes staff development a personal responsibility and not only a management responsibility.

Management will have to spend time on defining the career paths of staff. The career goals of employees within an organisation will have to be matched with broader personal goals but the focus will, at all stages, have to be on the customer.

4.2.2 DOING THINGS 100% RIGHT, 100% OF THE TIME

4.2.2.1 Total commitment of all staff

Inherent in the service management approach is a strategy that it no longer suffices to do things right 90% of the time. Things must be done 100% right, 100% of the time. There is no doubt that a quality drive within an organisation, in the long run, leads to improvement of productivity, improve profits and staff commitment. However, to
implement such a process requires a total commitment of all staff within the organisation, but particularly top management.

4.2.2.2. The Federal Express example
An example of a company in the United States which took a decision that top management must place priority on quality service and must continuously drive and be part of the process is Federal Express. The company was started in 1973 and in 1991 won the Malcolm Baldridge National Quality Award (i.e. after 18 years in business). However in 1983, after 10 years in business, it became the only United States company in history to top $1 billion revenue in its first ten years. In eighteen years, it grew from 8 to 420 aircrafts, which in 1991 was the biggest cargo fleet in the world. According to its Chief Executive Officer, the secret was simple, namely: "Just doing what we say". (American Management Association 1991:11).

Federal Express has a consistent, clearly defined service quality goal - the aim of which is to give 100% customer satisfaction 100% of the time and to achieve this they implement a number of steps which are set out below.

Measure absolute service failures
To achieve this, Federal Express mathematically measures absolute service failures as a catalyst to promote continuous quality improvement.

A people first approach
Employees feel empowered through open communication, training opportunities, quality improvement tools and excellent leadership. A "people-first" environment is created, acknowledging employees' satisfaction as primary corporate objectives. They therefore adopt the following approach:

People - Service - Profit

Putting people (staff) first, requires extraordinary hard work by management. This "people-first approach" forms part of every process in the organisation, namely planning the design of any process and every business decision Federal Express takes. Federal Express uses tools such as a leadership index which measures the subordinates opinions of management leadership performance.

Emphasis is placed on the human side of quality. Federal Express explicitly states: "In trying to understand the service part of quality, one must necessarily grasp the significance of the human side of quality." (American Management Association 1991: 12).

100% Customer satisfaction
To ensure that customers are satisfied, Federal Express insists on 100% customer satisfaction after each interaction with an employee and on 100% service performance on each package delivered.

This culture of 100% satisfaction is engrained in all employees and management from the moment the employee starts with the organisation until he/she leaves the organisation. An employee is, for example, not allowed to come into contact with a customer unless such employee has first been trained for five weeks.

Flat organisation hierarchy
In this process, communication between management and employees is of vital importance and to achieve this, a flat organisation hierarchy (only five levels exist between the Chief Executive Officer and front-line employees) is implemented. The five levels are as follows:
Answer three questions

According to Federal Express (American Management Association, 1991:15), all staff come to work with three questions, namely:

Question 1: What do you (management) expect of me?

To answer this question, the organisation must give clear, consistent communication of goals. One of the best ways to achieve this is to use a flat organisational structure. In addition, skills and knowledge training must be given. Employees must understand their job duties and company expectations. The organisation equips them with the skills and knowledge to perform these duties.

Customer service agents, for example, complete a five-week course before fielding any customer calls on their own. In addition, they do four hours training each month. The company therefore makes a huge investment in training. Every manager must pass tests on the so-called service reference guide (a compendium of delivery standards
and procedures) and its managers guide. Employees' expectations from each other are also highlighted. Employees in each level are encouraged to make jobs of other levels easier. Managers must serve their subordinates as customers. All managers must complete a Leadership Evaluation and Awareness Process (LEAP). (American Management Association 1991:23). In this process, three transformational leadership behavioural dimensions are sought, namely:

♦ Charismatic leadership
Charisma derives from an ability to see what is really important and to transmit a sense of mission to others. This is found in people throughout the organisation and is one of the elements that separate an ordinary manager from a leader. Charismatic leaders serve as symbols of success for others and make them enthusiastic, command respect and have a sense of purpose. Subordinates are proud to be associated with charismatic leaders who install pride and respect in subordinates.

♦ Individual considerations
Such managers treat each subordinate as an individual and serve as coaches and teachers through delegation and learning opportunities. They discover what motivates each employee and do not treat subordinates alike. They have a developmental orientation and serve as role models. They show appreciation and give attention to newcomers and those who appear neglected.

