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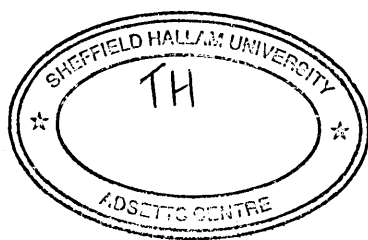
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**The Feasibility of Introducing Total Quality Management into
Oman Telecommunication Company (OMANTEL)**

Abdullah M. Al-Raisi

**A thesis submitted in partial fulfilment of the requirements of
Sheffield Hallam University
for the degree of Doctor of Philosophy**

October 2000



ABSTRACT

Total Quality Management (TQM) and the issues relating to its implementation have been widely discussed and debated in the business and management literature during the last few years, particularly in the West. The implementation of TQM principles, concepts and methods in an organisation has been regarded as a real movement towards transforming its culture and improving its management processes and the quality of its services and products. Nevertheless, available data on TQM implementation within the context of the developing countries are limited or mainly focused on the manufacturing sector. Little research has been carried out on the subject within the service sector, particularly within the telecommunication sector.

The issues relating to TQM implementation in this study are investigated within the context of a developing country; namely Oman; more particularly, within the context of the Omani telecommunication sector.

Against this background, this study examines the feasibility of introducing TQM into Oman Telecommunications Company (OMANTEL). The study provides an analysis and assesses the extent to which there is a need for TQM implementation in OMANTEL, and the extent to which the company's internal environment is compatible with the tenets of TQM.

The study is based on both secondary and primary data analysis. The secondary data are used to delineate the underpinning principles, methods, tools and techniques of TQM and to offer a background to the organisation under investigation. The secondary data were obtained through a survey of TQM literature and the archival data relating to OMANTEL. The primary data were obtained through an empirical study by questionnaire and conducting several interviews within OMANTEL. The primary data obtained are presented to manifest the extent to which it is feasible to introduce TQM in OMANTEL and to offer recommendations that would enhance this feasibility.

The secondary data analysis reveals that there are several emerging trends in the Omani telecom sector that entail some changes in OMANTEL. The secondary data analysis reveals that TQM has much to offer to OMANTEL in order to meet those emerging trends.

The primary data analysis reveals that there is a limited knowledge and understanding amongst OMANTEL's personnel of TQM and that there is a significant need for TQM implementation in OMANTEL. The primary data analysis reveals that there are some barriers that could be encountered in implementing TQM in OMANTEL; nevertheless, there are some driving forces that could facilitate this implementation. The primary data also reveals that the internal environment of OMANTEL is conducive to implementing the elements, concepts and principles of the proposed TQM framework.

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CHAPTER ONE:
INTRODUCTION TO THE RESEARCH

Chapter One: Introduction to the Research

1.1. The Rationale

During the last three decades Oman Telecommunications Company (OMANTEL), formerly the General Telecommunications Organisation (GTO), working under the supervision of the Ministry of Communications, formerly the Ministry of Posts, Telegraph and Telephone (PT&T), has virtually ruled every domain of telecom services in Oman. As a result, OMANTEL has enjoyed a virtual monopoly in the Omani telecom sector. This monopolistic status sheltered OMANTEL from the threat of competition.

Currently, after pursuing a purposeful development programme since 1970, the Omani Government is reconsidering its economic affairs and undertaking several steps towards restructuring its development plans particularly for the service sector as part of its long-term “Vision 2020” plan, diversification of its economy, and its intention to join the World Trade Organisation (WTO). These policies are forcing OMANTEL towards a more competitive scenario, as a consequence of the privatisation policy that has been recently adopted in the telecom sector.

The adopted privatisation policy and the other emerging trends in Oman’s national economy, will have a crucial impact on the continuation and functioning of OMANTEL. Anticipating and responding to the emerging trends in the country and telecom industry, restructuring of processes, and focusing on customer satisfaction and offering high quality services are essential for OMANTEL to attain the objectives of the privatisation policy, to meet the challenges of the emerging trends, and to keep pace with technological advancements in the telecom industry. As a result, there seems to be a potential need in OMANTEL for implementing the concepts and principles of TQM.

TQM has been seen as a management philosophy that seeks to enable all parts of an organisation to improve constantly to produce high quality services and products. It enables an organisation to seek competitive advantages. It emphasises cost reduction by doing things right the first time and every time. It emphasises the participation of all parts and functional levels of the organisation to improve constantly the quality of services, products and management processes. It is a philosophy with a set of values and beliefs that consider the customers, employees, and management of an organisation as significant factors in attaining improved services, products and management processes.

1.2. The Aims and Objectives

Against the above background to OMANTEL and TQM, the overall aim of the study is to undertake a critical assessment of the feasibility of introducing the tenets of TQM into OMANTEL. This overall aim is brought to fruition through the attainment of a number of discrete but sequentially interrelated objectives:

1. A background to the Omani telecom sector and OMANTEL to assess the developments achieved in this sector, the organisational structure of OMANTEL, the telecom services offered to the public, the human resources aspect of OMANTEL, and the emerging trends in the Omani telecom sector.
2. A delineation of the rational underpinning TQM to manifest its concepts and principles.
3. A critical assessment of the literature on TQM to assess whether or not there is an explicit model, or range of models, contained within the literature, which provides a definitive guide to the implementation of TQM in OMANTEL.
4. An assessment of the literature on TQM to determine the barriers to the implementation of TQM.
5. A formulation of conclusions and recommendations on the basis of the data analysis and the empirical findings.

1.3. The Research's Hypotheses

As no research has been carried out, to the best of the researcher's knowledge, in Oman on the implementation of TQM, the approach of the research was mainly exploratory in nature taking into account several hypotheses to include the following:

- Lack of appropriate knowledge and understanding of TQM philosophy and principles amongst OMANTEL's personnel.
- Lack of utilisation of TQM principles and its improvement methods within OMANTEL.
- A great need in OMANTEL for service and management processes improvement.
- Since there is a need for improvement, the principles associated with proposed TQM implementation model will be perceived as significant.

The above hypotheses have been formulated and based on the researcher's knowledge of OMANTEL.

1.4. The Research Questions

The research sought to resolve three questions relating to the employment of TQM in OMANTEL: will TQM act as an appropriate model for improving the service quality

and management process in OMANTEL?; will the concepts and principles of TQM work in Oman as they have been seen to work in some countries in the region and in some developed countries?; will TQM work in an organisation, such as OMANTEL, with a traditional pyramid management hierarchy and organisation chart? Clearly, this leaves the way open to seek to explain the findings; whether they suggest compatibility between the tenets of TQM and Omani cultural values (and more specifically business and management values) or whether they suggest incompatibility.

1.5. The Scope and Limitation of the Research

Since the key objective of the research was to test the feasibility of introducing TQM into OMANTEL, the research has limited itself to this organisation. As a result, the study focuses on discussing the feasibility of introducing TQM into this particular organisation and the capacity to generalise to other organisations in Oman is not open to empirical verification.

The primary data were collected within the context of this organisation and did not go beyond the organisation. The research did not try to collect data from the organisation's external customers in order to identify the perspectives of its customers towards its services. The data represents the viewpoint of OMANTEL's personnel towards the extent to which there is a need for TQM implementation in OMANTEL and the extent to which it is feasible to implement TQM in OMANTEL.

1.6. The Research's Contribution to the Knowledge

The research constitutes an addition to knowledge since it will be the first occasion upon which the feasibility of introducing the concepts and principles of TQM to an Omani organisation has been assessed; it provides that assessment in an unresearched context, the Omani telecommunications sector; and offers recommendations which will extend beyond the confines of OMANTEL and which will have concise recommendations for other areas of the growing Omani economy.

1.7. An Overview on the Thesis

In addition to the present introductory chapter, the thesis is designed and structured into eight discrete but consecutive chapters to include:

Chapter Two, which discusses the research design and methodology upon which this study was based. The chapter provides an overview on the research methodologies and their advantages and disadvantages. It discusses the study's design and data gathering instruments employed in the study. The chapter also discusses the sampling design of the study and data analysis process.

Chapter Three provides a background to the Omani telecom sector and OMANTEL. The first section of the chapter aims to provide a general background to the development of the Omani telecommunication sector. The second section discusses the organisation structure of OMANTEL and the services provided by OMANTEL and its human resources aspects. The chapter concludes with a discussion on some emerging trends in OMANTEL's environment.

Chapter Four provides a theoretical background to TQM. The chapter is divided into four sections. The first section deals with the definition of quality, from different perspectives. The second section provides an historical background to the evolution of quality management. The third section discusses the approaches of the quality management "Gurus". The last section discusses the key principle of TQM.

Chapter Five discusses the issues relating to TQM implementation. The chapter, first, manifests why there is a need for a framework or model to implement TQM. Second, the chapter proposes a conceptual framework for transferring the principles of TQM into practice along with a further implementation model. The chapter concludes by proposing a mechanism encompassing quality management tools and techniques for attaining continuous improvement.

Chapter Six will examine the results of the empirical study conducted to assess the extent to which there was a need in OMANTEL for implementing the proposed conceptual framework, and the extent to which the environment of OMANTEL was compatible with the principles and elements of the framework. The chapter is divided into five sections. The first section presents respondents' demographic variables. The second section provides the results indicating the level of awareness of OMANTEL's personnel of TQM and the results manifesting whether or not TQM concepts have been implemented in OMANTEL. The third section provides the results of rating the contextual (macro) elements of the proposed framework. The fourth section provides the results of rating the operational (micro) concepts of the framework. The fifth section provides the results of rating the principles of the proposed framework.

Chapter Seven explores the potential barriers that could be encountered by most of organisations in their efforts to implement TQM. The chapter discusses some common barriers that are encountered in the process of TQM implementation. The chapter also discusses, in more detail, some other barriers that are mainly related to the organisations' internal environments. The chapter presents three TQM implementation scenarios and the relating barriers to each scenario.

Chapter Eight provides and discusses the results of the empirical study and how the respondents perceived the barriers delineated and considered in chapter seven. The chapter discusses the extent to which the respondents to the empirical survey considered those barriers as possible inhibiting factors to TQM implementation in OMANTEL. The chapter also discusses the results of rating the factors that respondents felt to facilitate the implementation of quality management in OMANTEL.

Chapter Nine discusses the overall findings of the study together with conclusion and recommendations.

CHAPTER TWO:
THE RESEARCH DESIGN AND METHODOLOGY

Chapter Two: The Research Design and Methodology

Introduction

This chapter discusses the research design and methodology upon which this study was based. It provides an overview of the research methodologies and their advantages and disadvantages. It discusses the study's design and data gathering instruments employed in the study. The chapter also discusses the sampling design of the study and data analysis process.

2.1. A Review of the Research Methodologies

In discussing research methods, it should be noted that there is tremendous array of research methods in the social research literature. Phillips (1966) for instance, categorised research methods under two general headings, those that emphasise observation, and those that emphasise experimentation. Under the former heading could be placed the interview or questionnaire survey, the analysis of documents, and observation; experiments and simulation could be classified under the later heading. In discussing the distinguishing features and the advantages and disadvantages of the research methodologies, Yin (1994: 4) stated that each method has peculiar advantages and disadvantages, depending upon three conditions: (a) the type of research question, (b) the control an investigator has over actual behavioural events, and (c) the focus on contemporary as opposed to historical phenomena. However, the following is a brief discussion of the most common research methods used in the social science and their advantages and disadvantages.

The case study is a widely used research method in the social science. Yin (1994:13) defines the case study method as an empirical inquiry that investigates a contemporary phenomenon within its real-life context, especially when the boundaries between phenomenon and context are not evident. It copes with the technically distinctive situation in which there will be many more variables of interest than data points, and as a result relies on multiple source of evidence, with data needing to converge in a triangulation fashion. Benefit also results from the prior development of theoretical propositions to guide data collection and analysis.

The main strength of the case study method is that it allows for the identification of behaviours and other variables that were not expected to be related to the social problem, and provides for more in-depth analysis of superficial statistical portrayals of population. In addition, case studies provide for more complete understanding of a situation's complexity by examining behaviour in context (Majchrzak, 1984:63).

Despite their strengths, case studies have been viewed as a less desirable form of inquiry than either experiments or surveys since they provide little basis for scientific generalisation; and they take too long in the field, and result in massive, unreadable documents (Yin, 1994:10). However, case studies are extremely valuable in answering exploratory questions, and are a very useful mode of inquiry for studying a specific social case or problem. As Eisenhard (1989:548) stated, “building theory from case study research is most appropriate in the early stages of research on a topic or to provide freshness in perspective to an already researched topic”.

Since the overall aim of this study was to investigate the feasibility of implementing TQM in OMANTEL, it could be said that the selection of this organisation could be considered as a case study mode of inquiry. Nevertheless, this should not be taken so far as to claim that the study was based on a fully-fledged case study mode of investigation for to have done so would have been to go beyond the parameters of the research programme.

Cost-benefit analysis is another mode of inquiry that is used particularly in evaluating the impact or the cost and benefits of social policies or programmes conducted or proposed by the public agencies or authorities. Sylvia, R. Meier, K.J. and Gunn, E.M. (1991:47) defined cost-benefit analysis as an analytical tool used to study the impact a project or policy will have. It can facilitate decision-making regarding adoption, implementation, or continuation of a project or policy. The general approaches to identify and quantify both the negative impacts (the costs) and the positive impacts (the benefits) of a proposed project, programme, or policy, and then subtract one from the other to determine the net benefit.

The advantage of cost-benefit analysis, according to Sylvia et al. (1991), is that it allows the decision-maker or the investigator to focus on the goals of the programme and thus sharpens investigator's ideas about what is needed to be accomplished; in addition, it can bring to the investigator's attention programme features about which he or she may not have been previously aware, and warns the investigator about the areas that need more attention or further study. Nevertheless, the cost-benefit analysis mode of inquiry is weak in providing behavioural aspects, and it is limited to the public policy research.

However, the cost-benefit analysis method was not of the concern of this research since it mainly deals with public policies evaluation; and, since the proposed TQM concepts were not yet implemented within the organisation under investigation, efforts to determine the costs and benefits of their implementation would have been hype the

hial. The method could be used if the decision is taken to implement TQM; it could be used for further investigation to determine the costs of the implementation and the benefits that would accrue to organisation.

Experimental research methods are studies in which the investigator has control over the independent variable and over the assignment of subjects to different conditions (Selltiz, C. Wrightsman, L.S. and Cook, S.W., 1976:127). Under the experimental research methods there are essentially two discrete types of methods: laboratory experiments, and field experiments; the latter including quasi-experiments and action research.

The laboratory or true experimental method is a highly structured method based on laboratory tests. It permits the researcher to closely control the conditions under which observations are made. The intention is to isolate the relevant variables and to measure the response of dependent variables when the independent variable is manipulated. The laboratory type of experiments are useful when the conditions required to test a hypothesis are not practical or readily obtainable in natural situations and when the situation under investigation can be replicated under laboratory conditions (Gibson, J.L. Ivancevich, J.M. and Donnelly, J.H., 1994:732). However, laboratory experiments are not highly desirable in management research since the relevant behaviour is not observed in its natural everyday setting (Gill and Johnson, 1997:42).

A common field experiment is a quasi-experiment. The approach is mainly conducted to eliminate the difficulties that are associated with the laboratory experiments; the intention is to test the issue under investigation in its real-life or natural context. The approach is useful in situations where subjects cannot be randomly assigned to conditions, but where the independent variable can be manipulated, either by the investigator or by someone else (Selltiz *et.al.* 1976:145). In addition, the quasi-experiment is useful when time is an issue, or when matched (or no) comparison groups provide a more justifiable and less costly alternative to randomised controls (Majchrzak, 1984:62). However, the main weakness of the quasi-experiment is that the investigator lacks a degree of control over the conditions.

Action research is another type of field experiment. It is actually a derivative of quasi-experiment. The action research mode often entails the use of control groups so as to allow elucidation of cause and effect through the control of extraneous variables. It also entails the intervention of the investigator; the researcher being not only intended to contribute to existing knowledge but also to help resolve some of the practical concerns of people trying to deal with a problematic situation (Gill and Johnson, 1997:59).

Cohen and Manion (1997:186) stated that the use of action research in the social sciences can be resolved into two stages: a diagnostic stage in which the problems are analysed and the hypotheses developed; and a therapeutic stage in which the hypotheses are tested by a consciously directed change experiment, preferably in a social life situation. Walker (1985) suggested that the action research method can be alarming to the researchers who desire to see research as a purely passive measuring instrument and who find setting out to use data to change people somewhat heretical.

The disadvantage of field experiments is that the investigator must not only explain existing societal conditions but project future conditions as well. This projection into the future may be difficult if an experiment is conducted under conditions that are so dynamic that the results are constrained to the particular period of experimentation (Majchrzak, 1984:62).

The purposes of the experimental research methods discussed above indicate that these types of methods are mainly conducted to investigate purely scientific problems that may require experimental tests. As a result, it could be said that the experimental methods were uncongenial to the purpose of this research; thus, they were not used. Bryman (1996) noted that the researchers who conduct experimental research methods are preoccupied with problems of generalisation, such as the problem of external validity, which denotes the extent to which findings (which may be internally valid) can be generalised beyond the experiment. Also, the artificial nature of a laboratory experiment would seem adversely to affect the generalisability of findings; field experiments seems to solve the difficulties associated with laboratory experiment, but bring other problems in their wake. For instance, internal validity may be jeopardised since researchers in the field settings often have to compromise over such features as random allocation to group. Gill and Johnson (1997) added that the experimental researches are not highly desirable in management research

The ethnography approach to research is similar to the field experiment mode of inquiry; it is based on the naturalist modes of inquiry. Thus, studying the social phenomenon in its real-life context through the participant observation is the major concern of the ethnographers.

In the ethnography type of inquiry, the researcher observes the subject matter of the investigation either by fully involving him/herself into the situation, or only observes the situation without his/her direct involvement. Philips (1971: 168) distinguished between four types of participant observation:

1. Complete participant; here the participant conceals his research role and enters into the life of those he studies as thoroughly as he can.
2. Participant as observer; the participant reveals his role as researcher, he devotes a great deal of time and energy in participation in nonresearch roles.
3. Observer as participant; is illustrated by the one-visit interview, where the participation is kept to a minimum.
4. Complete observer; is entirely removed from social interaction with his informants, that is, he observes in unobtrusive ways.

However, researchers using an ethnographical approach to investigation are regarded as being more realistic since they are involved in the everyday life of the problem, and since they investigate the social phenomenon in its natural settings, which enables a great deal of depth in research. Despite those advantages, Gill and Johnson (1997) noted that the ethnographer's claims to population validity are usually considered to be limited to the actual phenomena under investigation during the field work because it usually entails the intensive study of a small number of cases; also, by becoming involved in the everyday lives of their subject matter, researchers internalise the subjects' culture and become unable to take a dispassionate view of events and unintentionally discards the researcher elements of the field role. In addition, people under investigation may behave differently if they know that they are under investigation, thus, the degree of naturalisation is reduced if observation is inappropriately conducted. However, the ethnography mode of research is widely used in the social sciences, particularly in anthropology and sociology.

In relation to this research, the ethnography method of inquiry was impossible to use since it was time consuming and costly and because it required, to some extent, the researcher's participation in the everyday life of the problem and close observation.

Surveys are the most commonly used research method in social science. Typically, surveys gather data at a particular point in time with the intention of describing the nature of existing conditions, or identifying standards against which existing conditions can be compared, or determining the relationships that exist between specific events (Cohen and Manion, 1997:83). Gill and Johnson (1997) distinguished between two types of surveys, 'Analytic' and 'Descriptive' surveys. Analytic surveys attempt to test a theory by taking the logic of the experiment out of the laboratory and into the field. The process must be carried out with due attention to any existing research, theory and literature relevant to the problem. The descriptive surveys are concerned primarily with addressing the particular characteristics of a specific population of subjects, either at a

fixed point in time or at varying times for comparative process. Prior consideration of the relevant theory and literature are also vital in descriptive surveys, particularly in determining the types of questions which need to be asked. According to Cohen and Manion (1997) whether the survey is analytic or descriptive, the data collection approach utilises one or more of the following data gathering techniques: structured or semi-structured interviews, self-administrated or postal questionnaires.

In discussing the advantages and disadvantages of surveys, Philips (1971) stated that in conducting a survey mode of research, the investigator can cover a wide range of phenomena and is not limited to analysing the effects of a few test stimuli; another advantage of the survey is the relative ease with which the investigator can obtain the co-operation of a probability sample of individuals from some defined population. Weisberg, H.F., Krosnick, J.A. and Bowen, B.D. (1996) added that surveys are frequently an appropriate and useful means of collecting information, although experiments and aggregate data often provide alternative data sources. Secondary analysis of existing surveys can sometimes substitute for collecting one's own survey data. In any case, surveys can have important advantages over other research methods and are, therefore, a useful tool for social scientific investigations. The disadvantage of the survey is its lesser degree of control over the data-collection situation and the resultant greater possibility of factors that are unknown to the investigator interfering with the results. The other arguments used against the survey are that verbal behaviour is quite unreliable, for individuals tend to say what they may think socially acceptable; and an individual's responses about his own behaviour are limited by his insight.

It should be noted that the intention of discussing research methods was not to suggest that one particular method is superior to another, but to reveal the concepts of each method and its advantages and disadvantages, and to justify the method employment in this study.

Due to the advantages of the survey method, despite some of its drawbacks mentioned earlier, this type of inquiry was deemed to be the most appropriate method for the purpose of this research, as the other research methods (e.g. experiments, ethnography) were costly and time consuming in addition to their other disadvantages and their focus on subjects that were not a primary concern of this study. Thus, it could be said that the study has followed the form of Watkinson's (1996) investigation into TQM implementation within Purchasing District Health Authorities of the NHS.

2.2. The Design of the Study

In describing research designs, Sekaran (2000) stated that studies can be either exploratory in nature, or descriptive, or they can be conducted to test hypotheses. According to Sekaran, an exploratory study is undertaken when not much is known about the situation at hand, or when no information is available on how similar problems or research issues have been solved in the past. Sekaran added that exploratory studies are important for obtaining a good grasp of the phenomena of interest and for advancing knowledge through good theory building and hypothesis testing. A descriptive study is undertaken in order to ascertain and be able to describe the characteristics of the variables of interest in a situation. Hypotheses testing studies usually explain the nature of certain relationships, or establish the differences among groups or the independence of two or more factors in a situation. Since no research has been conducted, to the best of the researcher's knowledge, on TQM implementation within OMANTEL, the design of the research was exploratory in nature evaluating the feasibility of implementing TQM in OMANTEL. Thus, it could be said that the study followed the design of Nwabueze's (1995) study on the analysis of the feasibility of developing a generic model for the implementation of TQM within NHS.

In addition to its exploratory nature, the study was based on a deductive process of investigation. Sekaran (2000) described this approach to investigation as a process by which the researcher arrives at a reasoned conclusion by logically generalising from a known fact. Based on this process, several steps were undertaken to arrive at the conclusion of the study.

In terms of the stages of the study, the research has been conducted in two main stages; a theoretical stage and an empirical study stage. The first stage was undertaken in the UK, which focused on the existing literature of TQM. The literature review concentrated on the delineation of the rationale underpinning TQM, the basic concepts and methods of the quality "Gurus", the basic tenets of TQM, the barriers to TQM implementation, and the search for an appropriate model for TQM implementation. This stage of the research was mainly based on the secondary sources of data.

The second stage of the research was conducted in Oman, namely in Muscat. The first phase of the second stage focused on the background of Oman and OMANTEL; this phase was conducted through organisational document and secondary data analysis. The second phase was an empirical study to collect primary data relevant to the study and the research problem, and to test the feasibility of introducing TQM into OMANTEL.

2.3. The Data Collection Instruments

In discussing data obtaining instruments, Phillips (1971) stated that some researchers prefer highly quantitative and precise techniques, and there are those who prefer to stay as close as possible to a 'realistic' situation and conduct research along qualitative lines. However, the subject matter of the research topic and objectives, and the sort of people to be studied all have a bearing on the choice of data collection method. However, an important aspect in data collecting, as Selltitz et al. (1976) stated, is that the data must produce information that is not only relevant but also correct. Two crucial aspects of correctness are reliability (the extent to which measures give consistent results) and validity (the extent to which they correspond to the 'true' position of the person or object on the characteristic being measured).

This research has employed a descriptive survey mode of inquiry. The methodology employed entailed a range of approaches to data gathering. More particularly, the research employed a mixture of both qualitative and quantitative methods, or what is termed 'Triangulation'. Cohen and Manion (1997) defined triangulation as the use of two or more methods of data collection in the study of some aspects of human behaviour; it attempts to map out, or explain more fully, the richness and complexity of human behaviour by studying it from more than one standpoint and, by so doing, makes use of both quantitative and qualitative data. Smith (1981:358) distinguished between four types of triangulation as followings:

I. Data Triangulation

- A. Time
- B. Space
- C. Level of triangulation
 - 1. Aggregate of persons
 - 2. Interaction of persons
 - 3. Collectivities of persons

II. Investigator Triangulation (multiple vs. single observers of the same object)

III. Theory Triangulation (multiple vs. single perspectives in relation to the same set of objects)

IV. Methodological Triangulation

- A. Within-method
- B. Between-method

For the purpose of avoiding the weaknesses and enhancing the strengths of the qualitative and quantitative methods, the research, as stated earlier, employed a

methodological triangulation approach. The essential advantage of triangulation is that different methodological weaknesses are avoided to produce more convincing findings, and to secure more accurate information regarding the subject under investigation. Yin (1994) added to these advantages that the use of multi sources of evidence allows an investigator to address a broader range of historical, attitudinal, and behavioural issues; another advantage presented by employing multiple sources of evidence is the development of converging lines of inquiry. In addition, with triangulation the potential problems of construct validity can be addressed because the multi sources of evidence essentially provide multiple measures of the same phenomenon. Furthermore, Bryman (1996:131) argued that social scientists are likely to exhibit greater confidence in their findings when these are derived from more than one method of investigation.

The justification of the method chosen entails a discussion of qualitative and quantitative methods. Gibson et al. (1994) stated that the quantitative approach is exemplified by precise definitions, control groups, objective data collection, use of the scientific method, and replicable findings which stress the importance of reliability, validity, and accurate measurement. On the other hand, the qualitative approach is more concerned with the meaning of what is observed, uses the experience and intuition of the researcher, and requires the researcher to become very close to the situation or problem being studied. Walker (1984) argued that since qualitative approaches are not concerned with measurement, they tend to be less structured than quantitative ones and can, therefore, be made more responsive to the needs of respondents and the nature of subject matter. Bryman (1996) argued that the data emanating from quantitative approaches are often depicted as hard, rigorous, and reliable since they have been collected by systemic procedures. These positive attributes are often taken to mean that quantitative data are more persuasive and more likely to gain the support of the decision-maker.

In discussing the role of theory and concepts with quantitative and qualitative methods, Bryman (1996) noted that qualitative researchers often reject the idea of using theory as a precursor to an investigation except, perhaps, as a means of providing an initial orientation to the situation as in 'grounded theory' since it may not reflect a subject's views about what is going on and what is important. Walker (1985) added that the nature of qualitative research is such that the theoretical rationale is likely to be less well developed than in a quantitative study. Typically, quantitative research is concerned to investigate specific theoretical propositions deduced from a more general theoretical system. It requires a priori statements or assumptions about the relevance of

particular concepts and about the means of operationalising them. Qualitative research is more frequently concerned to identify concepts in the data and to develop a theory that incorporates them.

For the purpose of gathering the qualitative and quantitative data, two of the data gathering instruments were employed; namely, a questionnaire and interviews. The instruments employed were specifically designed to gather the primary data of the study.

2.3.1. The Questionnaire

In discussing questionnaires, Sekaran (2000) stated that the questionnaires are an efficient data collection mechanism when the researcher knows exactly what is required and how to measure the variables of interest. In relation to this study, the data required from the field survey, the variables to be tested empirically, and the means by which these variables were to be measured were defined prior to designing the questionnaire. Therefore, a written, closed-ended and self-completion questionnaire was designed. The justification for conducting this type of questionnaire drives from a consideration of its advantages.

In discussing the advantages of written questionnaires, Judd, C.M., Smith, E.R., and Kidder, L. (1991) argued that written questionnaires are the least expensive means of data gathering, they may place less pressure for immediate response on the respondent, which is important when the respondent has to look in or refer to personal records for the information to answer a question, and they give the respondent a greater feeling of anonymity and therefore encourage open responses to sensitive questions.

According to Weisberg et al (1996:84) the main advantage of closed-ended questions is that they provide the same frame of reference for all respondents to use in determining their answers. It is also easy and inexpensive to work with the resulting data. Heather and Stone (1984:13) listed the following advantages of closed-ended questions:

- They are simple to administer.
- Because the categories are determined in advance, it is easy to pre-code the responses, which facilitates the analysis.
- Closed questions have a frame of reference which guides respondents' replies. This may clarify the concepts used and make clear the kind of answers sought.

Selltiz et al (1976) stated that closed-ended questions are more efficient where the possible alternative replies are known, limited in number, and clear cut. Thus, they are more appropriate for securing factual information and for eliciting expressions of

opinion about issues on which people hold clear opinions. This was particularly significant for securing factual data from OMANTEL's personnel regarding the organisational status quo and the extent to which its environment was compatible with TQM implementation.

Despite the aforementioned advantages of closed-ended questions, they have some drawbacks. These drawbacks include introducing bias, forcing a statement of opinion on an issue when respondents do not have any opinion, and the hazard of offering an easy choice that the respondents might not make if forced to recall, organise, and evaluate personal experience, etc. (see for example Smith, 1981; and Selltiz et al, 1976). To limit the drawbacks of the closed-ended questions, at the end of the questionnaire, the respondents were presented with an open-ended question to provide their comments and suggestions on the issues included in the questionnaire.

The questionnaire was divided into five sections (see Appendix II). The first section (section A) aimed to establish a general profile of the respondents. Thus, the section presented the respondents with the study's independent variables to include the following:

1. Type of Occupation.
2. Gender.
3. Nationality.
4. Level of Education.

These variables were based on the Nominal Scale of measurement to qualitatively distinguish the respondents by categorising them into mutually exclusive and collectively exhaustive sets. The respondents were asked to distinguish themselves by selecting the appropriate variables.

The second section of the questionnaire (section B) aimed to test the extent to which the respondents thought the elements, concepts and principle of the proposed implementation model (Chapter Five) were significant to be implemented in OMANTEL in order to improve the quality of OMANTEL's services and management processes. In this section the respondents were presented with a number of 20 statements (dependent variables) relating to elements, concepts and principles of the model. The dependent variables presented in this section were based on an Itemised Interval Rating Scale.

The third section (section C) of the questionnaire was used to test the extent to which the elements, concepts, and principles of the model (Chapter Five) are being practised in OMANTEL in order to identify the compatibility between OMANTEL's

environment and the requirements demanded by TQM implementation. The section presented the respondents with a set of statements (dependent variables) relating to each element, concept and principle of the proposed model. The section also included two statements. The first statement tested to what extent OMANTEL's personnel were aware and have an understanding of TQM. The second statement tested whether or not the tenets of TQM have been implemented in OMANTEL. The dependent variables presented in the third section were based on the Interval Likert Scale of measurement.

The fourth section (section D) presented respondents with a set of barriers (Chapter Seven) that could inhibit the implementation of TQM in OMANTEL. The last section (section E) presented the respondents with a set of factors that could facilitate and enhance the implementation of TQM in OMANTEL. The factors included in this section were related to the recent changes which had occurred in the Omani economy and telecommunication sector. The dependent variables (barriers and facilitating factors) were based on the Nominal Scale of measurement.

To gain more accurate data and to secure a high response rate from more than one group of respondents, the questionnaire was designed in multilingual (Arabic and English- see Appendix II and Appendix III) format since it was distributed to more than one group within the total sample of population. The groups represented Omanis whose mother language is Arabic, and non-Omanis whose language is not Arabic. In this regard, Coolican (1997) stated that respondents will be most comfortable and fluent using their normal language mode and must be made to feel that its use is not only legitimate but also welcome and valued.

In addition, three covering letters were enclosed along with the questionnaire (see Appendix II and III). The first letter clarified the aim of the research and assured the sample of the confidentiality of its replies. The second letter was a recall letter distributed to respondents who had not replied to the first letter. The letters were written first in English and then translated, by the researcher, into Arabic. The third letter was obtained from the Ministry of Higher Education stating the purpose of the study and was obtained to assure the sample that the data and results of the study will be used for the research purposes. It was also hoped that this would have a positive effect upon the response rate.

The questionnaires were distributed by hand and collected personally by the researcher because of the ease of access to the sample and its location. Again, this approach was envisaged as making a positive contribution to the overall response rate.

2.3.2. The Interviews

To avoid the weaknesses of closed-ended questions, to enhance the validity and reliability of the data gathered through the written questionnaire, and to get more accurate and factual data regarding the issues under investigation, several face-to-face interviews were conducted; particularly with the personnel at the management levels of OMANTEL. The key advantage of interviews, according to Hussey and Hussey (1997), is that they permit the asking of more complex and follow-up questions, which is not possible in a written questionnaire. Thus, further information can be obtained. In addition, an interview may permit a higher degree of confidence in the replies than written questionnaire responses and can take account of non-verbal communications such as the attitude and behaviour of the interviewee. Judd et al (1991) added that interview could best establish rapport and motivate the respondents to answer fully and accurately, which a consequent improvement in the quality of data. Nwabueze's (1995) study revealed that the major advantage of the use of the interview as the primary data collection vehicle was that it afforded the author the opportunity to note all underlying issues related to the study which other tools of data collection would have failed to gather.

To give the respondents a greater flexibility and freedom to express their perspectives frankly regarding TQM and the issues relating to its implementation within OMANTEL, the interviews were conducted on a semi-structured and face-to-face basis and individually instead of in groups and on a structured basis. The key advantages of semi-structured interviews, as Stone and Harris (1984) noted, are: a) the topics of interest to the researcher are likely to be covered; b) respondents are able to respond in their natural language; c) the interviewer can form questions on topics and ask them in an order which seems to arise naturally from the context. The semi-structured type of interviews were particularly important in relation to the sensitive issues relating particularly to OMANTEL, the respondents preferred not to be interviewed in groups to discuss the personnel and management issues of OMANTEL. A common factor which all of the respondents emphasised was the confidentiality of information they provided in interviews, as all respondents strictly requested that their names and positions not be mentioned in the study. The respondents' request is respected throughout this study.

Although the interviews were semi-structured, the main discussions and questions concentrated on the following points:

- The feasibility of introducing TQM into OMANTEL, how it could lead to an improvement in OMANTEL's services?

- Which of OMANTEL's functional areas and services need to be improved?
- Which elements, concepts and principles of the model were most significant for improving the quality of OMANTEL's services?
- What are the possible driving forces and inhibitors that could lead or limit TQM implementation within OMANTEL?

2.4. The Pilot Study

A pre-test or pilot study was conducted, before handing the questionnaire to the sample, to test the validity and reliability of the questionnaire. Copies of the questionnaire were given randomly to a stratified sample of 20 personnel of OMANTEL, representing various functional levels of OMANTEL to include one Director General, four Middle Managers, and four First-Line Managers, all Omanis. The other eleven copies were given to Employees representing five Omanis and six expatriates, including both males and females.

The participants in the pilot study were asked to review the questionnaire and give their opinions on the appropriateness of the questions, the clarity of the concepts related to the variables presented in the questionnaire, the quality of translation, and to say whether or not the questions posed were understood by the sample.

The participants in the pilot study suggested no major changes in the questionnaire, except some changes in the wording of the Arabic format of the questionnaire, which were due to the translation process. The major change was in the timing of distribution. Before conducting the pilot study, the intention was to distribute the first part of the questionnaire (sections A and B), and then the second part of it (sections C, D, and E) after collecting the first one. The participants suggested distributing the two parts of the questionnaire together as an entity since it would be time consuming to distribute it separately, and the sample could not link the content of the first part with the second one and could become confused as to the purpose of each part of the questionnaire. Accordingly, the two parts of the questionnaire were merged and distributed to the sample as a totality.

Another major change was in removing a question related to the level of occupation from the first set of the questions (general information). Prior to the pilot study, the questionnaire included a question seeking to identify the level of occupation of the sample. Some participants in the pilot study suggested excluding that question as it might imperil the anonymity of respondents. Instead, the researcher distinguished between the questionnaires distributed to each group of respondents by numbering the questionnaires on their front pages, without seeking the level of occupation. For

instance, the questionnaires distributed to the top management were marked with a number (1); the questionnaires distributed to the managers were marked with a number (2); those were distributed to the middle managers were marked with a number (3); and those distributed to the employees were marked with a number (4).

To test the reliability of the questionnaire and measures, Cronbach's Alpha test was used. The results showed the Alpha measure of 0.8834 for the twenty items related to the significance of the principles; the test showed an Alpha measure of 0.9728 for the items related to the practice of the principles. The results of the test indicated an Alpha measure of 0.9195 for the facilitating and inhibiting factors. Sekaran (2000) stated that reliabilities less than 0.60 are considered to be poor, those in the 0.70 range, acceptable, and those over 0.80 good.

2.5. The sample

The sample was geographically limited to Muscat, the capital city of Oman, in view of the costs and difficulties associated with personally contacting OMANTEL's personnel throughout the country. Although the sample was geographically limited, it can be considered as truly representative since the major activities and departments of OMANTEL are located in Muscat. However, the sample was drawn from a stratified sample encompassing all relevant organisational levels and functional areas within OMANTEL. They represented managers and first line operatives, administrative and technicians, Omanis and non-Omanis, males and females, all with differing levels of education.

The sample was drawn using Disproportionate Stratified Random Sampling procedure to ensure that all the groups of the population were present and to gain information from all groups of the population. In relation to the Stratified Random Sampling procedure, Sekaran (2000:275) stated that "This sampling design is more efficient than the simple random sampling design because, for the same sample size, each important segment of the population is better represented, and more valuable and differentiated information is obtained with respect to each group". The size of the population and the number of questionnaires distributed according to this method of sampling are provided in Table 2.1.

Table 2.1: Disproportionate Stratified Random Sampling

Occupational level	Number	No. of Questionnaires Distributed
Top Managers	10	9
Middle Managers	27	27
First-Line Managers	98	80
Employees & Others	1938	94
Total	2073	210

As shown in Table 2.1, nine questionnaires were distributed to Top Managers of OMANTEL. Eight questionnaires were distributed to the Director Generals (General Managers), and one was handed to the Director of His Excellency the Minister's Office (Chairman of Board of Directors of the OMANTEL) to be handed and completed by His Excellency the Minister. No questionnaire was handed to the office of His Excellency the Executive President of OMANTEL since the position was vacant during the empirical study. Twenty-seven questionnaires were distributed to twenty-seven Middle Managers. Eighty questionnaires were distributed to the First-line Managers, or personnel occupying equivalent levels. Ninety-four questionnaires were distributed to Employees representing various areas of OMANTEL.

It should be noted that the sample includes both the Technicians and Administrative although some of the Technicians, particularly those at the managerial levels, hold administrative positions; the sample also includes both Omanis and non-Omanis, and both males and females.

The number of the questionnaires distributed and returned, the percentage of the sample of the total population, and the response rate are provided in Table 2.2.

Table 2.2: Questionnaires Distributed and the Response Rate

The Population	2073
The Sample	210
% of the Sample to the Population	10.13
Returned Questionnaires	169
Unreturned Questionnaires	41
Excluded Questionnaires (Statistically Unusable)	17
Analysed Questionnaires (Statistically Useable)	152
% of the Response Rate	80.47
% of the Questionnaires Analysed	72.3

The total population of OMANTEL is 2073 personnel representing all the functional levels of the organisation. As stated earlier, using the Disproportionate Stratified Random sampling procedure, 210 of the population were selected to be the sample of

the study. Thus, an equivalent number of questionnaires were distributed to the sample, keeping in mind that the sample represented the total population in terms of occupational levels, occupation type, nationality, gender, and educational levels. The percentage of the sample was 10.13 of the total population.

Out of 210 questionnaires distributed, 169 questionnaires were returned. Top Management did not return 3 questionnaires. A total of 8 questionnaires was not returned by Middle Managers. The First-Line Managers did not return another number of 14 questionnaires. Employees did not return a total of 16 questionnaires. The highest return rate was from the Top and Middle Managers, and the lowest return rate was from the First-Line managers and Employees. This would indicate the seriousness of the top management about the study. This could be due to some aspects related to their level of education, positions they are holding, or the degree of awareness amongst them about TQM.

However, a total of 17 questionnaires were statistically unusable. Thus, the total of number of the questionnaires analysed and statistically used is 152. Based on the figures provided above, the actual response rate was 80.47%, but the percentage of the returned questionnaires deemed usable and which were therefore analysed gives a response rate of 72.3%. Accordingly, it could be said that the actual response rate was high and that the percentage of the questionnaires analysed was adequate for concluding the results of the study. In this regard, Fink (1995:53) argued that “All surveys hope for a high response rate. No single rate is considered the standard, however. In some surveys, between 95% and 100% is expected; in others, 70% is adequate”.

2.6. The Data Analysis

In the data analysis process, several steps were undertaken before analysing the data. At the first stage, the data was cleared and edited. The data gathered by means of interviews were clearly deciphered so that they could be coded systematically in their entirety. The questionnaires received with more than 20% items left blank were taken away and not included in the data set for analysis. The number of questionnaires excluded due to such blank items was 17 questionnaires out of the 169 that were returned.

Before entering the data for analysis, the responses were coded. The responses relating to the respondents' demographic variables (independent variables) were coded according to the number of items. The responses related to the type of occupation variable, “Administrative” and “Technician”, were given the numbers of 1 and 2 respectively. The variables relating to the respondents' gender, “Male” and “Female”,

were also coded as 1 and 2 respectively. The responses of the nationality variable, “Omani” and “Non-Omani”, were coded as 1 and 2 respectively. The responses to the level of education variables, Preparatory and Less, Secondary, College, and University were coded as 1,2,3, and 4 respectively.

The responses to the statements seeking the extent to which the elements, concepts and principles of the proposed implementation model were significant were coded from 1 to 4 since there were four items (Most Significant, Significant, Less Significant, and Not Significant). The responses to the statements seeking the extent to which the model’s elements, concept, and principles were being practised in OMANTEL were coded from 1 to 5 since there were five items indicating the degree of their practice (Strongly Agree, Agree, Neutral, Disagree, Strongly Disagree). The responses to the facilitating and inhibiting factors were coded as 1 and 2. The selected items, were coded as 1; and those which were not selected were coded as 2.

After the data had been made ready for the analysis, the SPSS package, version 0.9, was used. Several tests (Mean, Standard Deviation, Percentage, and Frequency) from this package were used in analysing the data.

CHAPTER THREE:
TELECOMMUNICATIONS IN OMAN

Chapter Three: Telecommunications in Oman

Introduction

This chapter is divided into three sections. The first section aims to provide a general background to the development of the Omani telecommunication sector. The second section discusses the organisation structure of OMANTEL, the human resources aspects of OMANTEL, and the services provided by it. The chapter concludes with a discussion of some emerging trends in OMANTEL's environment.

3.1. The Growth of the Omani Telecommunication Sector

The history of telecommunications in Oman dates back to over a century. In 1877, the first telegraph cable was laid between Muscat and Aden. In 1885, further cables links were established with Karachi and Busair. In 1939, Cable and Wireless (C&W) of the UK was granted an exclusive licence to provide international telecommunications services for Oman and a C&W telegraph office was established in Muscat. In 1950, C&W obtained the exclusive right to install and operate a telephone system in Muscat and Muttrah, as well as junction services between these exchanges, over a connecting underground cable. In 1952, the first automatic exchange with a capacity of 100 lines was installed at Muttrah (Ministry of PT&T, 1983). Apart from those facilities, there were no other telecommunications facilities in Oman.

In 1970, an Analogue Exchange (Cross Bar 23 c) with a capacity of 1,000 lines was commissioned in Muscat, and 24 hour telecommunications operations started in Oman; for the first time extending the 14 hours restricted schedule (Oman Telecom Book, 1997:33).

1971 witnessed the addition of several new services in the field of telecommunications such as the opening of the international FM station to provide more channels for international services. In the same year, communications services were introduced, for the first time, in the Southern Region with a capacity of 42 lines in addition to operating a new Analogue Exchange (Cross Bar 23 c) with a capacity of 750 telephone lines in Muttrah (Capital Area) to meet the increasing need for telephone services. In addition, a new high capacity telex exchange was installed to provide further telex services (Ministry of PT&T, 1983).

In 1972, an additional 4 H.F. channels were opened to make a total of 12 circuits for international services, and a semiautomatic international telephone dialling by operators

was introduced to increase the speed of setting up international telephone calls (Oman Telecom Book, 1997:33).