♦ Intellectual stimulation
According to Federal Express the importance of technical expertise and intellectual power is frequently overlooked because of emphasis placed on interpersonal skills. Intellectual stimulation is seen as a vital part of leadership that:

- arouses an awareness in subordinates of problems and of different methods to solve them;
- provides compelling and convincing logic;
- stirs imaginations; and
- promotes thought and insight prior to actions rather than immediate, emotionally stimulated reactions.

Six leadership requirements are sought, namely:

♦ **Courage**
The leader must stand up for unpopular ideas, not avoid confrontation, give negative feedback to subordinates and superiors. In addition, the leader has confidence in his/her capabilities, desires to act independently and is prepared to sacrifice in order to do the right things for the company or subordinates.

♦ **Dependability**
Such a leader is dependable, follows through, keeps commitments, meets deadlines, takes responsibility, admits mistakes and works effectively with little supervision.

♦ **Flexibility**
Such a leader functions effectively in a changing environment, remains objective when confronted with many responsibilities, can handle several problems simultaneously, focuses on critical items and can change course when required.

♦ **Integrity**
Such a leader adheres to a code of business ethics and moral values, behaves consistently within corporate climate and professional responsibility, does not abuse privileges, gains trust/respect, serves as a role model in support of corporate policies, professional ethics and corporate culture.

♦ **Judgement**
This leader uses logical and intellectual discernment to reach sound evaluations or alternative actions, basis decisions on logic, factual information and consideration of
human factors, does not exceed authority, uses past experience and information to
give perspective on present decisions and makes objective evaluations.

♦ Respect for others
This person honours rather than belittles opinions of others, regardless of their status
or position in the organisation and demonstrates a belief in each individual's values,
regardless of background.
(American Management Association 1991:24-25)

Employees are encouraged to work autonomously, to be self-managing and to take
risks. Wrong decisions are not penalised if taken in the best interest of the company.

Question 2: What is in it for me?
Federal Express pursues promotion from within. People are paid according to
performance. There are well defined award and recognition programmes based on a
decentralised basis, done very swiftly and customer driven. Staff therefore know that
“what's in it for them” are:

♦ a promotion from within;
♦ pay for performance; and
♦ recognition.

Question 3: Where do I go with a problem?
An open-door policy is encouraged. Surveys and feedback are done regularly.
Employees are guaranteed fair treatment procedures. Top management of the
organisation (including the chief executive officer) spends one morning a week
focussed on worker concerns filed through a feedback process.
4.3 QUALITY MUST BECOME PART OF LIVES OF STAFF

4.3.1 THE SA WORKER – COMING FROM A WEAK EDUCATIONAL BACKGROUND

In any organisation, but particularly so in a service organisation, the focus of a quality drive should be the people working in the organisation. The question which management must ask themselves, is whether quality service and a quality culture in an organisation can be driven by people who do not only not understand quality but who also come from a background where very little attention was given to quality.

The reality of the South African situation is that the bulk of the current workforce come from an educational system which put little, or no, emphasis on quality. They are the products of an educational system which lacked trained teachers, lacked proper infrastructure, lacked money and was plagued by a non-care attitude by many teachers and principals. It is a well documented and established fact that many of the teachers who taught pupils, who are today in our workforce, lacked qualifications to teach properly and had a non-caring attitude.

The evidence of this weak base from which workers who are employed in manufacturing and service organisations come, is the yearly poor matric results.

The mere fact that organisations are spending time, money and effort on providing training is indicative of the fact that there seems to be an understanding that trainees need these skills to ensure a better personal life which will, hopefully, be to the advantage of the organisation.

4.3.1.1 A new dimension to training

If South Africa wants to meet the challenges of a rapidly changing world, it will have to embark on a training process which is not only skills orientated but places more emphasis on personal development by incorporating into the process aspects such as:
quality decision making;
quality at home;
quality lifestyles;
quality work;
quality personal relationships; and
becoming a quality person.

(Author's own suggestions)

The message to trainees must be that every step they take, whether in their own lives or at work, must meet certain quality criteria. Trainees must be taught that before they take decisions they must ask themselves questions such as: "Is this a quality decision based on the quality criteria I set myself?" Organisations have been so obsessed with technical training skills and abilities of workers that they have not asked themselves whether they should not go a step further and develop the whole person instead of concentrating on pure technical skills (i.e. work-related skills). Unless such an approach is adopted, many organisations will keep on asking themselves why their training is not as effective as they think it should be.