In 1973, the Omani Government entered into an agreement for the extension of the telephone network infrastructure. This included 23 automatic telephone exchanges with a capacity of 1,200 telephone lines which provided telecommunications services for main towns and villages and for setting up a cable to connect these exchanges (Teleoman, 1995:14). This was a major milestone on the way to telephone development in Oman.

In 1975, the first communication company (Omantel) was established to replace C & W. The new company was established with 60% of its shares owned by the Omani Government and 40% by C&W. During the same year, a temporary Earth Station Standard “B” with 24 circuits via Indian Ocean Intelsat was inaugurated to replace the existing H.F. international link. In addition, 23 new exchanges and a long-distance Coaxial cable system were commissioned (GTO Year Book, 1995:13).

The progress of the telecommunications sector during the period of 1970-1975 is illustrated in Table 3.1.1:

Table 3.1.1: The Progress of the Telecommunications Services From 1970-1975

		1970	1971	1972	1973	1974	1975
Normal telephone	Capacity	1750	1750	1750	2950	3950	3950
	Working	557	989	1208	2226	2937	3701
	Loading	31.83%	56.51%	9.03%	75.46%	4.35%	93.70%
International traffic	Telephone calls	9500	19300	39000	46400	49600	75000
	Telex/Letters	4900	12900	21500	31600	36500	47200
	Telegraph/Letters	27000	35000	48000	54000	73000	100000

Source: GTO Year Book (1995).

In 1976, the Omani Government launched its First Five-Year Development Plan (1976-1980). To keep pace with the development, the telecommunication sector was among the economic sectors which were given a high priority by the Government. As a result, during the five years of the plan, several projects have been carried out to expand the telecommunication sector in the country. In the first year of the plan, 1976, a new Earth Station Standard “A” with 72 circuits operating with Indian Ocean Intelsat was inaugurated (Ministry of PT&T,1983).

In 1977, Omantel embarked on studies to improve and expand the telecommunications network countrywide to meet the increasing demands for telecommunications services (Oman Telecom Book, 1997).

In 1978 the Ministry of Posts, Telegraph and Telephone was formed and separated from the Ministry of Communications by Royal Decree No. 27/78, to undertake the expansion and development of the communication network throughout the country (GTO Year Book, 1995) Omantel remained responsible for providing telecommunications services in the country.

Based on the studies carried out in 1977 to expand the telecommunication network, "OMANTEL", in 1979, commissioned a 1200 line electronic automatic telex system (EDX) and upgraded its "Coaxial" cable system to 12 MHz to carry traffic to rural areas.

On May 6, 1980, Royal Decree No. 43/1980 was issued establishing the General Telecommunications Organisation (GTO) which replaced Omantel (Development Council, 1981:96). GTO with the help of the International Bank set a 20 year plan for the development of telecommunications services, the operation of the earth stations, the construction of buildings, communication centres, telephone exchanges and other related necessary services (Teleoman, 1995:15). During the same year, GTO commissioned the Khasab Standard "B" Earth Station to provide telecommunication services to Musandum Governorate along with a 100 line exchange, and introduced coin-operated public payphone service into the country for the first time (Oman Telecom Book, 1997).

However, Table 3.1.2 illustrates the progress of the telecommunications sector during the First Five-Year Plan:

Table 3.1.2: The Progress of the Telecommunication Sector From 1976-1980

		1976	1977	1978	1979	1980
Normal Telephone	Capacity	13660	15960	15960	20960	23060
	Working	6649	9699	11112	11163	17286
	Loading	48.67%	60.77%	69.62%	53.26%	74.96%
Telex	Capacity	0	0	0	1200	1200
	Working	0	0	0	583	730
	Loading	0	0	0	48.6%	60.8%
Payphone	Card	0	0	0	0	0
	Coin	0	0	0	0	1
International circuits	Arabsat	0	0	0	0	0
	Intelsat (IOR)	31	37	40	48	54
	Intelsat (AOR)	0	0	0	0	0
Terrestrial with UAE	Terrestrial	0	0	0	0	0
	Total	31	37	40	48	54
Data circuits	Telephone Calls	95800	138700	174400	1170400	0253500
International traffic	Telex/Letters	60900	259700	291200	321500	454300
	Telegraph/Letters	123800	156600	135400	131200	139600

Source: GTO Year Book (1995).

In 1981, the Omani Government implemented its Second Five-Year Development Plan (1981-1985). The targets and policies of the plan for the telecommunications sector can be summarised in the following points (Development Council, 1981:96):

1. To extend telecommunication services to new regions in the Sultanate.
2. To expand the capacity of existing telephone exchanges in order to install extra telephone lines.
3. To expand the system of long-distance direct dial.
4. To introduce public phone booths.
5. To expand telex services.

As part of the above targets and policies, GTO appointed consultants to work out specifications and implementation schedules for the targets and to supervise the execution of works. However, during the first year of the plan, 1981, GTO commissioned an electronic telephone exchange to provide an International Subscriber Dialling (ISD) facility (GTO Year Book, 1995).

In 1982, a major order was placed for the expansion of the telecom system in the Capital Area (Muscat) and the Southern Region (Dhofar). This included a 1,000-km long-distance Analogue microwave system for telephony and television between Muscat and Dhofar, in addition to exchanges using digital technology. In addition, ship-shore communications were expanded to provide better communication services to vessels sailing in Omani territorial waters. Also, all mountaintop radio microwave repeaters were converted to solar power for easy maintenance and better communications (Oman Telecom Book, 1997).

In 1983, in order to meet the increasing demand for telephone and telex services, GTO temporarily installed four container type exchanges of 1,000 lines in Muscat, and expanded the International Telex Switching Centre with Time Division Multiplex (TDM) equipment in addition to expanding the telex exchange to a capacity of 3,502 lines (GTO Year Book, 1995).

1984 was a landmark year for switching in Oman. Computerised digital switching were introduced in GTO's network as part of a major telecommunication expansion project. 15 digital exchanges of EWSD type were introduced in the Governorates of Muscat and Dhofar with a total capacity of 58,000 lines. A computerised centralised supervisory system was also installed in the Telecommunication Centre (TCC) of Muscat for remotely monitoring the performance of the network and carrying out corrective measures from one

central location (GTO Monthly Report, April 1998). In addition, and as part of the Coast Station expansion, GTO extended VHF radio telephone to cover Salalah, Sohar and Khasab in order to improve telecommunications services provided to ships in those areas (Oman Telecom Book, 1997).

By the end of the Second Five-Year Development Plan, in 1985, GTO introduced the Public Mobile Automatic Telephone System (PMATS) and Card-Operated Payphone services. The initial coverage of PMATS was the Muscat and Dhofar Governorates and Batinah Coast with an initial capacity of 4,500 subscribers and 14 Radio Base Stations. As a result of the increasing demand for extended coverage, GTO increased the number of Radio Base Stations to 42 covering more highways and interconnecting more cities and important areas (GTO Monthly Report, April 1998). The achievements attained during the Second Development Plan are presented in Table 3.1.3:

Table 3.1.3: The Progress of the Telecommunication Sector From 1981-1985

		1981	1982	1983	1984	1985
Normal Telephone	Capacity	23060	23060	28096	65096	73456
	Working	17286	19642	21370	23391	41320
	Loading	74.96%	85.18%	76.06%	35.93%	56.25%
Telex	Capacity	1200	1200	3052	3052	3052
	Working	866	994	1092	1266	1436
	Loading	72.2%	82.8%	35.78%	41.48%	47.05%
Mobile telephone	Capacity	0	0	0	0	4500
	Working	0	0	0	0	52
	Loading	0	0	0	0	1.16%
Payphone	Card	0	0	0	0	0
	Coin	3	2	1	2	45
International circuits	Arabsat Intelsat (IOR)	0	0	0	0	11
	Intelsat (AOR)	68	106	141	183	215
		0	0	0	0	0
Terrestrial with UAE	Terrestrial	0	0	0	100	100
	Total	68	106	141	283	326
Data circuits	Telephone calls	6	6	23	47	79
	Telex/Letters	330800	567000	6288072	8196098	11784811
International traffic	Telegraph/Letters	589400	742700	72414436	3233467	3336295
		155700	167300	3566074.00	3697969.00	3785440.00

Source: GTO Year Book (1995).

In 1986, the Third Five-Year Development Plan (1986-1990) was implemented in Oman. The main objectives of the plan, relating to the development of the telecommunication sector, were concentrated on the development of the telecommunications services in the rural areas of the country. The followings were the major objectives of the plan (GTO Year Book, 1987:58):

1. Expansion of 6 exchanges in Muscat to 21,000 lines.

2. Replacing 5 exchanges with further capacity exchanges.
3. Constructing new exchanges in 31 cities and villages in the rural areas.
4. Expanding 38 exchanges in the rural areas.
5. Adding 7299 lines to the exchanges in the rural areas.
6. Installing 21 exchanges in the Northern Region, and 22 exchanges in the Southern Region, with a capacity of 7892 lines.
7. Expanding the Mobile exchange to 5000 lines.
8. Introducing Public Recall System.
9. Expanding satellite communications, and constructing an earth station to work with Intelsat satellite in the Atlantic Ocean.
10. Expanding ship-shore communications, and constructing a second coast station in the Southern Region.
11. Expanding voice and data circuits services.
12. Expanding the use of computer systems.
13. Expanding the use of digital networks.

Accordingly, In 1986, GTO commissioned 7 Digital Exchanges under the rural telecommunication expansion Phase-1 project, and replaced the CIMA Electronic Exchange for international traffic by the International Gateway Digital Exchange. During the same year, GTO commissioned a long-distance Microwave and 1,000 lines exchange including required outside plant network for Khasab in the Northern Region (Oman Telecom Book, 1997).

In 1987, several Digital Exchanges were installed in various parts of the rural areas along with Digital Microwave Radio links. The Mobile Telephone network was expanded by adding 20 additional Radio Base Stations, which were upgraded later to 42 bases (GTO Year Book, 1995).

In 1988, most of the expansion projects were carried out in the rural areas. Under these expansion projects, 5 EWSD Digital Exchanges along with 4 subscribers units were constructed in the Batinah Coast area in addition to 33 exchanges and 3 units in other rural areas. The expansion included the completion of outside networks, which provided 12,500 telephone connections in the rural areas (GTO Year Book, 1988).

In 1990, 15 exchanges were expanded and a total of 18,304 lines added to GTO's network. In addition, a contract was awarded for construction of an earth station in Ibri in the Dakhira Region to work with Intelsat Atlantic Ocean (Oman Telecom Book, 1997). The

progress of the telecommunication sector during the Third Five-Year Plan is provided in Table 3.1.4:

Table 3.1.4: The Progress of the Telecommunication Sector From 1986-1990

		1986	1987	1988	1989	1990
Normal telephone	Capacity	98596	108004	121860	122146	144082
	Working	49565	56899	81321	91462	104679
	Loading	50.27%	52.68%	66.73%	74.88%	72.88%
Mobile telephone	Capacity	4500	4500	4500	4500	4500
	Working	747	1159	1711	2098	2730
	Loading	16.60%	25.76%	38.02%	46.62%	60.67%
Telex	Capacity	3052	3052	3052	3052	3052
	Working	1496	1408	1335	1228	1072
	Loading	49.02%	46.13%	43.74%	40.24%	35.12%
Payphone	Card	12	18	19	102	192
	Coin	68	269	323	327	314
International circuits	Arabsat	59	85	93	102	112
	Intelsat (IOR)	216	220	247	264	270
	Intelsat (AOR)	0	0	0	0	0
Territorial with UAE	Terrestrial	124	131	135	143	143
	Total	399	436	475	509	525
Data circuits		137	207	239	299	377
International traffic	Tele/Mins	13 633 530	15 542 221	18 052 780	20 109 734	25 187 674
	Telex/Mins	2 501 527	2 501 527	1 695 573	1 278 352	931 026
	Telegraph/Mins	3 171 867.00	2 839 800.00	2 621 354.000	2 357 179.00	2 226 641.00

Source: GTO Year Book (1995).

In 1991, Oman's Fourth Five-Year Development Plan (1991-1995) was launched. The plan included the followings as the main objectives of the telecommunication sector during the years of the plan (Development Council, 1991:208-209):

1. Increasing telephone lines provided and expansion of telephone exchanges to increase the number of telephone installations.
2. Establishing a satellite station of size (A) to support the ground satellite stations in the communications network of the Sultanate.
3. Complete introduction of new services and the digital system in the exchanges, a digital network system for integrated services and packed transfer services.
4. Expanding the vocational training institute, developing its programmes and courses to provide the increasing number of technicians required and proceeding with Omanisation to raise its ratio to 83% by 1995.

In response to these objectives, in 1991, contracts were awarded for the provision of six telephone exchanges in the Dakhelia Region and a long-distance (400-km) Fibre Optic Cable System. Also, four new Digital Exchanges were commissioned in the Southern Region (GTO Year Book, 1991). In addition, in December 1991, GTO introduced the

Paging System with an initial capacity of 10,000 subscribers to offer tone, numeric and built-in voice mail box services (GTO Monthly Report, April 1999). For improving its administrative system, GTO introduced its new organisation chart to upgrade its former departments into directorates/directorates general.

During 1992, GTO expanded telecommunications services in towns and villages in the Northern, Southern, Dhahira and Dakhelia Regions. During the same year, the mobile telephone coverage and exchange were expanded to accommodate 2000 additional subscribers; and Al-Amerat Standard (A) Earth Station was replaced with an earth station employing digital technology (GTO Year Book, 1992). The paging service was substantially expanded in both capacity and area coverage. System capacity was increased from 10,000 to 20,000 and coverage was enhanced by installing 15 new transmitters for a total of 35 (GTO Monthly Report, April 1999).

During 1993, paging system capacity was expanded from 20,000 to 55,000 subscribers and coverage was further increased by installing 13 additional transmitters bringing the total number in the system to 48 (GTO Monthly Report, April 1999).

In order to provide diversity and reliability for international telecommunications services, a new earth station, using digital (IDR) technology, was commissioned at Ibri in the Dahira Region in 1993, using the Intelast Atlantic Ocean Region Satellite, for carrying traffic to Europe, America and West Africa (Oman Telecom Book, 1997).

1993 also witnessed the introduction of several new services to individual customers and institutions, amongst these are the following (GTO Year Book, 1993:10-11):

1. Global Network Services (GNS) to provide an avenue to access information services such as database and bulletin boards world-wide using dial up modems at cost-effective prices compared to international leased circuits.
2. Modular Voice Processing (MVP) voice mail service offering four different voice mail packages: Basic, Express, Executive, and Bulletin Board.
3. Digital Data Network (DDN) to provide digital leased circuits that are suitable for computers and establishing Local Area Networks (LANs) and Wider Area Networks (WANs).

With the rapid additional of advanced Server Computers to its Electronic Data Network, GTO has adopted modern computing concepts and methods to extend better services to subscribers, and a new technical building was designed to house GTO's Computer Centre and other groups involved in high technology work such as Research and

Development, Geographical Information System, and Technical Drawing and Design System.

In 1994, GTO introduced the Navtex System service, which is an automated system that distributes maritime navigational and weather forecast warnings, search and rescue notices, and other safety and urgent information to mariners (GTO Year Book, 1993).

In 1995, the existing Analogue IOR Intelsat Main Standard (A) Earth Station was replaced with a digital station at Al-Amerat Earth Station Complex. During the same year, several contracts were awarded for expansion and provision of telecom services in Dahira and Dakhelia Regions. For a better network performance and to meet the requirements for future GSM and Intelligent Networks, GTO introduced the Common Channel Signalling System No.7 (CCS). The year also witnessed the introduction of the Optical Filling System for keeping records for customer services, and the provision of customer service system software which provides a new billing system, customer services subscriber connection requirements, line information facility management and MIS (GTO Year Book, 1995).

By the end of the Fourth Five-Year Development Plan, 90% of inhabited areas were covered by telecom services, and GTO had achieved 83% of Omanisation (localisation of workforce) as was planned in the Fourth Five-year Plan (Oman Telecom Book, 1997).

Table 3.1.5 shows the progress achieved during the Fourth Five-Year Plan:

Table 3.1.5: The Progress of the Telecommunication Sector From 1991-1995

		1991	1992	1993	1994	1995
Normal telephone	Capacity	159600	179189	199876	203049	213313
	Working	116558	130107	147784	157840	168303
Mobile telephone	Loading	73.03%	72.03%	73.94%	77.73%	78.90%
	Capacity	4500	5000	6500	7000	8500
Paging service	Working	3672	4721	5616	6751	7669
	Loading	81.60%	94.42%	86.40%	96.44%	90.22%
MVP	Capacity	10000	20000	55000	55000	55000
	Working	0	11333	21856	35907	46176
Telex	Loading		56.67%	39.74%	65.29%	83.96%
	Capacity				25000	25000
Payphone	Working				3181	5149
	Loading				12.72%	20.60%
Payphone	Capacity	3052	3052	3052	3052	3052
	Working	968	892	821	722	670
	Loading	31.72%	29.23%	26.90%	23.66%	21.95
	Card	909	1691	2069	3098	3228
	Coin	253	214	157	107	88
	Arabsat	108	121	135	152	150
International circuits	Intelsat (IOR)	284	306	317	252	254
	Intelsat(AOR)	0	0	60	159	184
Terrestrial with UAE	Terrestrial	141	240	221	223	228
	Total	533	667	733	786	816
Data circuits		444	598	799	1092	1169
International traffic	Tele/Mints	31 016819	39420530	41305453	49517375	35330522
	Telex/Mints	779 841	668010	519218	560516	286065
	Telegraph/Mints	2181159.00	2083016.00	1817804.00	1582111.00	1012743.00

Source: GTO Year Book (1995).

In 1996, the current Fifth Five-Year Development Plan (1996-2000) was implemented. The telecommunications sector was afforded special attention in the Plan. The most important objectives of the telecommunications sector are as follows (Ministry of Development, 1997:493):

1. Developing a telecommunications sector with world class standards, through the introduction of the Global System for Mobile (GSM) and the creation of an Omani inlet for the international telecommunications network (Internet) in 1996.
2. Providing all regions of the Sultanate with basic telephone services so that by the end of the Plan there will be 20 lines for every 100 persons.
3. Upgrading the efficiency of the services of the sector and reducing its charges without detriment to the performance standard of GTO.
4. Allowing the private sector to take part in the development and upgrading of the telecommunications sector.
5. Upgrading the software services so that Oman will become a centre for the export of telecommunications and information technology services.

The most important policies and mechanisms that will be implemented during the Plan to achieve the sector objectives may be summarised as follows:

1. Carrying out a study of the restructuring of the telecommunications sector.
2. Preparing new legislation for telecommunications. This should reflect the new policies of the Government and should allow for the privatisation of some activities of the sector.
3. Developing and upgrading the Omani labour force in the field of telecommunications and information technology.
4. Starting to implement a set of executive steps towards privatising some activities of GTO. This can be done through transforming GTO into a public liability company and privatising 15% of its shares at a later stage.

Based on the above objectives, on 1 November, 1996, GTO introduced the GSM service in Oman. GTO started with 30,000 line-equipped capacity. Customers' response was so encouraging that in the first three weeks GTO had 10,000 subscribers and the network grew to 38,000 subscribers in the first eight months (GTO Monthly Report, April 1999).

In July 1996 a contract was awarded to Sprint International to establish an ISP site for GTO. In addition to Sprint, connections for some Omani Internet servers were provided to

an AlterNet Internet access port by Teleglobe (Burkhart, 1998). On 28 December, 1996, GTO introduced the Internet service (www.gto.net.om) to the public (GTO Monthly Report, April 1999).

In 1997, the Ministry of PT&T confirmed that the Omani Government was considering the sale of GTO. Accordingly, an international consultant was appointed to evaluate GTO's current assets, and a government stock company was to be formed, with shares offered for public subscription in the Muscat Securities Market in blocks of 10-15 per cent (Middle East Communications, 1997). Although the privatisation plan was supposed to be announced in 1998, it was delayed.

On the 18 July, 1999 a Royal Decree (No. 46/99) was issued to transform GTO into an Omani closed stock holding company to be named Oman Telecommunications Company "OTC" (Oman Daily Observer, July 19, 1999). Later, the Board of Directors of GTO agreed on OMANTEL instead of OTC as an abbreviation of Oman Telecommunications Company. The Decree's main articles are as follows (Times of Oman, July 19, 1999):

1. The GTO is to be transformed into an Omani stock holding company to be named the Omani Telecommunications Company (OTC) fully owned by the Government.
2. The OTC will have a renewable duration of 25 years.
3. The OTC receives all GTO's assets and liabilities besides all GTO's material and personal rights and bears its commitments. GTO's accounting registers and files are also to be transformed to the new company.
4. The purpose of the company will be setting up and operating telecommunications networks inside the country and linking the Sultanate with the rest of the world as per the plan of the company's board of directors and within the context of the state's general policy. In pursuit of the company's purpose, it may in particular, carry out the following:
 - Set up telecommunications networks throughout the Sultanate.
 - Provide telecommunications services in various regions.
 - Manage and maintain buildings, installations and equipment necessary for the delivery of telecommunications services.
 - Develop communications utility to meet international standards in this field.
 - Implement projects necessary to achieve the company's objectives or relevant to those objectives.

- Co-operate with external telecommunications companies and administrators to realise the company's objectives.
 - Establish new companies or own stakes in existing companies operating in field of its work or fields relevant or complementary to its activities.
5. The company's funds will be considered public funds and enjoy the public treasury's funds rights, privileges and status over the funds owned by the company's debtors or guarantors.
 6. The commercial companies' laws apply to the provision of the existing laws and regulations.
 7. The company shall establish its basic rules as per the provisions of the aforementioned commercial law and in conformity with the provisions of this royal decree.
 8. The company shall continue to apply the present rules and regulations governing the GTO and in conformity with the provisions of the royal decree until such time when the company's own rules and regulations are issued.
 9. GTO's employees will be transferred with the same employment status to the new company. Regulations governing their affairs shall continue until the company's board of directors issues the company's employees regulations as per the provisions of the labour law.
 10. The Council of Ministers may decide on selling or offering for public subscriptions part of government's stake in the company's capital. The decision will specify the percentage of the stake to be sold or offered and the conditions and proceedings for sale.

On the 25 January, 2000 Royal Decree No. 10/2000 was issued to rename the Ministry of Posts, Telegraph and Telephone (PT&T) as the Ministry of Communications. The Decree also appointed a new minister for the Ministry of Communications (Al Waten, January 26, 2000).

3.2. The Organisation Chart of OMANTEL

The Oman Telecommunications Company (OMANTEL), formerly GTO, is a self-financed government entity established in 1980 by the Royal Decree No. 43/80 to replace the pervious Omantel Company. OMANTEL, working under the direction of the Ministry of Communications, formerly the Ministry of PT&T, was charged with the responsibility of providing telecommunications services throughout the country and expanding the network

of telecommunications. OMANTEL is a member in the following international and regional organisations (GTO Year Book, 1991:51):

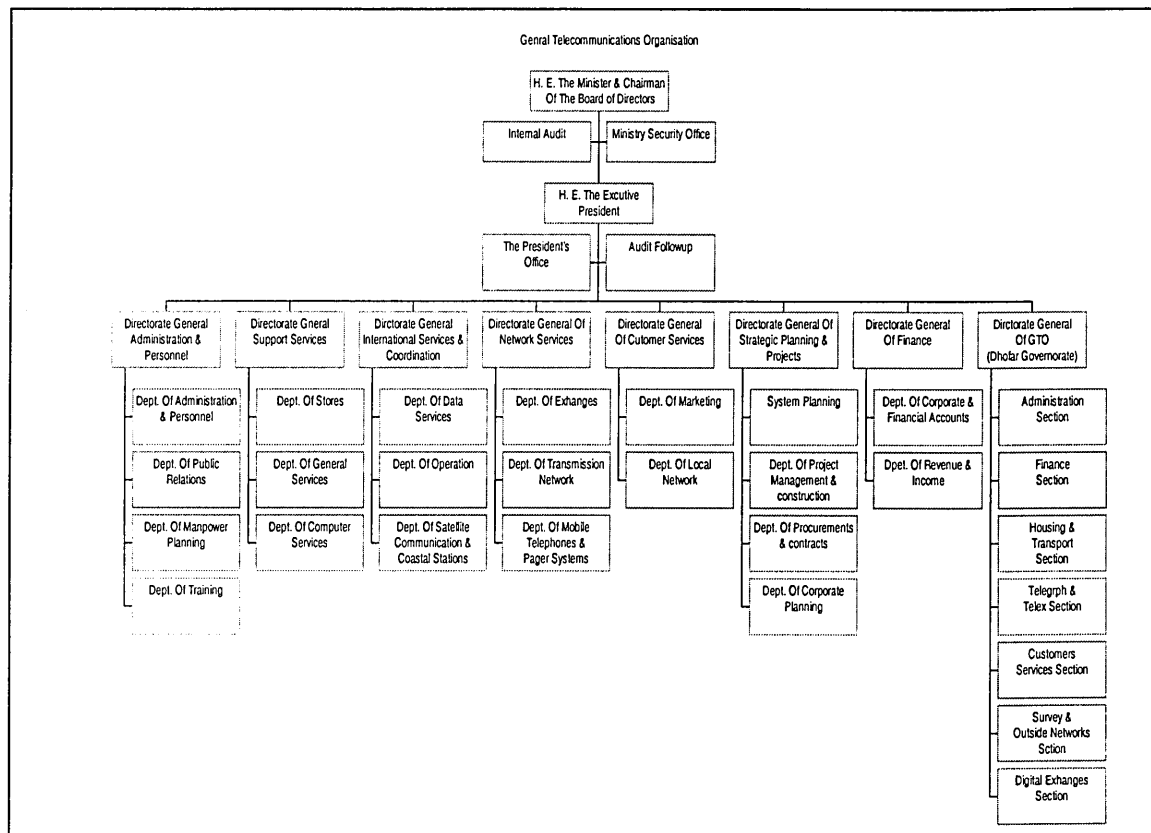
1. International Telecommunication Union (ITU).
2. International Telecommunication Satellite Organisation (INTELSAT).
3. Arab Satellite Communication Organisation (ARABSAT).
4. International Maritime Satellite Organisation (INMARSAT).
5. Council of Arab Telecommunication Ministers.
6. Arab Gulf Co-operation Council.

OMANTEL is managed by a Board of Directors with the Minister of Communications as its Chairman. In addition to the Chairman, the Board of Directors consists of six members (GTO Year Book, 1987:19):

1. The Minister of Transport and Housing.
2. The Under-Secretary of the Financial and Economic Affairs at the Ministry of Finance.
3. The Executive President of OMANTEL (formerly GTO).
4. A representative from the Ministry of Defence, who is appointed by the Minister of Defence.
5. The Under-Secretary of the Administrative and Financial Affairs of the Ministry of Information.
6. The Advisor of the Telecommunications in the Ministry of Communications.

Since OMANTEL is a fully-government entity, the members of the Board are not elected, but appointed by royal decree. The highest-ranking member of the Board is the Chairman (the Minister of Communications). The Board of Directors is responsible for establishing policies for key internal and external operations that permit effective use of organisational resources while complying with social and legal mandates. It is also responsible for identifying the mission of the organisation and ensuring that appropriate practices and strategies are undertaken to accomplish the mission. Responsibility for administrating and running the organisation's affairs rests with the Executive President.

Under the Executive President there are a number of Directors Generals, Directors and Section Heads. The functions and responsibilities are divided among the directorates as per the organisation chart provided in Figure 3.2.1:

Figure 3.2.1: OMANTEL's Present Organisational Chart

Source: GTO Year Book (1992).

The Directorate General of Administration and Personnel, as the title indicates, is responsible for the administrative and personnel affairs of the organisation. It encompasses three departments: Department of Personnel, Department of Public Relations, and Training Department. The Department of Personnel is responsible for securing and maintaining the manpower of the organisation. Its functions also include recruiting candidates, personnel planning and forecasting, forecasting personnel requirements, and other administrative and personnel affairs. The Department of Public Relations is responsible for the publication of monthly and yearly reports that contain abbreviated descriptions of work and projects undertaken by various departments, and informing the public of new telecommunications services, as well as the modernisation of the existing services, through the issue of notices and advertisements in both the local and foreign press. The Training Department is responsible for training the organisation's manpower and developing its skills. It organises training programmes that include in-house training in the OMANTEL Training Centre. Training is carried out under suppliers' contracts, in various institutes located in Oman, and

aboard comprising specialised training of short duration or long term educational courses leading to the award of degrees/diplomas (GTO Management Services & Public Relations, 1994).

The main task of the Directorate General of Support Services is to provide support services to the other directorates and departments of OMANTEL. The Directorate is divided into three departments: the Department of Stores, the Department of General Services, and the Computer Department. The Department of Stores is responsible for the storage of materials and equipment required for conducting the work, such as paperwork materials, installation and maintenance of equipment, etc. The General Services Department provides departments and personnel of OMANTEL with such services as housing, building maintenance, transportation, office accommodation, purchase of materials and equipment, etc. The Computer Department is responsible for computing services, such as the installation of software, providing technical support services, etc., to the OMANTEL's departments.

The Directorate General of Co-ordination and International Services is responsible for international telecommunications services. The Directorate splits into four departments: Co-ordination and International Relations Department, Data Services Department, Operation Department, and Satellite Communications Department. The Co-ordination and International Relations Department is responsible for co-ordinating OMANTEL's international telecommunications relations, and providing facilities that meet telecommunications needs between Oman and other countries. The Data Services Department is responsible for providing data services to OMANTEL's business and individual customers. These services include digital data network and global network services in addition to analogue and dial up data services. The Operation Department is responsible for providing telex, telegraph and bureaufax services in addition to operator assisted services for connecting calls and on-line information for customers' inquiries. The Satellite Communications Department is responsible for providing and maintaining satellite telecommunications services, such services include receiving and transmitting television from and to other countries in the world via INTELSAT and ARABSAT networks, and interconnecting the country's regions, where ordinary telecom services cannot be provided, through satellite networks via the Domestic Satellite Network (DOMSAT).

The Directorate General of Customer Services is responsible for providing general telecommunications services. The Directorate is divided into two departments: Local

Networks Department and Marketing Department. The former department is responsible for installation and maintenance of fixed telephone networks. The latter department advertises, promotes, and sells OMANTEL's products and services. It carries out market research to gather information that helps strategic decision-making regarding the introduction of new services and existing services. It also provides OMANTEL's customers with user-guide, explanatory brochures, leaflets and other useful information.

The Directorate General of Finance deals with the financial matters of OMANTEL. It is divided into two departments: Department of Corporate and Financial Accounts and Department of Revenues and Income. The Department of Corporate and Financial Accounts deals with such matters as budget allocation, assets and property affairs, funds control, personnel financial matters, etc. The Department of Revenues and Income deals mainly with subscribers' billing inquiries, subscribers' accounts, payment collections, and other customer related financial matters.

The Directorate General of OMANTEL (Dhofar Governorate) is responsible for the provision and maintenance of the company's services in Dhofar Governorate (the Southern Region). Unlike the other directorate, this Directorate does not have separate departments, but most of the OMANTEL's directorates, particularly those departments that provide direct services to customers, have a section in this Directorate to carry its tasks in the region. However, the personnel working in this Directorate work under the supervision of the Director General of Dhofar Governorate.

The Directorate General of Strategic Planning and Projects is responsible for planning and carrying out OMANTEL's projects, and the Directorate General of Network Services is responsible for the supervision and maintenance of the networks. As per Figure 3.2.1, the Directorate General of Strategic Planning and Projects is divided into four departments: Corporate Planning Department, System Planning Department, Project Management and Construction Department, and Contracts and Procurement Department; and the Directorate General of Network Services is divided into three departments: Department of Transmission, Department of Exchanges, and Department of Mobile and Private Radio Services. It should be noted that on 8 June, 1999, the Chairman of the Board of Directors of OMANTEL issued Administrative Decision No. 29/99 for re-organising the Directorate General of Strategic Planning and Projects and the Directorate General of Network Services. According to the decision, the name of the former Directorate was changed to "Fixed Telecommunications Services Unit"; and the latter Directorate's name was modified

to “Mobile Telecommunications Services Unit”. Accordingly, the Fixed Telecommunications Services Unit splits into five departments to include the following:

1. Department of Planning and Enforcing Fixed Telecommunications Projects.
2. Department of Fixed Exchanges.
3. Department of Fixed Transmission Networks.
4. Department of Operating Fixed Telecommunications Networks.
5. Department of Data Services.

It should be noted that the last department has been taken away from the Directorate General of Co-ordination and International Services. The overall task of the Unit is to deal with the fixed telecommunications networks, in terms of expansion, supervision, maintenance, etc.

The Mobile Telecommunications Services Unit consists of the following departments:

1. Department of Planning and Enforcing Mobile Telecommunications Projects.
2. Department of Operation and Maintenance of Mobile Telecommunications Network.

The Unit mainly deals with the mobile telecommunications networks and services.

The Decision also added a new department to the OMANTEL’s organisation chart. The newly established department, called “Internet Department”, is attached to the Executive President’s Office to deal with the Internet services.

However, the organisation chart of OMANTEL is subject to further modifications due to the privatisation policy. In this regard, an Internal Memorandum (No. 1-19/431/99 dated 13-12-1999) was distributed to the personnel of OMANTEL which revealed the positions that the company is intending to add and the new organisational structure that would ensue. It was proposed to include in the new structure the directorates and departments illustrated in Table 3.2.1:

Table 3.2.1: OMANTEL's Proposed Organisation Chart

Directorates	Departments
Marketing and Customer Services	1. Marketing & Public Relations 2. Customer Services
Access Network	1. Local Network 2. Geographical Information Systems (AM/FM) Development
International Services	1. Satellite Communications 2. International Operations
Fixed Communications Services	1. Switching 2. Transmission 3. Operations 4. Fixed Systems Development
Information Technology	1. Internet 2. Computer Systems
Mobile Communications Services	1. Mobile Engineering 2. Mobile Systems Development
Finance Services	1. Corporate & Financial Accounts 2. Revenue Accounts 3. Purchasing and Stores
Administration and Human Resources	1. Human resources 2. Development and Training 3. Administration
Strategic Business Development	1. Corporate Strategy 2. Quality and Standards
Dhofar Governorate	1. Administration & Finance 2. Marketing & Customer Services
Tenders and Contracts	1. Tenders & Contracts
Internal Audit	1. Internal Audit

It should be noted that there is a tendency in OMANTEL to take quality management issues into consideration, as there is an intention to create a quality department (Quality & Standards) under the Strategic Business Development Directorate. This would enhance the feasibility of TQM implementation.

3.3. The Telecommunications Services of OMANTEL

As stated earlier in this chapter, the Ministry of Communications and OMANTEL have been responsible for bringing the latest technologies available in the world of telecommunication to the country. To achieve this, they have made critical efforts to develop the telecommunications services and systems through introducing a range of services in the country. The current telecommunications services available in Oman include the following services:

1. **Fixed Telephone Line Service:** this is an ordinary telephone service provided to the customers. There is a wide range of additional services that may be added to this service on request of the customers. Those services include (GTO Tariff & Telecom Services Handbook, 1997):
 - *Abbreviated Dialling Service:* this service allows the customer to minimise dialling functions by storing frequently dialled numbers in memory and dialling them by two digit code. This saves the user time and energy.
 - *Subscriber Absent Service:* this lets the caller know that the called customer is absent without the frustration of listening to the ringing tone and wondering when the call will be answered.
 - *Wake Up Service:* this allows the programmed telephone to ring at a predetermined time. If the call is not answered, a reminder call follows five minutes later.
 - *Call Waiting Service:* this feature when activated gives the customer the flexibility to have a call in progress whilst alerting the customer with a call waiting tone that another call is waiting for the user's attention.
 - *Follow Me Service:* this feature allows the customer's telephone to re-route calls to another destination. This could be another telephone (fixed or mobile), a pager, or a voice mailbox. This method ensures that the customer does not miss calls.
 - *Do Not Disturb Service:* this facility enables customers to temporarily divert all incoming calls to a recorded announcement requesting callers to try again later.
 - *Restricting of Outgoing Calls Service:* out going call restriction (subscriber controlled) can be activated by the use of four-digit personal code. This ensures that unauthorised calls are not made from the customer's telephone.
 - *Three Party Conference:* this feature allows the customer to talk to two people simultaneously. The customer also has the option of placing one of the calls on hold or alternating between the two people.
 - *Hotline Service:* the service allows a customer to reach a predetermined telephone number by simply lifting the handset. The number will be automatically dialled after 5 seconds unless the user dials another telephone number.
 - *Caller Number Identification service:* this service allows the customer to identify the caller's telephone number before answering the call through displaying the caller's number while the telephone is ringing.

- *Self-Hunting Facility*: if a customer has more than one telephone line, this facility allows the customer to place all his/her lines in a group and assign a pilot number to the group. Callers need to remember only the pilot number to make a call and can be connected through any of the free numbers.
- 2. **Payphone Service**: OMANTEL provides both coin and card payphone service in residential and commercial areas such as hospitals, government departments, schools, colleges, hotels, airports and other public locations. The service has been extended to cover ships, thereby providing the crews with telecom facilities at sea or in ports; and some payphones in the hospitals have been fixed on trolleys so they can be easily moved near patients' beds allowing them to get telecom services (GTO Year Book, 1995). Utilising solar-powered payphone through the mobile network enabled OMANTEL to provide payphone service in remote, mountains and desert areas (GTO Year Book, 1993).
- 3. **Mobile Telephone Service**: this service can be used in vehicles, offices, the homes or even outside as a fixed or portable set. Mobile telephone customers can communicate locally and internationally. The customer is able to move freely within the radio coverage area without having to inform the system where he/she is.
- 4. **Private Radio Telephone Service**: this service mainly deals single and multi-channel point to point rural radio telephones. The service provides long distance H.F. radio communications in rural areas that are not covered by the wireline telephone network.
- 5. **GSM Service**: the GSM refers to "Global System for Mobile Communications". The GSM service differs from the mobile telephone service by providing its users with the facility of using the service in any country in the world involved in the International Roaming Agreement and has the GSM facility, in addition to its delivery of high quality and confidentially ensured calls.
- 6. **Maritime Telecommunications Services**: OMANTEL provides telecommunications services to all maritime vessels in Omani territorial waters and beyond. Such services include handling of telegraph messages, telephone communication, navigational warnings, medical assistance and co-ordination of the various services in rescue operations.
- 7. **Television and Radio Transmission Service**: OMANTEL has been playing an active role in the broadcast of local TV and Radio programmes for the Ministry of Information

to various parts of the country. OMANTEL provides facilities for live transmission of national, religious, cultural, sporting and other events and activities.

8. **Telex and Telegraph Services:** the telex service is provided to individual and business customers throughout the country. The telegraph service through the OMANTEL's counters and post offices throughout the country. The key customers of the telegraph service are the news agencies.
9. **Paging, Voice Mail and Billboard Services:** OMANTEL provides two types of paging services: tone paging and numeric paging services. The tone service emits four patterns of tone alerts depending upon the code the caller used. The numeric service generates one standard alert tone and the number originating the call appears on the display panel. The voice mail service enables callers to call up a subscriber's voice mailbox and leave messages. The billboard or bulletin board service is mainly used by organisations such as airports and weather forecasting organisations for the announcement of flights' schedules and weather forecasting services.
10. **Facsimile and Bureau fax Services:** OMANTEL provides these services by either using a private fax machine or by sending and receiving fax messages through its bureau fax offices available at the OMANTEL's public counters and post offices throughout the country.
11. **Directory Enquiries Service:** OMANTEL provides 24-hour directory enquiry service to assist the public with its enquiries. It also maintains an updated record of all customers to be included in yearly directories.
12. **Data Communications Services:** in addition to analogue and dial up data services, OMANTEL provides digital data services such as the Digital Data Network (OMANET), Concert Packet Service (CPS), and the Internet Service. The Digital Data Network (DDN) is a highly efficient data service that has proven to be economical and reliable as compared to analogue systems. It employs a self-healing ring for its main transmission backbone, with Intelligent Multiplexers supplying individual data channels to serve those users with high bandwidth requirements. It is also used to cross-connect all of OMANTEL digital network, providing the network operators with a fault-tolerant, automated system that can automatically re-route circuits and allow the configuration of inter-machine trunks from a single site (GTO Year Book, 1992:29). Concert Packet Service (CPS) formerly Global Network Service (GNS) provides the customers with access to many of the world's major database services and computerised

service bureaus. The major advantage of CPS is that it allows dissimilar terminals and computers to transparently communicate with one another while providing a high level of security. There is the added insurance that all data sent through the network arrives at its destination uncorrupted and intact (GTO Year Book, 1995:39). The Internet service enables commerce, industry, government, financial and educational institutions and private individuals to communicate and exchange information electronically with millions of other similar bodies and individuals world-wide, for the purpose of business, research, hobbies and entertainment. OMANTEL's Internet services include the following (GTO Monthly Report, April 1999):

- E-mail, which can create, send and receive mail electronically over the Internet.
- World Wide Web (WWW), which can access information and services covering almost any subject, the information is often in multimedia form, including text, graphics, video and sound. It is viewed as a page at a time on a computer screen. It is rather like reading a paper or magazine but with the ability to have added video and sound features.
- Network News. These are items transmitted on the Internet and downloaded to the OMANTEL's Node. Customers are able to read these news for themselves when they connect to OMANTEL's network.
- File Transfer Protocol (FTP), which allows users to connect to other computers on the Internet and transmit or receive files.
- Search Engines. These are like directories on the Internet that help users find the information they are looking for. Yahoo and Alta Visa are two examples.

OMANTEL's Internet service can be accessed over a dedicated leased line or by dial up. Dedicated access is mainly for companies and institutions with high usage, whereas individuals and smaller institutions with less frequent usage can choose dial up service.

OMANTEL is one of the few ISPs in the region that does not offer flat-rate Internet access, but offers instead several packages of prepaid peak and off-peak usage hours. This does, however, lower the barrier to obtaining Internet service by providing an inexpensive, minimal-use option (Burkhart, 1998:3).

It is worth mentioning that to give the public a wider variety of choice and selection, OMANTEL has liberalised the sale of equipment such as Key Systems, Mobile Telephones, Facsimile Machines, Telephone Sets, Answering Machines, GSM Sets and Pagers.

The current number of the subscribers for the telecommunications services by type of services is provided in Table 3.3.1:

Table 3.3.1: Number of Subscribers for Telecommunications Services

Telecommunication services	End-April		Changes (%) (98/99)
	1998	1999	
Fixed telephone	205,175	219,227	6.8
GSM	68,932	107,217	55.5
Cellular Phones	5,925	4,040	-31.8
Pay Phones	3,574	3,665	2.5
Paging	71,006	69,416	-2.2
Internet	8,917	13,831	55.1
Telex	455	397	-12.7

Source: Ministry of National Economy (1999).

It should be noted that number of subscribers for Cellular Phones, Paging and Telex has declined during 1999 as compared to 1998; and it is expected that the number would witness a further decline in the coming years. That is due to the introduction of GSM and Internet services, which provide more flexible communications services than the other services.

3.4. The Human Resources of the OMANTEL

OMANTEL's human resources can be classified under two main categories: administrators and technicians. The administrators are responsible for conducting the administrative tasks, such as personnel, financial, and other related tasks. The technicians deal with the technical matters of the organisation, such as installation and maintenance of the network systems. The number and the distribution of OMANTEL's manpower, administrators and technicians, are provided in Tables 3.4.1 and 3.4.2:

Table 3.4.1: The Number and Distribution of OMANTEL's Administrative Personnel

The Breakdown of the Personnel	Omanis		Expatriates		Total
	Male	Female	Male	Female	
Director General	8	-	-	-	8
Advisor	-	-	1	-	1
Director	27	-	-	-	27
Expert & Researcher	3	-	4	-	7
Physician	-	-	1	-	1
Section Head	58	2	-	-	60
Accountant	24	11	21	-	56
Assistant Accountant	10	8	1	-	19
Supervisor	32	2	2	-	36
Translator	3	-	3	-	6
Secretary	7	13	-	-	20
Clerk	247	108	8	-	363
Typist	21	42	-	-	63
Nurse	1	-	-	1	2
Teacher	-	-	3	1	4
Driver	23	-	2	-	25
Bearer	2	-	-	-	2
Watchman	33	-	-	-	33
Total	499	186	46	2	732

Source: GTO's Department of Administration & Personnel (1999).

It should be noted that although some of the administrators, particularly director generals and directors, hold administrative positions, they could be technicians holding administrative positions. That is, because the job carried by their departments require technical experiences and qualifications.