4.3.1.2 A personal excellence model

To assist with developing a new training approach a model for personal excellence should be developed. This can be based on the BEM developed by SABEF and the principles on which the Malcolm Baldridge Quality Award is based. For too long organisations have concentrated on training to do things right without ensuring that staff and management are able to do things right by having the abilities, skills, personal motivation, personal integrity and personal circumstances which will enable them to do things right. Just as organisations must strive towards organisational excellence, staff and management must be encouraged to strive towards personal excellence.

A personal excellence model such as that set out in Figure 4.2 below, can be used as a guideline on how employees can strive to personal excellence.
This model is based on the premise that positive impacts on personal life, employers, society, family, finances and effectiveness are achieved through personal behaviour driving personal policy strategies, managing finances and personal development leading to excellence in lifestyle.

There are 11 elements in the model, which is a criterion that can be used to assess the persons' progress towards personal excellence. As in the BEM developed by SABEF,
each criterion can be divided into a definition, criterion parts and areas to be addressed. There are six enabler criteria and five result criteria.

The six enabling criteria are:

1. **PERSONAL BEHAVIOUR**
   Definition:
   How behaviour, both in relationships with co-employees/employer family and society inspire, support and promote a culture of personal excellence.
   Criterion parts:
   Self assessment should demonstrate how employee:

   1. visibly demonstrates a commitment to personal excellence;
   2. supports personal improvement by developing himself/herself to cope with changing working and environmental needs;
   3. improves effectiveness through proper time management;
   4. addresses public responsibility and practices good citizenship; and
   5. recognises and appreciates peoples' efforts and achievements.

   Each criterion is allocated 20 points.

2. **PERSONAL POLICY AND STRATEGY**
   Definition:
   How policies and strategies are turned into plans and actions.
   Criterion parts:
   Self assessment should demonstrate how employee:

   1. basis policy and strategy on information which is relevant (i.e. workplace reports, reports from schools, financial information);
2. develops policy and strategy (i.e. projects his/her commitment to personal improvement by taking actions to develop himself/herself); 
3. implements strategy (i.e. setting personal objectives and prioritise action plans); and 
4. regularly reviews and updates policy and strategy.

Each criterion is allocated 17.5 points.

3. **EMPLOYER AND PEOPLE FOCUSED**

**Definition:**
How employee determines employer needs, needs of people with whom he/she makes contact and improves relationships.

**Criterion parts:**
Self assessment should demonstrate how employee:

1. determines need of employers and those with which he/she is in frequent contact;
2. collects such information and uses it;
3. resolves inadequate work performance effectively and promptly; and
4. determines whether he/she is performing adequately.

Each criterion is allocated 15 points.

4. **FAMILY FOCUSED**

**Definition:**
How the employee releases the full potential of all members of the family, i.e. developing his/her own skills as well as that of family members.

**Criterion parts:**
Self assessment should demonstrate how employee:
1. develops abilities of family;
2. agrees targets with family and review performance;
3. encourages family to empower themselves and recognises performance;
4. has effective dialogues with family; and
5. cares for family.

Each criterion part is allocated 18 points.

5. FINANCIALLY FOCUSED

Definition:
How employee uses financial and other resources available to the employee.

Criterion parts:
Self assessment should demonstrate how employee:

1. manages financial resources;
2. plans future financial needs; and
3. uses and cares for other resources (i.e. house, car, furniture, etc.).

Each criterion part is allocated 20 points.

6. PROCESSES

Definition:
How employee identifies, reviews and improve his/her important processes.

Criterion parts:
Self assessment should demonstrate how employee:

1. determines those processes which have a significant impact on his/her life;
2. manages these processes;
3. reviews the processes and sets targets for improvement;
improves processes; and
changes processes.

Each criterion part is allocated 24 points.

In the case of the five result criteria, the employee looks at whether he/she is meeting their targets and how he/she compares with others. The employees therefore determines what the positive impacts are of the steps which he/she has taken to improve their lives.

1. **IMPACT ON PERSONAL LIFE**

   **Definition:**
   What the person is achieving in his/her personal life.

   **Criterion parts:**
   Self assessment should demonstrate:

   1. personal self improvement policies have been developed;
   2. strategies have been implemented to improve personal improvement; and
   3. policies are regularly updated.