Table 3.4.2: The Number and Distribution of the OMANTEL's Technicians

The Breakdown of the personnel	Omanis		Expatriates		Total
	Male	Female	Male	Female	
Engineer	49	10	72	-	131
Assistance Engineer	33	6	27	-	66
Technician	381	30	159	-	570
Assistance Technician	228	-	5	-	233
Traffic Supervisor	5	-	-	-	5
Traffic Superintendent	122	26	5	-	153
Program Analyst	3	-	1	-	4
Computer Programmer	4	2	-	-	6
Assistance Cable Jointer	3	-	-	-	3
Assistance lineman	67	-	4	-	71
Skilled & Semi-skilled workers	74	-	1	-	75
Craftsman	22	-	1	-	23
Total	991	74	275	-	1340

Source: GTO's Department of Administration & Personnel (1999).

Table 3.4.3 shows the total number of the OMANTEL's manpower, the percentage of Omanis and expatriates, and the percentage of male and female.

Table 3.4.3: The Total Number of OMANTEL's Manpower

	Omanis		Expatriates		Total
	Male	Female	Male	Female	
Number	1490	260	321	2	2073
Percentage	71%	13%	15%	1%	100 %

Source: GTO's Department of Administration & Personnel (1999).

It is obvious from the above tables that only 732 of OMANTEL's manpower occupy administrative positions and the rest of the manpower (1340) occupies technical positions. It is also obvious that most of the manpower is male, representing 86% of the total manpower including both Omanis and expatriates. The female personnel, including both Omanis and expatriates, represent only 14% of the total manpower most of them in administrative positions (188) while their number in the technical positions is very small, only 74 female staff.

In terms of organisational hierarchy, OMANTEL's personnel could be divided into four main groups to include top or senior management, middle managers, first-line managers, and operative employees.

Top or senior managers include the chairman of the board of directors, the executive president, and the director generals. Senior managers are responsible for setting the objectives of the organisation, establishing its operating policies, and designing or defining courses of action through the strategies they develop and approve. Middle managers are responsible for departments that perform specialised tasks and co-ordinate between top managers and first-line managers. First-line managers include section heads and first-line supervisors. First-line managers are responsible for meeting daily quality, quantity and timeliness standards in the functions and services produced by their sections, and co-ordinate between middle managers and operative employees. Operative employees hold a wide range of titles and also execute a wide range of tasks. Operative employees include sales and marketing personnel, technicians, administrative support personnel (secretarial-clerical), semiskilled workers, unskilled workers, craftsmen, etc.

OMANTEL employs the Civil Service Law in dealing with personnel matters and it does not have its own specific personnel regulations and procedures. As a result, it applies the same regulations and procedures as are applied in other Civil Service institutions in the areas of recruitment, promotion, retirement, payment, performance evaluation and other personnel related matters.

However, the creation of the telecommunication infrastructure and the use of highly sophisticated telecom technologies required the availability of technically trained manpower, which the Omani labour market lacked during the early stages of the infrastructure's creation. Therefore, OMANTEL relied solely on expatriates, mainly from Europe and North America, to create the telecom infrastructure. To meet its commitment to Omanisation (localisation of workforce) policy, OMANTEL has taken critical steps to progressively increase the proportion of Omani staff through improving its human resources development programmes and policies. OMANTEL recruited as many suitable Omani staff as it could and provided its staff with the necessary training facilities and services. OMANTEL's training strategy consists of four main elements (GTO Management Services & Public Relations, 1994:17):

- I. Training in OMANTEL's Training Centre.
- II. Training in local educational institutes.
- III. Training abroad.
- IV. Training as per contracts signed with suppliers.

The Training Centre organises basic technical and administrative courses for OMANTEL's staff. In co-operation with other local and international institutions, the Training Centre arranges courses in different fields in accordance with job requirements. In addition, the Training Centre co-ordinates with suppliers of telecom systems to carry out the training as stipulated in their contracts in such a way that the Omani staff can manage these systems without having to get a specialist from the manufacturers to work on those systems in Oman. The Training Centre also sponsors a large number of staff to study abroad in various universities in different fields to acquire degrees ranging from diploma up to Ph.D.

3.5. OMANTEL and the Future: Some Emerging Trends

The survey on the telecommunications reveals that the telecommunications industry is rapidly changing and increasingly becoming global and competitive, which places new demands on the organisations and individuals working in this industry. Within the Omani telecom sector, the changes in the telecommunications industry will result in some new trends and challenges, both local and global, which OMANTEL will have to take into consideration. Some of the most significant trends that will, either directly or indirectly, affect OMANTEL are:

3.5.1. Privatisation

The recent trend towards privatising the telecom sector of Oman was due to some significant deficiencies in that sector, despite the vast development that has taken place. According to the Omani authorities (see Ministry of Development, 1997) the most significant deficiencies are:

1. The high telecommunications service charges.
2. The current status of the telecommunication sector, with OMANTEL as the only supplier of telecommunications services. This may hamper the future capacity to benefit from rapid changes in the telecommunications field.

The Omani Government believes that allowing the private sector's participation in the provision of telecommunication services will aid in expanding the scope and efficiency of these services. Thus, the following policies have been adopted in order to achieve this goal (Ministry of Development, 1997):

1. Benefiting from telecommunication technology, expanding and upgrading the existing telecommunications network in order to provide a variety of high quality services.
2. Reviewing the institutional and legal structure of the telecommunications sector with the aim of separating the Government role as an organiser and supervisor from its role as the owner of the telecommunication authority. This would enable the Government to provide access to private sector's participation in providing services related to the telecommunications sector.

To attain these goals, the Omani Government announced the privatisation of OMANTEL. According to the former Minister of PT&T (see Oman Daily Observer, 19 July 1999), the move towards privatisation paves the way for expanded participation of the private sector in government sponsored projects. The Minister added that encouraging the private sector to invest in the telecommunication sector would diversify and expand the telecommunications services in the country and help it to keep pace with innovations in the world market and stay competitive in terms of tariffs for local and international services.

It may not be feasible, at least at this stage, to identify the impact of the privatisation policy on the telecommunication sector and its services, but it could be expected that privatisation would result in a host of new and significant challenges to the management of OMANTEL that need to be faced in order to achieve the objectives of the policy, as expected by the policy makers. The trend of privatisation, at least in the theory, would result in market-type systems and economies. Dubashi (1999:6) stated that “in a market economy, you go by the market, and if you make a wrong guess, you pay for it, just as if you make money, you keep the profits. The government does not come into the picture at all, unless there are special reasons”. Farazmand (1999) added that the governments are led to believe that privatisation will lead to more efficient allocation of resources and reduction of government waste. These statements clearly indicate that the privatisation policies result in a limitation of government’s role in privatised industries, demand better allocation of resources, and require the privatised organisations to be more efficient in terms of their functions, productivity, and outcomes. Accordingly, the privatisation policy adopted in the Omani telecom sector will require OMANTEL’s management to reconsider and redesign its management processes in order to enable it to meet the requirements demanded by the market-type economy, to become more efficient and productive, and to be able to diminish its operation costs with better allocation of resources in terms of both financial and human resources.

In addition, privatisation will bring into prominence local and international investors or stakeholders in OMANTEL. These investors would have demands on profitability and expectations on OMANTEL’s reputation and status in the marketplace. Privatisation would also bring employees into ownership of the company. Letwin (1988) stated that one of the most important aspects of privatisation has been its use as a vehicle for bringing employees into ownership of the companies for which they work. According to Letwin, the speed of employee ownership under privatisation has been truly remarkable in the case of British

Telecom (BT) in which the British Government has gone to great efforts to encourage employee share participation. The investors, whether they be internal or external, will place constraints upon OMANTEL's management to find efficient means of financial resources allocation and high investment rates, which could be hardly attained without improved management processes, high quality services, and qualified personnel.

Privatisation also would entail a change in the organisation's culture and its personnels' attitude towards the customers. This raises the need for a culture change in OMANTEL and reconceptualisation of its values; employees' attitudes need to be changed from public-oriented based attitudes to business-oriented, customer-focused and customer-driven attitudes. Nwankwo and Richardson (1994) stated that when BT was privatised in 1984 it quickly became obvious to the management that the organisation needed to adopt a new value system as a mooring for the quality revolution that was to unfurl. The company did not simply need to shift from a public to a private culture, but more importantly from being monopolistic to being competitive. The main challenge rested on turning an introverted organisation into one looking outward towards the customer. Quality of customer service became an imperative.

Claver. E., Gascó, J. L, Llopis, J. and López, E. A. (2000) stated that in order to meet the new challenges occurred in the Spanish telecom sector, as a result of the liberalisation in the telecommunications sector in the 1990s, the Telefonica Group (the main Spanish firm the telecommunications sector) had to make some critical efforts to develop a new management style. Top managers in Telefonica were aware of the fact that improvements in equipment and infrastructure were not going to be enough to respond to those challenges. They were convinced that structures, behaviours and values had be modified and adapted. The management reached the conclusion that it was necessary to evolve from a bureaucratic culture to another oriented towards total quality management and the customer. The management realised that it was necessary to implement total quality. Accordingly, Telefonica had to resolve some negative aspects in the firm's operation such as inappropriate planning, employees' lack of involvement, too many hierarchical levels, insufficient investment in technology, not being able to adapt to the market, inappropriate business alliances. The management believed that the following factors would lead Telefonica to reach success: advanced technology, market diversification, adapting to the customers' needs, real decentralisation, the customer as the basis of process design and decision-making, flexible regulations, shared and well-known objectives, everyone's

involvement in reaching success, adjusting the workforce according to real needs, and increased productivity. According to Claver et al. (2000), the methodology used by Telefonica, the “bubble-like” quality management implementation scheme (from one division to the whole organisation) along with the introduction mechanism (from top management to the lowest levels), supported by correct training, communications and participation programmes, has helped Telefonica to adapt to the requirements demanded by the liberalisation in the Spanish telecom sector.

3.5.2. The World Trade Organisation and Competition

The Omani Government’s intention to join the World Trade Organisation (WTO), as part of its “Vision 2020”, would originate some new challenges to OMANTEL’s management. Oman has applied to join the WTO; the Working Party on the accession of Oman was established on 26 June 1996 (see WTO, 1998). Oman is expected to become a member of the WTO before the end of 2000.

Sierra (1999:396), of the United Nations International Trade Centre, stated that “All member governments are committed to the implementation of the agreements”. Therefore, Oman’s intention to join the WTO will require it to be committed to the WTO’s agreements, as the market access concessions and commitments offered by Oman form the most crucial part of its access negotiations (see WTO, 1998). The recent agreements, particularly Information Technology Agreement (ITA) and Group on Basic Telecommunications (GBT), will require Oman to open up its economy and liberalise its telecommunications sector. In relation to ITA and GBT, Flanigan (1997) argued that ITA and GBT create a new era in the telecom industry, one that will be based on substantially liberalised markets for telecom services, globally accepted and pro-competitive regulatory principles, the elimination of import duties on IT products for the major markets of the world and substantial relaxation in many countries of foreign-ownership restrictions of telecom operators.

Accordingly, the trend towards joining the WTO would bring new challenges to OMANTEL’s management. The most important of these challenges is competition, which requires OMANTEL to have substantial competencies to compete in the marketplace. Frances Cairncross, in her *The Death of Distance* (1997a), argued that privatisation, competition, and open markets assume more importance in developing countries than in

rich ones, because their national monopolies so often suffer from a mixture of lack of capital and bad management. Hamel and Prahalad (1996) added that the competitiveness problem faced by so many companies today is not a problem of foreign competition, but a problem of non-traditional competition; the real competitive problem is laggards versus challengers, incumbents versus innovators, the inertial and imitative versus the imaginative.

Competing in the telecom industry is much more difficult than in other industries. The telecom industry is rapidly changing in terms of innovations, services, new technologies, customers' expectations, etc. or as Cairncross (1997b:14) stated "competing in the telecoms business is different from competing in candyfloss or cornflakes. The dominant telephone companies start with big advantages-100% of the local markets, a familiar brand, a network that has largely been paid for, and a good cash flow". Peter Kiernan, of Goldman Sachs & Co, added, "Literally, the great old telcos around the world will see seven to ten competitors. In places where there's been one telephone company for five generations, there'll be four competitors in long distance and six in local calling" (see Fioravante, 1997:2). As a result, competition would result in bringing new entrants into the Omani telecom sector. Many of the new entrants, particularly in the telecom industry as Cairncross (1997 b) argued, come from other industries, and bring new ideas and ways of doing things. Other new entrants are big telephone companies from other countries, resigned to losing market share at home and eager to gain it abroad. A study by More and McGrath (1999) revealed that the deregulation policy adopted in the Australian telecommunications sector, which aimed at increasing competition, globalisation, dynamism, customer-orientation and commercialisation, resulted in three operating companies in the Australian telecom sector (Telstra, Optus and Vodafone); which created alliances and resulted in some significant challenges to the management of the three operators. Their management had to be proactive, anticipatory, entrepreneurial and work well within their own organisations in managing both internal and external relationships. Such management necessitated grasping that one was dealing with whole groups of different players coming together across organisations; and intra-organisationally, with totally new groups of people such as sales, engineering and operations, and with differing stakeholders' interests.

To meet the challenges demanded by competition, it essential that OMANTEL's management should think of well-trained and innovative personnel and flattened management systems and structures in order to maintain competitive advantages and attain market share. Day (2000) reported, "Fierce competition and a dramatic profit slump have

left BT with its back to the wall. Having rested on its laurels for so long, the telecom giants has now been forced to double its ad spend and slash jobs. Without drastic action, it will fall further behind its rivals and face hostile takeover bids”. A third group of companies is made up of innovators, using novel technologies to leap into new markets.

To enable OMANTEL to survive in a marketplace with such fierce competition, its management would have to work out how to restructure its processes and reorient its culture in order to anticipate and respond to these fundamental marketplace changes that will emerge sooner or later.

3.5.3. The Changing Needs of Customers

Due to competition in the world markets and advancement in information technologies, customers all over the world are becoming more sophisticated than ever before with increased demands for high quality services and products and high expectations of better value and after sale services. Hammer (1999:96) stated that “Customers have come to expect to that we do things their way, rather than that they do things our way”. Chowdhury (2000:8) stated that “Customers are smarter than they used to be, partly thanks to the revolution in information technology. They do not care about management structures, strategic planning, the financial perspectives, or the leader of the organisation. What they do care about are products and services available to them. Customers value quick and easy access to products, and they demand a lot of information before making a decision on whether to buy”. Prahalad and Ramaswamy (2000:80) noted that “Customers are fundamentally changing the dynamics of the marketplace. The market has become a forum in which consumers play an active role in creating and competing for value. The distinguishing feature of this new marketplace is that consumers become a new source of competence for the corporation. The competence that customers bring is a function of the knowledge and skills they possess, their willingness to learn and experiment, and their ability to engage in an active dialogue”. Table 3.5.1 shows the increased role of customers in the marketplace.

Table 3.5.1: The Evolution and Transformation of Customers

	Persuading predetermined groups of buyers	Customers as a Passive Audience Transacting with individual buyers	Lifetime bonds with Individual customers	Customers as Active players Customers as Cocreators of value
Time frame	1970s, early 1980s	Late 1980s and early 1990s	1990s	Beyond 2000
Nature of business Exchange and role of customer				Customers are part of the enhanced network; they cocreate and extract business value. They are collaborators, codevelopers, and competitors.
Managerial mind-set	The customer is an average statistic; groups of buyers are predetermined by the company.	The customer is an individual statistic in a transaction.	The customer is a person; cultivate trust and relationships.	The customer is not only an individual but also part of an emergent social and cultural fabric.
Company's interaction with customers, and development of products and services	Traditional market research and inquiries; products and services are created without much feedback.	Shift from selling to helping customers via help desks, call centers, and customer service programs; identify problems from customers, then redesign products and services based on that feedback.	Providing for customers through observation of users; identify solutions from lead users, and reconfigure products and services based on deep understanding of customers.	Customers are codevelopers of personalized experiences. Companies and lead customers have joint roles in education, shaping expectations, and cocreating market acceptance for products and services.
Purpose and flow of communication	Gain access to and target predetermined groups of buyers. One-way communication.	Database marketing; two-way communication.	Relationship marketing; two-way communication and access.	Active dialogue with customers to shape expectations and create buzz. Multilevel access and communication.

Source: Prahalad and Ramaswamy (2000).

Due to the advanced information technologies, introduction of the Internet, increasingly high levels of education, etc., the Omani customers are increasingly becoming sophisticated and demanding better and higher quality services and products. To meet the changing demands of customers, OMANTEL's management should recognise that the only really effective way to meet those demands is to provide high quality service and to focus entirely on customers in order to understand their needs and expectations and to deliver that which will satisfy the customers.

The above three emerging trends in the Omani telecom sector would result in significant challenges to OMANTEL's management. OMANTEL will need to be prepared for issues and challenges that are likely to be brought by these trends in the near future. To prepare for these trends and their associated challenges, OMANTEL's management has to adopt a new management philosophy, which will enable OMANTEL and prepare it to meet the challenges of the aforementioned emerging trends. A management philosophy such as TQM seems to offer the requirements demanded by these trends.

Conclusion

The overall aim of this chapter was to provide a background to OMANTEL. The chapter provided a historical background to the Omani telecom sector and the development attained in this sector. The chapter delineated the organisational structure of OMANTEL, the telecommunications services offered by OMANTEL, and the human resources aspects of OMANTEL. The chapter highlighted some critical emerging trends in Oman in general, and in the Omani telecom sector in particular. The outcomes of these trends constitute significant challenges to OMANTEL's management, and necessitate changes in the management style and structures of OMANTEL. TQM implementation in OMANTEL would aid it to keep pace with these trends and enable it to face their outcomes.

CHAPTER FOUR:
THE NOTION OF TOTAL QUALITY
MANAGEMENT

Chapter Four: The Notion of Total Quality Management

Introduction

The aim of the present chapter is to provide a background to TQM. The chapter is divided into four sections. The first section deals with the definition of the term “quality” from different perspectives. The second section provides an historical background to the evolution of quality management. The third section discusses the approaches of the quality management “Gurus”. The last section discusses the key principles of TQM.

4.1 The Definition of Quality

In discussing the definition of quality, it is generally agreed in the literature that quality is a subtle term and that it lacks precise definition since it means different things to different people. Despite the nebulousness of the term, it is not an inexplicable term. The following is an attempt to interpret the definition of quality from different perspectives.

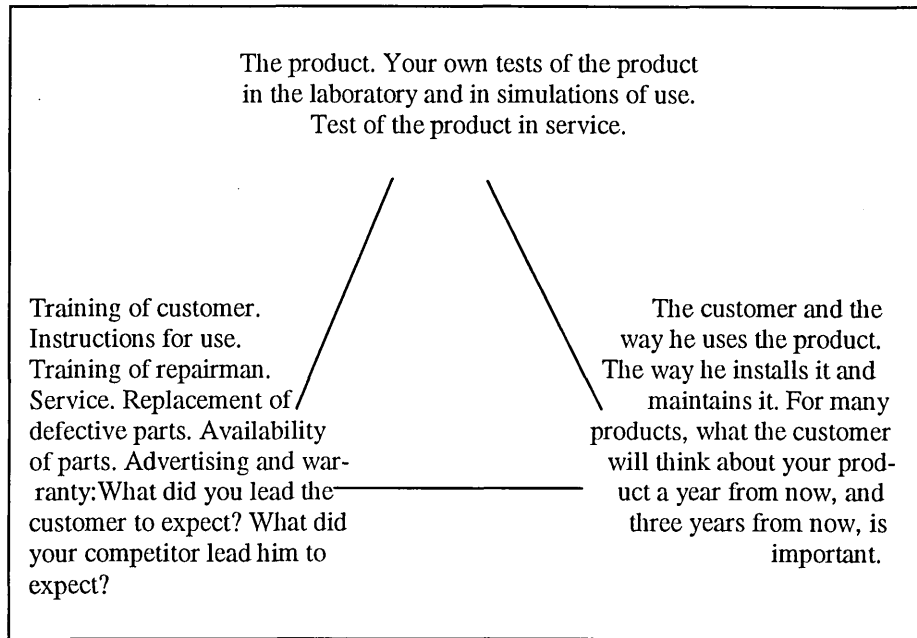
In a linguistic sense, Dale and Cooper (1992:2) stated that quality originates from the Latin word “*qualis*” meaning “such a thing really it is”. An internationally widely used and agreed definition of quality can be found in the statements of the British Standards Institute and International Standardisation Organisation, which define quality as “the totality of features and characteristics of a product or service that bear on its ability to satisfy stated or implied needs” (BS. 4778: Part 1, 1987; ISO 8402, 1986).

The Gurus did not attempt to define quality except in broad terms, and most of these definitions are product-based definitions since most of the Gurus addressed quality primarily on the basis of operation perspectives concerned with conformance to specifications. Crosby (1984), for instance, suggested that quality must be defined as “conformance to requirements” if it is to be managed and measured, which means that a product could be of a high quality only if it conforms to all of its requirements. Deming (1986) suggested that the quality of a product must be defined by the ultimate customer or user of the product, and it must be measured by the interaction between three components (Figure 4.1.1):

1. The product itself.
2. The user and how he uses, installs, and takes care of the product.
3. Instruction for use, such as training of customer and repairman, and the availability of parts and repair services.

The three corners of Deming's definition represent some of the fundamental attributes of quality, which must be, in addition to some other attributes, in a product if it has to be regarded as a quality product. These attributes are serviceability, maintainability, and ease of use.

Figure 4.1.1: The Three Corners of Quality



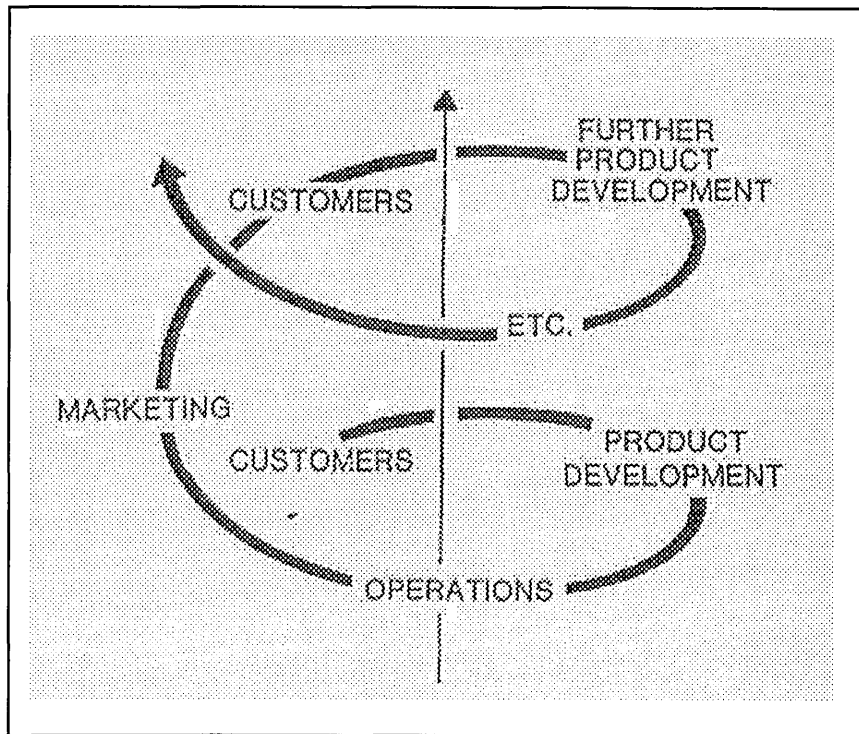
Source: Deming (1986).

Juran (1988) divided the meaning of quality into two categories:

1. Product performance.
2. Freedom from deficiencies.

Juran referred to the product performance as a product's features; features such as promptness of delivery, ease of maintenance, and courtesy of service, which according to Juran, are intended to provide customer satisfaction and fulfilment. Product deficiency refers to such forms as late deliveries and product field failures, which result in customer dissatisfaction and complaints. Juran's simple definition of quality is "fitness for use", which he contends must be enlarged because of different users and uses of the product as shown in Figure 4.1.2. Accordingly, a product that does not perform as it is expected to perform and result in customer dissatisfaction and complaints cannot be regarded as a quality product according to Juran.

Figure 4.1.2: The Spiral of Progress in Quality



Source: Juran (1988).

Feigenbaum (1991:7) referred to quality as “the total composite product and service characteristics of marketing, engineering, manufacturing, and maintenance through which the product and service in use will meet the expectations of the customer”. Feigenbaum stated that quality is customer determined, and is based upon the customer’s actual experience with the product or service, measured against his or her requirements. Feigenbaum (1986) added that there are some individual characteristics associated with product quality, such as:

1. **Reliability:** the product must have good reliability; it must perform its intended function repeatedly as called upon, over its life cycle.
2. **Serviceability:** the product must have proper serviceability and maintainability during its life cycle.
3. **Attractability:** the product must be attractable and must appear as suitable to customer’s requirements.

Taguchi (1993:4) stated that “quality is evaluated by quality loss, defined as the amount of functional variation of products plus all possible negative effects, such as environmental damages and operational costs”. Taguchi’s definition of quality is based on his concept of “loss function”, which states that a poorly designed product imparts losses to society; these

losses can take different forms such as: time loss for correcting quality problems, decrease in productivity due to the ineffectiveness, and actual losses that faced by the customer due to the product failure.

Garvin (1988) provided a comprehensive consideration of the meaning of quality. Garvin suggested that the definition of quality could be divided into five categories:

1. **Transcendent Definition:** this definition suggests that quality is synonymous with 'innate excellence'; that it cannot be defined precisely and that it can only be recognised.
2. **Product-Based Definition:** according to this definition quality is a precise and measurable variable. This approach is based on the idea that an expensive product is a high quality product because quality reflects the quantity of attributes that a product contains; thus, higher quality goods will be more expensive than lower quality goods.
3. **User-Based Definition:** this is a customer determined definition, which suggests that a product will be of high quality if it meets the needs of most customers and results in maximum satisfaction.
4. **Manufacturing-Based Definition:** this definition focuses on the supply side of the equation and is concerned with engineering and manufacturing practices and cost reduction. Improvements in quality, according to this approach, lead to lower costs since preventing defects in the source is less expensive than rework and repair.
5. **Value-Based Definition:** according to this definition quality is defined in terms of costs and prices; thus, a quality product is one that provides performance or conformance at an acceptable price or cost.

In addition to these considerations, Garvin (1987) proposed eight dimensions of quality that can serve as a framework for strategic analysis. These dimensions are:

1. **Performance:** refers to a product's primary operating characteristics and it involves measurable attributes. Some performance standards are based on subjective preferences and some others are based on objective standards.
2. **Features:** are the characteristics of the product that supplement its basic functioning and involve objective and measurable attributes.
3. **Reliability:** reflects the probability of a product malfunctioning or failing within a specified time period.
4. **Conformance:** refers to the degree to which a product's design and operating characteristics meet established standards.

5. **Durability:** is a measure of product life. It can be defined as the amount of use that the customer gets from a product before it deteriorates, and is linked with reliability and serviceability.
6. **Serviceability:** refers to the speed, courtesy, competence, and ease to use, or what can be termed as after-sale services such as repair and maintenance, which may result either in customer satisfaction or dissatisfaction, depending on the company's responsiveness to the customer's complaints or after-sale requirements.
7. **Aesthetics:** refers to how a product looks, feels, sounds, tastes, or smells; aesthetics is a matter of personal judgement and a reflection of individual preference.
8. **Perceived quality:** since consumers do not always have complete information about a product's or service's attributes and they measure the quality on the basis of comparison between brands, reputation may play a primary role in perceived quality.

Payne (1993) argued that quality could be viewed from two perspectives-internal and external. Internal quality is based on conformance to specification. External quality is based on relative customer-perceived quality. The important point, as Payne argued, is that quality must be seen from the customer's viewpoint, not the company's or management's viewpoint for the following reasons:

1. Management may not know what specific purchase criteria users consider important.
2. Management may misjudge how users perceive the performance of competitive products on specific performance criteria.
3. Management may fail to recognise that user needs have evolved in response to competitive product developments, technological advances, or other market or environmental influences.

The aforementioned definitions illustrate that quality is customer determined, and, thus, it must be conceptualised in terms of the customer's perception. However, from the customer's perspective, quality means different things to different customers, and thus may be perceived differently. A product may be judged, from one customer's point of view as a quality product if it performs well, but for another customer it must be durable if it is to be judged as a quality product. For a third customer, quality may be judged in terms of costs, or appearance. Thus, determining customers' perceptions or expectations is not a simple task. Takeuchi and Quelch (1993) pointed out five difficulties associated with the customer's determination of quality. These difficulties may be listed as follows:

1. Customers cannot always articulate their quality requirements.
2. Customers' priorities and perceptions change over time.
3. Customers perceive a product or service's quality relative to competing products or services.
4. Customers demand high quality at low prices.
5. Customers' perceptions of quality are influenced by various factors at each stage of the buying process.

From a marketing point of view, Kotler (1994:56) stated that "since customers have a set of needs, requirements, and expectations. We can say that the seller has delivered quality whenever the seller's product meets or exceeds the customers' expectations". Hanan and Karp (1991:37) added that in order to satisfy customers, two things must be true about the product: (1) it must meet the customer's specifications on his must list and (2) it must meet the customer's expectations consistently. Once satisfactory performance has been established, (the product works as it claims the first time and every time) consistency becomes the key to continuing sales. A product must always perform as expected. This enables the customers to specify it, order it, and use it, with confidence that it will do what they require it to do and that there will be no surprise. The twin dimensions of quality are no surprises and utter reliability.

In sum, quality can be defined as meeting and exceeding customer's requirements and expectations, delighting him, and inciting him to repurchase; or as Peters (1987:83) described "Quality is practical, and factories and airlines and hospital labs must be practical. But it is also moral and aesthetic. And it is perceptual and subjective. It is delivering above expectation. It is a startling little touch that makes you smile at the designer's or production shop's care for you, the customer."

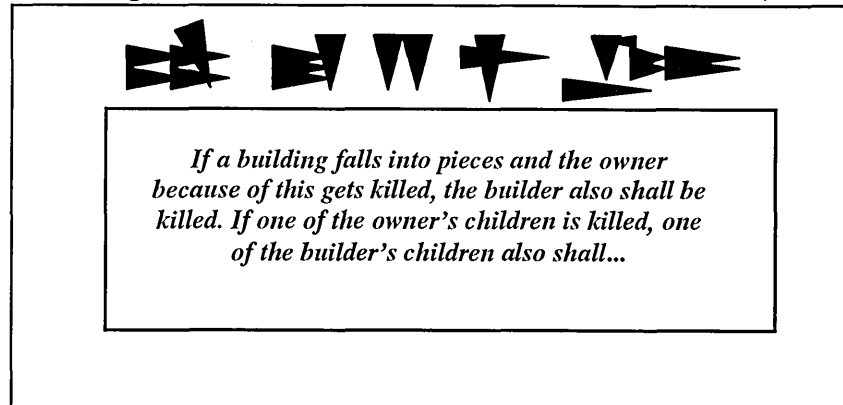
4.2. The Evolution of Quality

In discussing the evolution of quality management, the survey on TQM literature reveals that the concepts and methods of quality management (e.g. inspection) can be traced to the dawn of history. Juran and Gryna (1970), for instance, traced the roots of quality management concepts to the primitive era of the human history, where societies were heavily dependent on food, shelter, self-defence, etc. These societies had to determine whether food was fit to eat, or whether weapons were sound to defend them.

Bergman and Klefsjö (1994) referred to the "Code of Hammurabi" (Figure 4.2.1) and argued that Hammurabi, the Babylonian King, heralded the concept of "product liability".

This argument seems to suggest that the concept of product reliability, which has become an important quality management method in many modern quality management programs, has existed since the Babylonian era.

Figure 4.2.1: Codex Hammurabi (about 1700 BC)



Source: Bergman and Klefsjö (1994).

Banks (1989) argued that the perfection of the Egypt's pyramids, the flawlessness of the classical Greek master works, and the endurance of Roman structures attest that these ancient societies were concerned with quality management and made a conscious effort to control quality.

Sanderson (1995) argued that many elements of modern TQM practice can be found in the British craft guilds of the Middle Ages; for instance, by a Charter in 1327, the Goldsmiths' Company was given absolute responsibility for the quality of gold and silver; and some other companies had similar responsibilities for maintaining the quality of the products produced by their profession.

According to Wadworth, H. M., Kenneth, S. S., and Godfrey, A. B. (1986), more formal quality management concepts were implemented during the Industrial Revolution era, where individual full-time inspectors were appointed to inspect the technical problems of materials, and to ensure the quality of products.

Ishikawa (1985) maintained that modern quality control or statistical quality control began in the 1930s with the industrial applications of the control charts invented by W.A. Shewhart of the Bell Telephone Laboratories. The more formal and widespread adoption of quality control concepts, according to Harrington and Harrington (1995), began during the Second World War, when high quality war materials were demanded. Banks (1989) and Flood (1995) added that the War resulted in the publication of formal quality standards such as the American War Standards-AW SZ 1.1 'Guide to Quality Control', and AW SZ

1.2 'Control Charts for Analysing Data-, and Quality Control Standards of the British Standards Institute.

Following the Second World War, quality management evolved from a manufacturing-based discipline to a broader management discipline. The Japanese, who introduced such concepts as Quality Circles, Just-In-Time, and Kaizen, have made much of the contributions to this movement.

In the 1970s and 1980s, the service sector has become a major concern of many organisations over the world as a result of the increasing importance of the service sector in the economy. A number of service organisations, including both public and private, profit and non-profit organisations, have embraced the quality management approach as a strategy for improving their services, and enhancing their management processes. These organisations cover industries such as financial services, health-care, tourism, professional services, government, and transports, where the focus of the business activity is on services rather than on products (Lewis, 1994:233). Tuckman (1995:67) divided the evolution of quality management, during the 1970s and 1980s, into four phases, which are presented in Table 4.2.1:

Table 4.2.1: The Evolution of Quality Management During the 1970s and 1980s

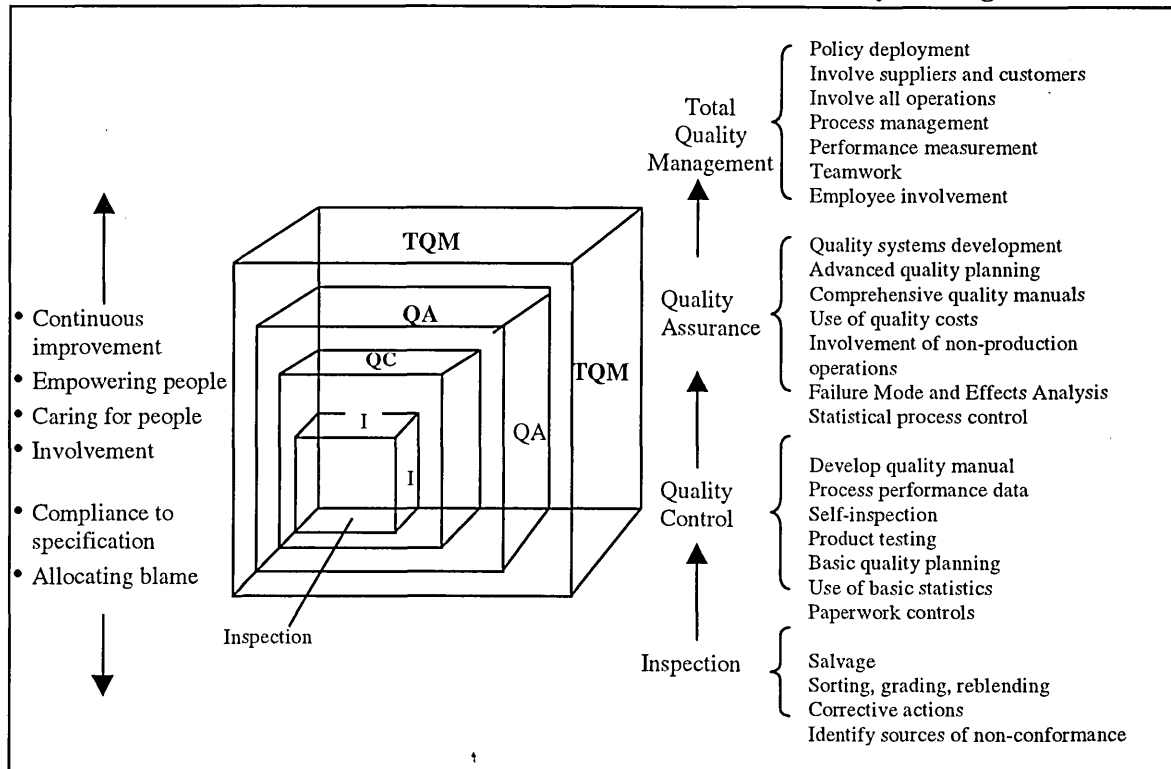
First phase	Late 1970s to early 1980s	Some experimentation with quality circles. Mostly affected firms in direct competition with Japan had concentrated, e.g. electronics and motor industries.
Second phase	The 1980s	Major companies, often affected by world recession, concerned with control of suppliers and subcontractors.
Third phase	From mid-1980s	A growing concern with customer service, particularly in the service sector.
Fourth phase	From late 1980s	Penetration of concerns with 'customer service' in areas which previously had not recognised the existence of customers.

Source: Tuckman (1995).

In general, the discussion of the previous quality management efforts illustrates that TQM has undergone a number of discrete stages. Dale, B.G., Boaden, R.J., and Lascelles,

D.M. (1994) categorised the evolution of TQM into four stages: Inspection, Quality Control, Quality Assurance, and Total Quality Management (Figure 4.2.2).

Figure 4.2.2: The Four Levels in the Evolution of Quality Management



Source: Dale et al (1994).

The Inspection stage involved weeding out unacceptable or defective items or products and finding the sources of non-conformance to ensure that only acceptable products or goods were shipped or sold. Most of the inspection processes were individually conducted; individual producers or official inspectors inspected the quality of products, and most of these activities were conducted prior to, and during, the Industrial Revolution.

The Quality Control stage involved the application of sampling procedures, such as quality control charts or statistical process control charts and periodic quality audits, in the production process to ensure a product's specifications and the efficiency of the producing equipment. It also involved co-operation between different departments, such as between a quality department and a production department or a marketing department, to improve the quality of products, or to resolve quality problems. Many of the Quality Control processes were introduced during the Second World War and in the immediate post-war years.

Quality Assurance involved management as well as employees from all functional areas within the organisation, and a commitment to the detection and prevention of quality

problems. An example of this type of commitment is to be seen in the adoption of “Quality Circles” as a technique for problem solving, problem identification, and problem resolution.

Total Quality Management, as Slack , N., Chambers, S., Harland, C., Harrison, A., and Johnson, R. (1995) argued, is an extension of the previous quality management concepts. It, however, involves all functional areas at all levels to achieve continuous improvement, teamwork, customer (external as well as internal) satisfaction, and improved productivity with reduced costs.

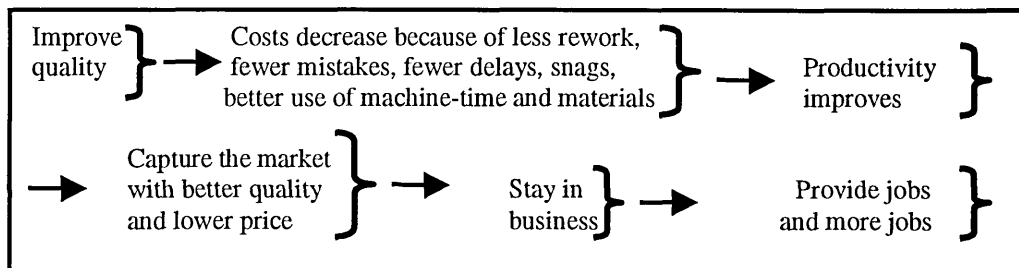
4.3. The Concepts and Methods of Quality Gurus

In discussing the theory and concepts of TQM, there is no single theoretical formalisation of TQM in the literature. However, the quality Gurus, or philosophers, constructed and provided a set of core assumptions and specific principles of management which can be synthesised into a coherent framework (Hill, 1995:36). Thus, it seems evident that the first step toward understanding the underpinning tenets of TQM requires an understanding of the Gurus’ methods and concepts. Accordingly, the following is a discussion of these methods and concepts:

4.3.1. W. Edwards Deming

In the TQM literature, Deming is regarded as the pathfinder of modern quality management concepts. Deming is well known for his emphasis on Statistical Process Control (SPC) techniques that were originally introduced by A.W Shewhart at the Bell Telephone Laboratories in the 1930s, and advanced and applied by Deming in the 1950s in Japan. Deming believed that top management is responsible for about 80% of quality problems and, thus, it is the responsibility of top management to tackle quality problems. Deming also believed in quality as an important issue for developing company’s performance and productivity and for gaining competitive advantage. The importance and advantages of quality, as Deming (1986) advocated, are shown in Figure 4.3.1.1:

Figure 4.3.1.1: The Importance and Advantages of Quality



Source: Deming, (1986).

Deming (1986) noted that there are seven deadly diseases that are encountered by most companies in attempting to improve the quality and management processes. These diseases or obstacles are shown in Table 4.3.1.1:

Table 4.3.1.1: The Seven Deadly Diseases

1. Lack of constancy of purpose.
2. Emphasis on short-term profits.
3. Evaluation of performance, merit rating, or annual review.
4. Mobility of management; job hopping.
5. Management by use only of visible figures, with little or no consideration of figures that are unknown or unknowable.
6. Excessive medical costs.
7. Excessive costs of liability.

Source: Deming (1986)

For tackling these diseases or obstacles and improving the quality and management process of an organisation, Deming recommended a 14-point plan as a guideline. These points are shown in Table 4.3.1.2:

Table 4.3.1.2: Deming's 14-Point Management Plan

1. Create constancy of purpose toward improvement of product and service.
2. Adopt the new philosophy.
3. Cease dependence on inspection to achieve quality.
4. End the practice of awarding business on the basis of price tag. Instead, minimise total cost.
5. Improve constantly and forever the system of production and service, to improve quality and productivity, and thus constantly decrease costs.
6. Institute training on the job.
7. Institute leadership.
8. Drive out fear, so that everyone may work effectively for the company.
9. Break down barriers between departments.
10. Eliminate slogans, exhortations, and targets for the work force asking for zero defects and new levels of productivity.
11. Eliminate work standards. Eliminate management by objective. Eliminate management by numbers, numerical goals. Substitute leadership.
12. Remove barriers that rob people of their right to pride of workmanship.
13. Institute a vigorous program of education and self improvement.
14. Put everybody in the company to work to accomplish the transformation.
The transformation is everybody's job.

Source: Deming (1986).

Deming (1986) argued that in order to improve the quality and management processes in an organisation, a transformation in the management mission of the organisation is required. This transformation, as Deming suggested, must be undertaken by all; with top management playing the guiding role (since top management is responsible for most of quality problems) and must be based on continuous improvement if an organisation is to reach its desired goals. The continuous improvement process could be achieved, as Deming advocated, through breaking down the barriers between the top management and employees (supervisor-worker barriers), enhancing co-ordination between departments, and eliminating fear among employees.

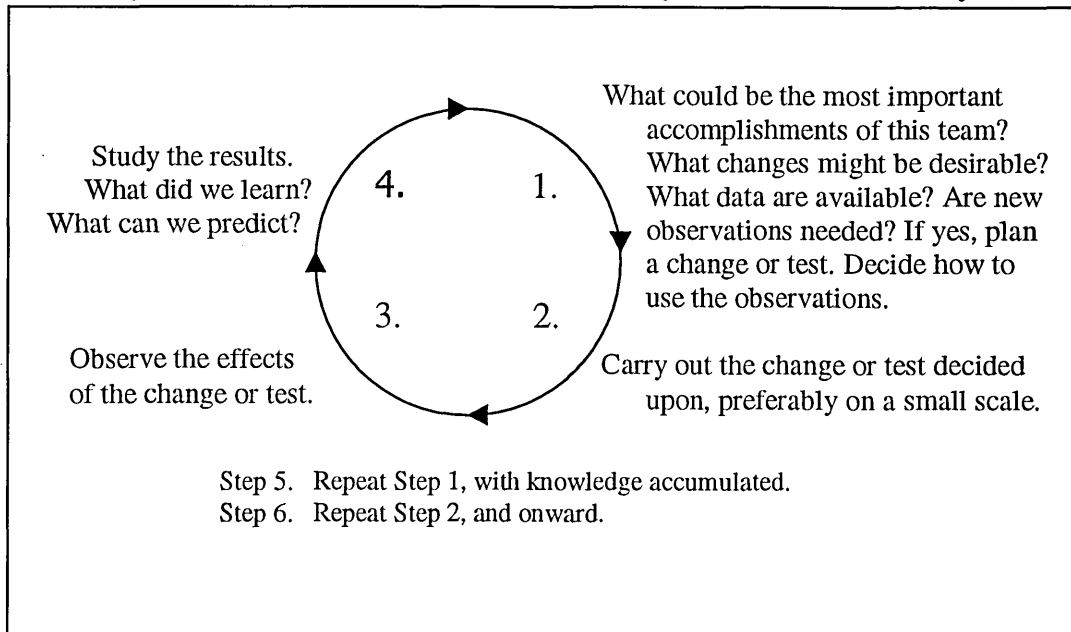
As part of the improvement process, management should seek competitive advantage and meet customers' requirements instead of concentrating on short-term profits. The workers should be provided with appropriate training and education; they should be provided with appropriate tools and techniques in conducting the work and with transparent and acceptable working procedures. This working climate, as advocated by Deming, was envisaged to result in increased productivity and improved quality.