   Each criterion part is allocated 20 points.

2. **EMPLOYER (AND ITS CUSTOMERS) AND SOCIETY**

   **Definition:**
   What the employee is achieving in relation to his/her employers and society.

   **Criterion parts:**
   Self assessment should demonstrate:

   1. employers' needs are met;
   2. needs of customers of employers are met;
3. areas of weak performance have been identified and corrected;
4. what steps employee is taking to improve positive impact of actions on society and employer; and
5. steps taken to improve effectiveness and efficiency.

Each criterion part is allocated 34 points.

3. IMPACT ON FAMILY

Definition:
What is employee achieving in relation to satisfying family needs?

Criterion parts:
Self assessment must demonstrate:

1. improvement in lifestyle and circumstances of family;
2. improvement in relationships with family members; and
3. family members have taken steps to develop themselves.

Each criterion part is allocated 30 points.

4. IMPACT ON PERSONAL FINANCES

Definition:
What is employee achieving in relation to improvement of financial circumstances?

Criterion parts:
Self assessment must demonstrate:

1. personal financial circumstances have improved;
2. financial planning is done in advance; and
3. other resources of employee are properly maintained.

Each criterion part is allocated 10 points.
5. LIFESTYLE IMPROVEMENTS

Definition:
What is employee achieving in relation to its planned objectives?

Criterion parts:
Self assessment must demonstrate:

1. personal and family circumstances have improved;
2. financial circumstances have improved; and
3. employee has developed as a person.

Each criterion part is allocated 50 points.

4.4 ADVANTAGES OF A PERSONAL EXCELLENCE MODEL

If businesses strive towards excellence by using a BEM, they must encourage employees to strive towards excellence by using a personal excellence model. As part of the model, assessment criteria can be built in. Employees must be encouraged and trained on making the personal excellence model part of their personal lives. By making it part of their personal lives, the quality gap between personal and work life will be reduced. It is difficult to explain to employees a model such as BEM, but it is easy to explain to them a model such as a personal excellence model. Once they understand the personal excellence model, the understanding of the BEM is a logical extension of what they are doing in their personal lives.

Adopting a personal excellence plan will encourage initiative amongst employees and they should be encouraged to ask employers questions such as: “What do you think of my performance? How can it improve?”

Kreitner 1995:564 (quoting University of Chicago Professor Harry V. Roberts and AT&T Executive BF Sergesketter) asks the question whether there is any better way to learn about TQM than to make yourself a quality improvement project. Roberts and
Sergesketter developed a personal quality checklist which effectively combines goal setting, time management, behaviour modification and total quality management. In principle they adopt the same approach as proposed above.

4.5 CONCLUSION

The implementation of a quality system depends on people. To ensure that they are committed and loyal to such a system, they must be empowered to deal with it and become part of it. Management must organise the organisation in such a way that top priority is given to meeting customers needs. To ensure that employees are an efficient and effective part of the process, they must be experienced and chosen correctly. The message must always be: Do things 100% right, 100% of the time.

Management can endeavour to develop the best system but unless more time and effort is spent on personal (and not only technical) development of employees, difficulties will still be encountered in the implementation of a quality system. Employees will have to develop a personal excellence model against which they assess performance. This process must be a continuous process of improvement with much guidance given by management. The principles must be simple and applicable to employees’ circumstances.

Future training will have to involve more emphasis on mentorship. Most managers have invested substantial money, effort and time into their own management development. They are often guided by experts who act as their role models. To ensure that the organisation increases market share and profitability and uses its resources to maximum effect, management will have to embark on a process which ensures that all that accumulated experience and knowledge is shared with all staff. To do this they will have to mentor and become involved, but the rewards will be worth the effort.
4.6 SUMMARY

Personal employee development is a cornerstone for quality improvement in the organisation. Quality improvement in an organisation must be directly linked with a process of personal quality improvement of employees. This process requires a huge commitment from management. Top management must become part of the process. Not only technical competencies of trainees must be developed but it is possibly more important that trainees are encouraged to develop quality lifestyles, which should have a beneficial impact on the organisation as a whole. In addition, it will have a positive impact on the personal lifestyles of employees and society as a whole.
IMPLEMENTATION AND ADVANTAGES OF A TOTAL QUALITY MANAGEMENT SYSTEM IN SERVICE RELATED INDUSTRIES

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