In addition to the above Fourteen Points, Deming (1994) provided management with a system called "Profound Knowledge". In his "Profound Knowledge", Deming advocated that when every part of a system worked in support of another part, "optimisation" occurred. To achieve optimisation, Deming suggested that all internal competition within an organisation must be eliminated. Numerical ratings and rankings must be eliminated in assessing and conveying feedback to individuals about their performance. In addition, Deming suggested that an organisation must not copy another organisation's success in total quality improvement, but it must construct its own improvement plan. Furthermore, Deming believed that people learn in different ways and have different capacities to learn and, thus, organisations need to recognise this differentiation, and reflect it in training methods or approaches needed to increase learning for individuals and the organisation itself.

As a tool for quality and management improvement, Deming recommended a systematic procedure that is known as Plan-Do-Check-Act Cycle or Deming's Cycle (Figure 4.3.1.2), which was originally invented by Shewhart and termed as Plan-Do-Study-Act Cycle and modified by Deming. However, the basic theme of the cycle is that the organisation plans a change or improvement process, does it, checks the results and, depending on the results, acts either to standardise the change or to begin the cycle of

improvement again with new information. The cycle, however, represents work on processes rather than specific tasks or problems.

Figure 4.3.1.2: The Plan-Do-Check-Act Cycle (The Shewhart Cycle)



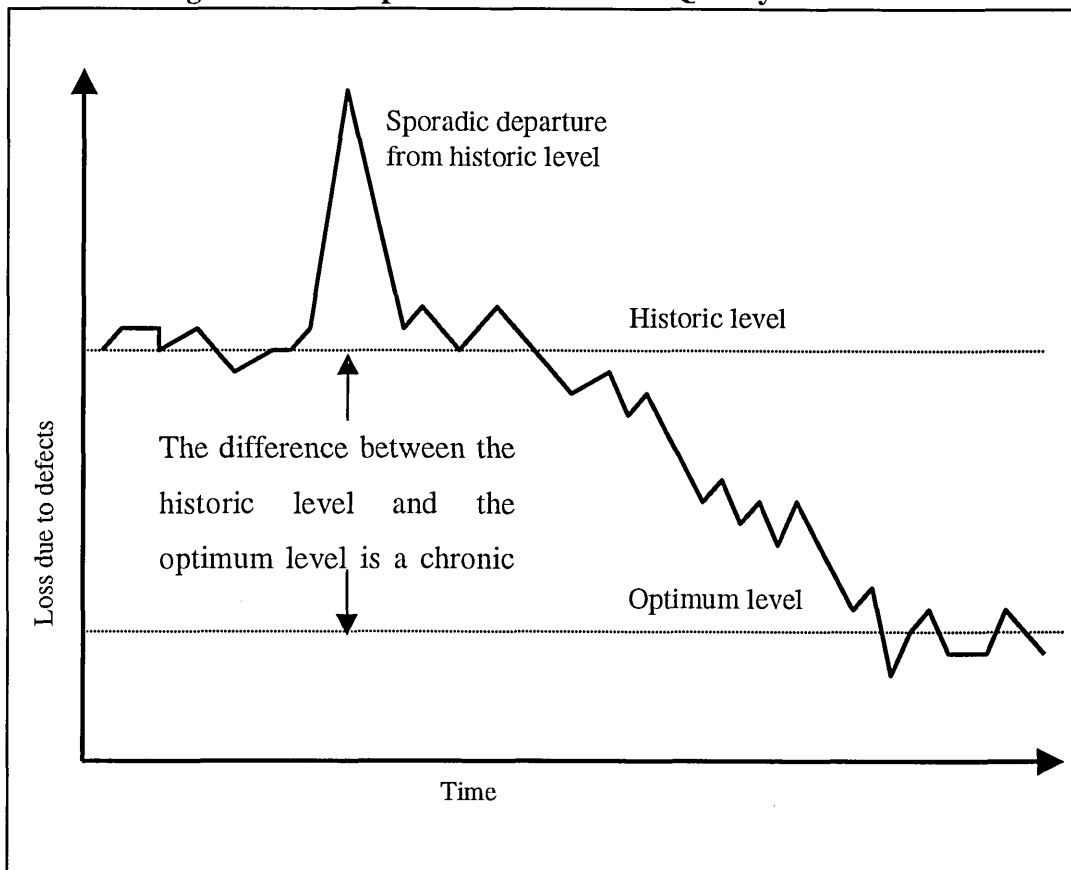
Source: Deming (1986).

In general, the salient characteristics of Deming's approach can be summarised as: continuous improvement; constancy of purpose; barrier-less communications between departments, employees, and top management; no inspection; and constant training.

4.3.2. Joseph M. Juran

Juran, like Deming, believed that most quality problems are due to management and, thus, top management is responsible for solving these problems. Juran tried to convince organisations and their management to move away and change its views towards quality from the traditional manufacturing-based view of quality as "conformance to specification" to a customer-based view, implied by the definition of quality as "fitness for use". In discussing quality problems, Juran and Gryna (1980) believed that there are sporadic and chronic quality problems (Figure 4.3.2.1). The sporadic problems are sudden adverse changes in the status quo, requiring remedies that restore the status quo. The chronic problems are long-standing adverse situations, often difficult to solve, and are accepted as inevitable, which require remedies through changing the status quo.

Figure 4.3.2.1: Sporadic and Chronic Quality Troubles.



Source: Juran and Gryna (1980).

For tackling the chronic quality problems, Juran and Gryna (1980) recommended the “The Breakthrough Sequence”, which is based on the following key ideas:

1. **Breakthrough in attitudes.** Prove that a breakthrough is needed and create an attitude favourable for embarking on an improvement programme. This could be achieved by collecting factual information and data to show the size of the problem, actual or potential loss of sales income due to poor quality, and the benefits possible from an improvement programme.
2. **Identify the vital few projects.** Determine which quality problem areas are most important or need improvement. This could be achieved by using Pareto Analysis.
3. **Organise for breakthrough in knowledge.** Organise to secure the new knowledge needed to achieve the improvement. This objective could be achieved through organising steering and diagnostic arms, whose tasks are to determine the specific aims of the improvement programme, provide ideas on possible causes of the problems and their solutions, and estimate the time required for the investigation and tackling the problems.

4. **Conduct the problem analysis.** Collect and analyse the facts that are required and recommend the action needed. The solution to the problems involves two phases – diagnostic and remedial. The diagnostic phase involves developing hypotheses and experiments to determine the real causes of the problems (to determine whether the causes of the problems or defects are primarily operator controllable or management controllable). The remedial phase involves providing solutions to the problems.
5. **Deal with resistance to change.** The purpose of breakthrough is change. Thus, it is important to establish the need for change in terms that are important to the people involved rather than on the basis of the logic of change. It is also important to use participation to get ideas on both the technical and social aspects of the change. The aim is to determine the effects of proposed changes on the people involved and to find ways to overcome resistance to change.
6. **Institute the change.** Convince the necessary departments to take action to institute the change. This involves (a) gaining the approval of management for instituting the solution, and (b) installing the solution in a way that will make it effective. This could be best achieved by explaining to the management the size of the problem, the proposed solution together with a summary of alternative solutions, the cost of the remedy and expected benefits, the efforts taken to anticipate the effects of the solution on the people involved, and the restrictions on the applicability of the solution.
7. **Institute control.** Institute control to hold the new levels of performance. That is, to make sure that (a) the solution continues to be effective, and (b) unforeseen problems are resolved.

Juran (1988) argued that there are many reasons why managers need to embark upon the “Breakthrough Sequence”. Some of these reasons are:

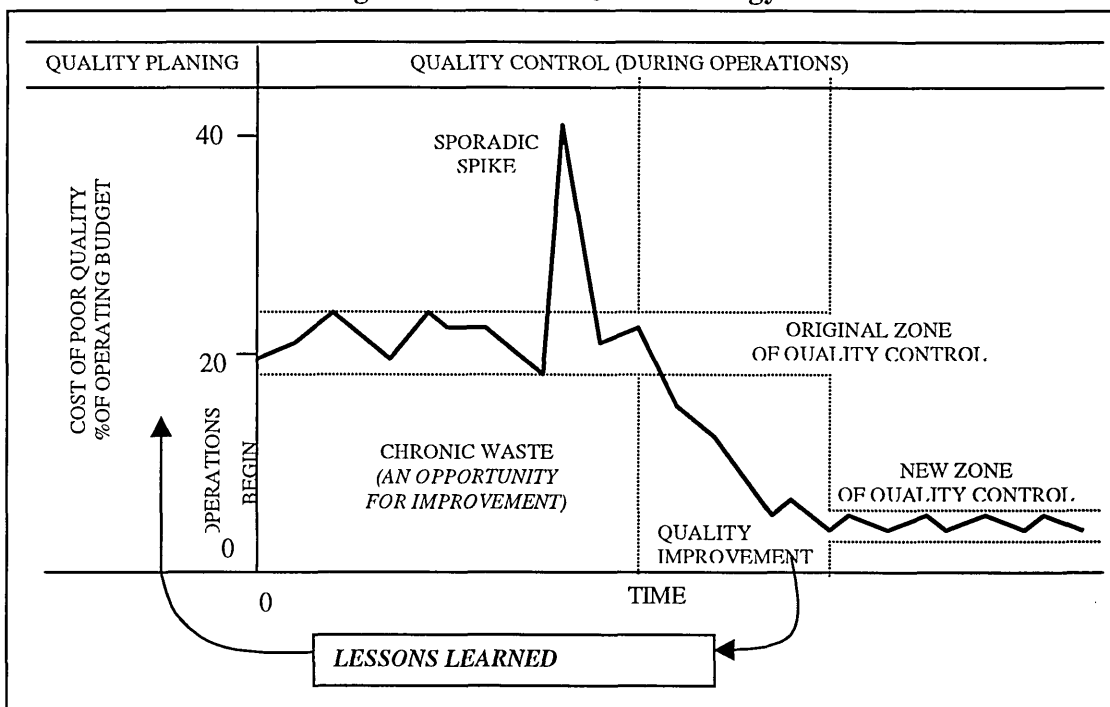
1. The managers wish to attain or hold quality leadership. This requires continuing breakthrough because of competition.
2. The managers identified some opportunities to improve income through superior fitness for use (or quality).
3. They are losing market shares through lack of competitiveness.
4. They have too many field troubles (failures, complaints, or returns) and wish to reduce these as well as cutting the external costs resulting from guarantee charges, investigation expenses, product discounts, etc.

5. They have identified some projects that offer internal cost-reduction opportunities, e.g., improvement of process yields or reduction of scrap, rework, etc.
6. They have a poor image with customers, suppliers, the public, or groups of outsiders.
7. There is internal dissension and a need to improve motivation and morale.

Juran (1989) suggested that there are three basic managerial processes, or what he termed “The Juran Trilogy” (Figure 4.3.2.2), in the quality improvement process. These processes are:

1. **Quality planning:** is a process of developing the products and their features. It identifies the customers and determines their needs and requirements. The process involves developing processes that are able to produce product features that are required by the customers, and transferring the resulting plans to operating forces.
2. **Quality control:** is a process of examining and evaluating the product against the original requirements of the customers. Problems detected are then corrected.
3. **Quality improvement:** is a process of identifying the specific needs for improvement and setting up project teams that are responsible for identifying problems and solving them; the process involves allocating resources and providing training that are needed by the teams for achieving their goals.

Figure 4.3.2.2: The Juran Trilogy



Source: Juran (1989).

In addition to his “Trilogy” and “Breakthrough Sequence”, Juran proposed a 10-point plan as an approach for quality and management process improvement:

Table 4.3.2.1: Juran’s 10-point plan

1. Create awareness of the quality crisis; the role of quality planning in that crisis; and the need to revise the approach to quality planning.
2. Establish a new approach to quality planning.
3. Provide training in how to plan for quality, using the new approach.
4. Assist company personnel to replan those existing processes which contain unacceptable quality deficiencies (March right through the company).
5. Assist company personnel to acquire mastery over the quality planning process, a mastery derived from replanning existing processes and from the associated training.
6. Assist company personnel to use the resulting mastery to plan for quality in ways that avoid creation of new chronic problems.
7. Establish specific goals to be reached.
8. Establish plans for reaching the goals.
9. Assign clear responsibility for meeting the goals.
10. Base the rewards on results achieved.

Source: Juran (1988).

In his 10-point plan, Juran suggested that management is required to emphasise continuous improvement; this attitude should be part of the organisation’s culture and its regular system. Management, particularly top management, is required to ensure that all employees are aware of the need for improvement and trained to understand their tasks in the improvement process. Quality and process improvement, according to Juran, can be achieved by setting up specific goals and monitoring or measuring the improvement process. The organisation’s reward system must be based on the recognition of results achieved.

Juran also believed that there is no single department responsible for quality, but that quality is an organisation-wide responsibility. Thus, he recommended teamwork as a way for improving quality and the management process, eliminating the barriers between departments within an organisation, and enhancing the communication between top management and employees.

The key elements of Juran’s quality improvement approach can be summarised as: quality control must be an integral part of management; quality is no accident and must be planned; there are no short cuts to quality; use problems as sources of improvement.

4.3.3. Philip B. Crosby

Philip B. Crosby is well known for his concepts of Zero Defects, Doing Things Right the First Time, and the System of Quality is Prevention not Appraisal. Crosby (1980) maintained that quality management is a systemic way of guaranteeing that organised activities happen the way they are planned. He argued that if effective quality management is to be practical and achievable, it must start at the top. Thus, Crosby's main target was top management, he believed that the first step toward improving quality is to change top management's way of thinking and attitudes. Crosby (1979) argued that to achieve quality improvement, it is necessary to change the company's culture, to eliminate the causes that produce non-conforming products and services. He also argued that doing things right the first time and defining quality as "conformance to requirements" placed the organisation in a position of operating where the best brains and most useful knowledge were invested in establishing the requirements in the first place.

The cost of quality, according to Crosby, can be divided into two areas, the price of non-conformance and the price of conformance. Non-conformance costs include all expenses involved in doing things wrong such as corrections, rework, and pay for warranty and claims. On the other hand, conformance costs are the costs of doing things right and include most of the professional quality functions, all prevention efforts, quality education, and procedural and product qualification costs.

In discussing his management improvement approach, Crosby (1980) introduced the management maturity grid (Figure 4.3.3.1) as a way for measuring the present quality system and pinpointing areas that need improvement. The grid has five main stages as follows:

- 1. Uncertainty stage:** at this stage, management does not recognise quality as a positive management tool, and the cost of quality is unknown. Quality improvement is not considered as a strategy. Management knows that there are problems of poor quality, but it does not know what are the causes of these problems.
- 2. Awakening stage:** at this stage, management starts to recognise the importance of quality as a useful management tool, but still it does not pay enough attention to it because of the time and money associated with its introduction although some efforts, such as inspection and testing, are undertaken to identify the problems and their causes. The basic problems remain the same and long-range solutions are not seriously considered.

Figure 4.3.3.1: The Quality-Management Maturity Grid

MEASUREMENT CATEGORIES	STAGE I: UNCERTAINTY	STAGE II: AWAKENING	STAGE III: ENLIGHTENMENT	STAGE IV: WISDOM	STAGE V: CERTAINTY
Management understanding and attitude	No comprehension of quality as a management tool. Tend to blame quality department for "quality problems"	Recognising that quality management may be of value but not willing to provide money or time to make it all happen.	While going through quality improvement program learn more about quality management; becoming supportive and helpful.	Participating. Understand absolutes of quality management. Recognise their personal role in continuing emphasis.	Consider quality management an essential part of company system.
Quality organisation status	Quality is hidden in manufacturing or engineering department. Inspection probably not part of organisation. Emphasis on appraisal and sorting.	A stronger quality leader is appointed but main emphasis is still on appraisal and moving the product. Still part of manufacturing or other.	Quality Department reports to top management, all appraisal is incorporated and manager has role in management of company.	Quality manager is an officer of company; effective status reporting and preventive action. Involved with consumer affairs and special assignments.	Quality manager on board of directors. Prevention is main concern. Quality is a thought leader.
Problem handling	Problems are fought as they occur; no resolution; inadequate definition; lots of yelling and accusations.	Teams are set up to attack major problems. Long-range solutions are not solicited.	Corrective action communication established. Problems are faced openly and resolved in an orderly way.	Problems are identified early in their development. All functions are open to suggestion and improvement.	Except in the most unusual cases, problems are prevented.
Cost of quality as % of sales	Reported: unknown Actual: 20%	Reported: 3% Actual: 18%	Reported: 8% Actual: 12%	Reported: 6.5% Actual: 8%	Reported: 2.5% Actual: 2.5%
Quality improvement actions	No organised activities. No understanding of such activities.	Trying obvious "motivational" short-range efforts.	Implementation of the 14-step program with thorough understanding and establishment of each step.	Continuing the 14-step program and starting Make Certain.	Quality improvement is a normal and continued activity.
Summation of company quality posture	"We don't know why we have problems with quality."	"Is it absolutely necessary to always have problems with quality?"	"Through management commitment and quality improvement we are identifying and resolving our problems."	"Defect prevention is a routine part of our operation."	"We know why we do not have problems with quality."

Source: Crosby (1980).

3. **Enlightenment stage:** more formal quality improvement programmes and policies are conducted at the enlightenment stage. Quality at this stage is given more attention than at the earlier stages and problems are resolved in a systematic way. The cost of quality is evaluated and estimated, and appropriate decisions are made to eliminate waste. An official quality team heads up the quality improvement process.
4. **Wisdom stage:** this is the most critical stage. At this stage, the cost of quality is accurately estimated and problems are handled as they appear. The problem handling activities are passed to the lower levels of the organisation; employees are empowered and involved in the quality improvement and decision-making processes.
5. **Certainty stage:** the quality at this stage becomes part of the organisation's culture and a routine task of management. Problems do not occur and the cost of quality is reduced.

In addition to the management maturity grid, Crosby (1980) offered a 14-point programme as a guideline for quality improvement as shown in Table 4.3.3.1:

Table 4.3.3.1: Crosby's 14-point Quality Programme

- | |
|---|
| <ol style="list-style-type: none">1. Management Commitment.2. Quality Improvement Team.3. Quality Measurement.4. Cost of Quality Evaluation.5. Quality Awareness.6. Corrective Action.7. Establish an Ad Hoc Committee for the Zero Defects Program.8. Supervisor Training.9. Zero Defects Day.10. Goal Setting.11. Error Cause Removal.12. Recognition.13. Quality Councils.14. Do It Over Again. |
|---|

Source: Crosby (1980)

Crosby (1980) stated that the first step toward a continuous improvement process was top management's commitment to that process to understand current activities and to ensure improvement. Management should examine the purpose of the improvement programme and the concepts involved in making improvement. It is necessary, according to Crosby, to then establish quality teams, whose tasks are to carry out intended policies and undertake the necessary improvement actions. It is also important to determine the current quality problems and to evaluate the cost of quality. These provide clear understanding of areas that need improvement and an accurate estimation of the costs and of the methods or

tools needed for improvement. Once these are determined, then management is required to raise the awareness for improvement and the necessity for change among employees, and is required to take appropriate actions to solve problems. The overall aim is 'zero defects'; and management must realise that the improvement process is a continuous one.

The main characteristics of Crosby's approach are: quality is conformance to requirements; quality is achieved through prevention, not appraisal; the quality standard is zero defects, not acceptable levels; quality is measured by the cost of non-conformance.

4.3.4. Armand V. Feigenbaum:

Feigenbaum is known as the father of quality control, since he was its originator. Feigenbaum (1991:6) defined total quality control as "an effective system for integrating the quality-development, quality-maintenance, and quality-improvement efforts of the various groups in an organisation so as to enable marketing, engineering, production, and service at the most economical levels which allows for full customer satisfaction". Feigenbaum believed that quality is a way of managing the organisation and a crucial hinge for business success or failure; thus, it must be considered as the primary business strategy in an organisation. To achieve business success, Feigenbaum suggested that an organisation must develop a quality control programme, which must foster sound business growth and provide major competitive advantage to a company. According to Feigenbaum, there are normally four steps to a total quality control programme; the steps are:

- 1. Setting standards:** determining the required quality costs and standards.
- 2. Appraising conformance:** comparing the conformance of the product or service to the standards.
- 3. Acting when necessary:** correcting problems and their causes throughout marketing, design, engineering, production, and maintenance factors that influence user satisfaction.
- 4. Planning for improvement:** developing a continuing effort to improve standards.

Feigenbaum proposed "9 Ms" as fundamental factors affecting quality in today's competitive business markets and which must be met through correspondingly strong programmes for quality control. These "9 M's" are:

- 1. Markets:** since today's markets are becoming broader in scope, more functionally specialised in the goods and services offered, and globalised, which result in competition and a variety of choices for customers, business must be highly flexible and able to change direction rapidly.

2. **Money:** quality costs associated with maintenance, rework, and quality improvement resulted in management's focus on the quality cost area as one of the "soft spots" in which its operating costs and losses can be decreased to improve profits.
3. **Management:** managing quality becomes an organisation-wide responsibility, which results in an increased load on top management, particularly the increased difficulty of allocating proper responsibility for correcting departures from quality standards.
4. **Men:** the great demand for workers with specialised knowledge results in breaking the responsibility of quality into a number of pieces.
5. **Motivation:** the human motivational aspects have led to an unprecedented need for education and training in quality methods, tools, and techniques and improved communication of quality awareness.
6. **Materials:** the production costs and quality requirements resulted in tighter material specifications and in the use of highly specialised laboratory machines as tools for quality measurement.
7. **Machines and mechanisation:** cost reduction and increased production volumes have forced companies to use modern and complex manufacturing equipment.
8. **Modern information methods:** the information technologies have provided the means for an unprecedented level of control of machines and processes, and have made available to management more useful, accurate, timely, and predictive information upon which to base the decisions that guide the future of a business.
9. **Mounting product requirements:** higher performance requirements for products has emphasised the importance of product safety and reliability; thus constant attention must be given to make sure that no factors enter the process to decrease the reliability of components or systems.

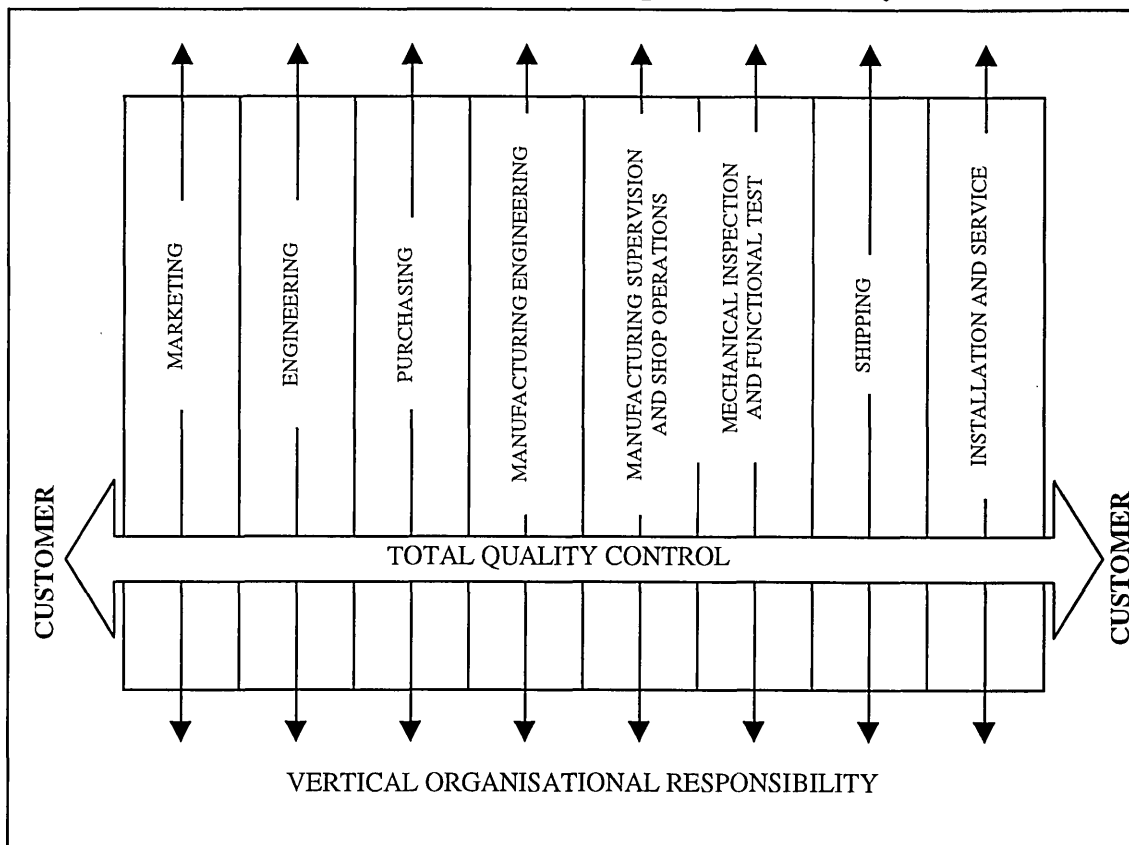
In addition to his "9 Ms", Feignbaum suggested 10 benchmarks as fundamentals to direct the improvement effort. His benchmarks are:

1. **Quality is a company-wide process:** quality is a systemic customer-connected process and must be totally and rigorously implemented throughout the company and integrated with suppliers.
2. **Quality is what the customer says it is:** quality is a customer determination not an engineer or marketer's determination.

3. **Quality and cost are a sum not a difference:** quality is a fundamental business strategy and an outstanding opportunity for high return on investment, for which careful quality cost identification is an essential guideline.
4. **Quality requires both individual and teamwork zealotry:** quality is everybody's job and, thus, everybody in the organisation is responsible for quality improvement.
5. **Quality is a way of managing:** good management means personal leadership in empowering the quality knowledge, skills and attitudes of everyone in the organisation to recognise that making quality right makes everything in the company right.
6. **Quality and innovation are mutually dependent:** it is essential to make quality part of the product design and development processes.
7. **Quality is an ethic:** the pursuit of excellence is the strongest human emotional motivator in any organisation and it is the basic driver in true quality leadership.
8. **Quality requires continuous improvement:** quality is not a separate activity; it is a continuous and integral improvement process which could be achieved through the help, participation, and involvement of everyone.
9. **Quality is most cost-effective, least capital-intensive route to productivity:** the management must concentrate on the concepts of producing "good" products rather than "more" products; this can be achieved by the application of new and existing technologies.
10. **Quality is implemented with a total system connected with customers and suppliers:** quality improvement process involves all parts of the organisation as well as the customers and suppliers.

Quality control to Feigenbaum was a horizontal function (Figure 4.3.4.1), and thus he emphasised the employees' commitment as well as top management's in the quality improvement process. Employees must be given a significant role in the improvement process with a clear understanding of their role in that process. Feigenbaum (1991) defined the quality improvement system as "the agreed company wide and plantwide operating work structure, documented in effective, integrated technical and managerial procedures, for guiding the co-ordinated actions of the people, the machines, and the information of the company and plant in the best and most practical ways to assure customer quality satisfaction and economical costs of quality".

Figure 4.3.4.1: The Horizontal Scope of Total Quality Control



Source: Feigenbaum (1991).

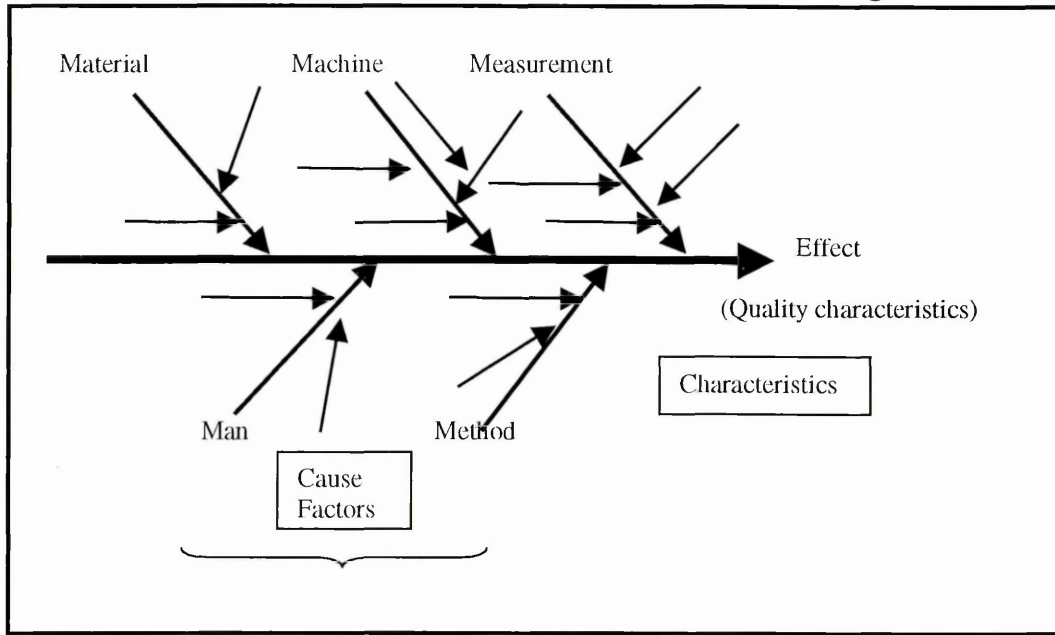
4.3.5. Kaoru Ishikawa

Kaoru Ishikawa is a Japanese quality Guru. Ishikawa (1985) believed that quality control is a company-wide issue and must be an all-pervasive influence on the way every aspect of business is conducted. He recommended that all employees must participate in quality improvement process, instead of leaving the responsibility of improvement to a specific department.

Ishikawa placed emphasis on “Quality Circles”, in which employees jointly and on a voluntarily basis form teams for problem solving, as a significant technique for solving quality problems, and as a tool for empowering employees from different levels in the decision-making and improvement processes.

Ishikawa is also known for his invention of the “Cause and Effect” or “Fishbone” diagram (Figure 4.3.5.1), which he recommended as an important tool for identifying and analysing the causes of problems of poor quality.

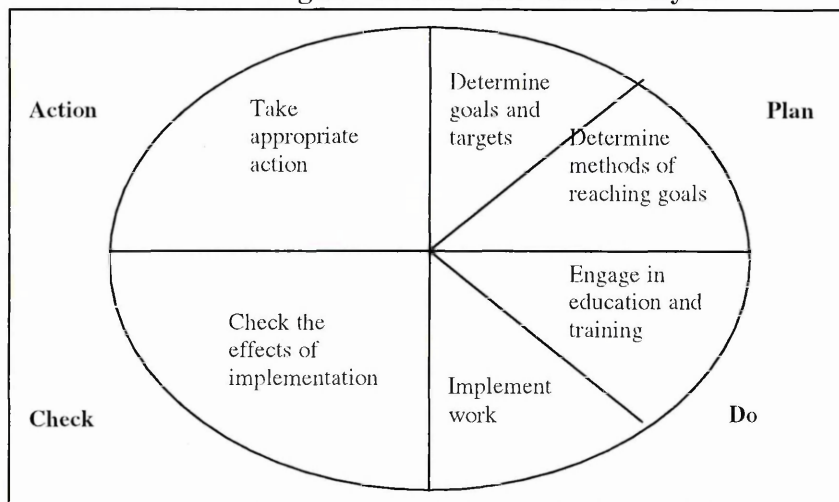
Figure 4.3.5.1: The Cause and Effect (Fishbone) Diagram



Source: Ishikawa (1985).

Since Ishikawa believed in education and quality control as critical issues in quality improvement process, he modified Deming's "Plan-Do-Check-Act" Cycle by dividing "Plan" phase into two phases and the "Do" phase into another two phases, and called the cycle the "control cycle" (Figure 4.3.5.2). He recommended the application of quality control methods, such as statistical quality control methods and the use of a cause and effect diagram, in the "Plan" phase as approaches for reaching the desired goals, and education or training, in the "Do" phase, as a requirement for the improvement process.

Figure 4.3.5.2: The Control Cycle



Source: Ishikawa (1985).

For improving the management process, Ishikawa argued that a transformation is required in the management process; this transformation, according to him, has six categories:

1. Quality first- not short-term profit.
2. Consumer orientation-not producer orientation. Think from the standpoint of the other party.
3. The next process is your customer-breaking down the barrier of sectionalism.
4. Using facts and data to make presentations-utilisation of statistical methods.
5. Respect for humanity as a management philosophy-full participatory management.
6. Cross-function management.

Ishikawa (1985) argued if a company followed the principle of “quality is first”, its profits would increase and it would gain competitive advantage and customer confidence in the long run. Thus, it is important, as Ishikawa argued, that management should concentrate on long-term profits, which would be achieved by emphasising quality improvement and customer satisfaction instead of concentrating on short-term profits or high volumes of sales with poor quality. In this regard, Ishikawa (1985) suggested that management should listen to the customers and take their opinions and views into the consideration. Internally, the sectionalism within the organisation has to be broken down so that everyone must be able to communicate freely and smoothly, which will result in internal-customers satisfaction.

The decision making process, as Ishikawa (1985) suggested, must be based on facts and accurate data, which could be gained through the utilisation of statistical quality control tools such as the Process Chart, Pareto Analysis, Histogram Chart, Process Control Chart, and a Fishbone Diagram. In this respect, Ishikawa recommended that all employees must be taught the basic principles of these tools.

The fundamental principle of successful management, as Ishikawa (1985) advocated, is to respect humanity. The term humanity implies autonomy and spontaneity, to create a working environment where humanity is respected and the authority is delegated to subordinates to make full use of their abilities.

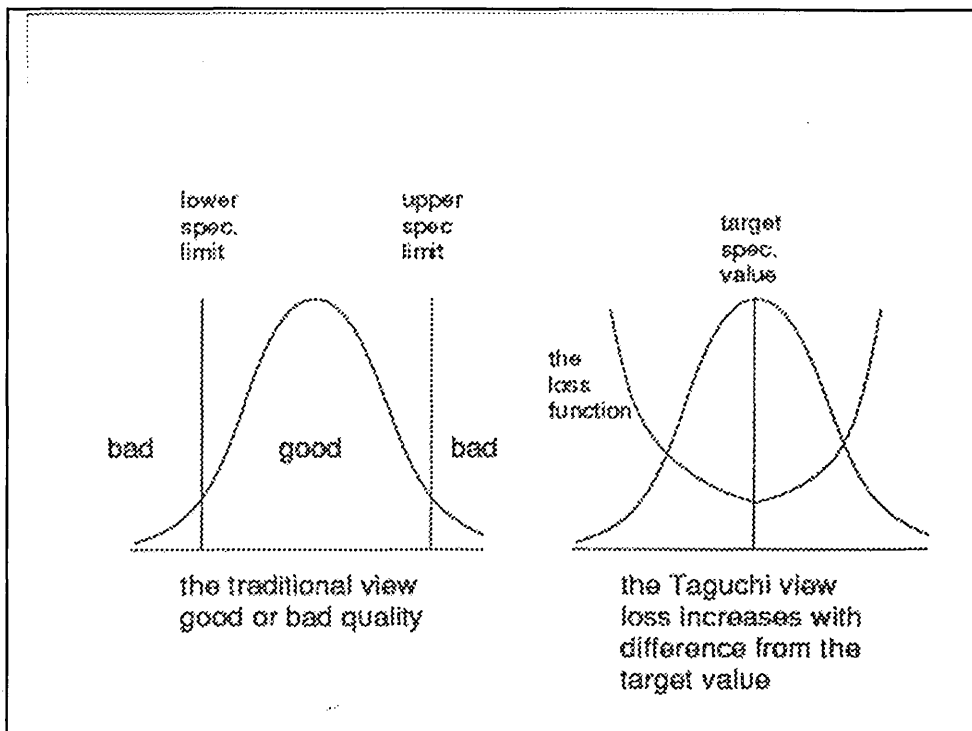
4.3.6. Genichi Taguchi

Genichi Taguchi was another Japanese quality Guru who is known for his concepts of “Loss Function” and “Robust Design”. He is also known for his promotion of the use of statistical methods for product design improvement. Taguchi’s loss function differs from

the traditional quality control thinking by rejecting the idea that there is no need for improvement if the product falls within the specifications. Taguchi believed that there is some level of loss associated with a product based on whether it falls within or without the specification limits. The differences between the traditional quality control approach and Taguchi's method are shown in Figure 4.3.6.1. The main characteristics of Taguchi's loss function can be summarised in the following points (Roy, 1990:13-14):

1. The quality loss function is a continuous function and is a measure of deviation from the target value. The conformance to specification limits is an inadequate measure to define the quality loss function.
2. Quality loss is related to product performance characteristics and can best minimised by designing quality into the product. Prevention of poor quality is less costly than rework, and yields far better returns.
3. Quality loss results from customer dissatisfaction and should be measured system-wide rather than at a discrete point in the manufacturing process.
4. Quality loss is a financial and social loss.
5. Minimising quality loss is the only way to be competitive and survive in today's international environment.

Figure 4.3.6.1: The Traditional View and Taguchi's View of Quality



Source: Bicheno (1991).

The “Robust Design” concept is based on the idea of building up safeguards at the product design stage itself, and studying all factors, which Taguchi termed noises, that may hamper uniformity between a product and its long-term stable performance.

Taguchi (1993) divided the product design and production process stages into three main phases as follows:

1. **System design:** choosing the most appropriate system for production process and product development from all possible systems that can perform the objective functions.
2. **Parameter design:** deciding the optimal nominal values for the parameters of the chosen systems.
3. **Tolerance design:** finding the optimal trade-off between quality loss due to the variation of objective functions and the cost of high-grade components.

The “system design” is a non-statistical phase that brings together engineering and marketing/customer knowledge to produce a design prototype. In the “parameter design” phase, the relationship of desirable product performance to changing parameter is explored, which amounts to finding a robust design. The “tolerance design” sets tolerances around the target settings, not by the usual engineering techniques relating to “tolerance stackup”, but by finding the right trade-off between societal loss and manufacturing cost (Bicheno, 1991:16-17).

In general, the key points of Taguchi’s quality management methods can be summarised as: the quality of a product should be measured by the total loss occasioned by the product not only to the customer, but to the whole society, as the losses due to the product result in economic and financial losses in the society; it is necessary to emphasise continuous quality improvement and cost reduction; product design is necessary from the outset, as this will have a critical impact on a product’s quality; there must be an emphasis on statistically designed experiments in the product design process.

In general it should be noted, as suggested in the literature, that each approach of the quality Gurus has its own strengths and weaknesses and that none of these approaches should be taken as a quick-fix solution to improve quality or processes. Therefore, it is recommended that organisations intending to embark on TQM should seek an appropriate framework or approach that fits their own unique requirements.

4.4. The Key Features and Characteristics of TQM

TQM differs from the other management theories or approaches by its emphasis on some specific features and characteristics. In distinguishing TQM from the other management theories or schools, Morris and Haigh (1996: 92) stated that “whilst all of the Schools of management have sought to delineate a rational approach to the attainment of increased productivity, enhanced effectiveness and efficiency and greater economy, TQM has emphasised the attainment of those objectives through the concept of continuous quality improvement”. Flood (1993:127) added that the theory of TQM stresses the need for autonomy, responsibility and participation, and the eradication of coercive forces; in short, a need for human freedom. It would not be possible, therefore, to claim proper and valid use of TQM without evidence that the practice had in its profile a guarantee of human freedom.

TQM should be also distinguished from other organisational improvement approaches, such as Business Process Reengineering (BPR), Just-In-Time (JIT), and Kaizen, despite some similarities between their objectives and those of TQM's. Hammer and Stanton (1995:97), for instance, distinguished between TQM and BPR by stating that TQM stresses incremental improvement through structured problem solving, whereas BPR is about radical improvement through total process redesign. TQM assumes the underlying process is sound and looks to improve it; BPR assumes it is not and seeks to replace it. Reengineering is best seen as the next step after TQM. Success with TQM can position an organisation to take that next step. Organisations that have fared poorly with TQM may reject BPR as just another passing fad.

Research carried out by Flynn, B.B., Sakakibara, S., and Schroender, R.G. (1995) distinguished between JIT and TQM by describing TQM as an approach for improving the quality of products and services that is characterised by the goals of: continuous improvement of all processes; customer-driven quality; production without defects; a focus on improvement of processes rather than on a criticism of people; and data-based decision making. On the other hand, JIT is based on the notion of eliminating waste through the simplification of manufacturing processes, which includes the elimination of excess inventories and overly large lot sizes that cause unnecessarily long customer cycle times. The research, however, proposed that the use of TQM practices will improve JIT performance through process variance reduction and reduced rework time, and JIT

practices will improve quality performance through problem exposure and improved process feedback.

Imai (1986:9) described the concept of Kaizen by stating that “the starting point for improvement is to recognise the need. This comes from recognition of a problem. If no problem is recognised, there is no recognition of the need for improvement. Complacency is the arch enemy of Kaizen. Therefore, Kaizen emphasises problem-awareness and provide clues for identifying problems”. Imai’s statement seems to suggest that the problem solving concept in Kaizen depends on the recognition or existence of a problem, which means if no problem exists, then there is no need for improvement; whilst TQM emphasises improvement regardless of the problem’s existence. In addition, Thomas (1995:81-82) noted that the Kaizen is about the identification and implementation of small step improvements to processes and procedures with no necessary requirement that such improvements should result from large research and development efforts. In Kaizen the level of improvement necessary to engage management’s attention and support is commonly quite minute. On the other hand, total quality activities can begin anywhere and at any time within an organisation and the key role of management is to facilitate and reward progress wherever it occurs. Facilitation is the prime activity in total quality.

In defining TQM, Hannagan (1995:168) described it as a ‘value-based’ approach to quality management. He added that it could be defined as “an intensive, long-term effort to transform all parts of the organisation in order to produce the best product and service possible to meet customer needs”.

Zairi (1994:95) stated that TQM focuses on the process rather than upon the individual; it concerns itself with questions as to what is wrong and how can we improve, rather than who is to blame and who is responsible. He summarised the key tenets of TQM in the following points:

1. TQM values the contribution of all individual employees and looks for ways harnessing people’s efforts and contributions.
2. TQM encourages the delegation of responsibility and authority to the lowest levels possible, through employee involvement, participation and empowerment to make decisions.
3. TQM works cross-functionally and as such seeks to remove barriers and encourages teamwork.

4. TQM encourages people to focus on the same direction, i.e. that of the customer and to do the right things right first time for a customer perspective.
5. TQM considers problems as opportunities for improvement and therefore seeks to channel people's creative efforts in a more positive manner, to try and solve problems and learn from experience rather than dissipate the levels of energy available by apportioning blame and reprimanding people.
6. TQM considers that performance is relative and not absolute. Goals and their achievement are only incremental milestones towards the long-term drive for continuous improvement.

Oakland and Porter (1997:18) maintained that "TQM is an approach to improve the competitiveness, effectiveness and flexibility of a whole organisation. It is essentially a way of planning, organising and understanding each activity, and depends on each individual at each level".

Accordingly, TQM can be described as a management discipline that emphasises a set of concepts that could be regarded as its core features and characteristics. These may be summarised in four broad points: continuous improvement, customer satisfaction, employees participation or involvement, and management commitment. The following paragraphs discuss these in more details.

4.4.1 Customer Satisfaction: Customer satisfaction is the main objective and cornerstone of TQM since the overall aim of TQM implementation and practice is to satisfy the customer. The customer in this regard could be an external or internal customer, but within this principle the issues relating to the external customer will be discussed. The issues relating to the internal customer will be discussed along with the employee participation principle.

In TQM it is imperative that an organisation, its top management, its employees at all levels, and all of its production systems should focus on, and emphasise, producing and delivering that which will satisfy customers' needs and expectations. One way of attaining that objective is by getting closer to the customers and listening to them by their participation in the design process of the product or service, responding to their requirements, and handling or dealing with their complaints and suggestions seriously.

Based on his definition of quality as "fitness for use", Juran (1989) provided ten points for quality planning and meeting customers' needs, which he termed "The Quality Planning Road Map". These points are:

1. Identify who are the customers.
2. Determine the needs of those customers.
3. Translate those needs into our language.
4. Establish units of measure.
5. Develop a product that can respond to those needs.
6. Optimise the product features so as to meet our needs as well as customers' needs.
7. Develop a process which is able to produce the product.
8. Optimise the process.
9. Prove that the process can produce the product under operating conditions.
10. Transfer the process to the operating forces.

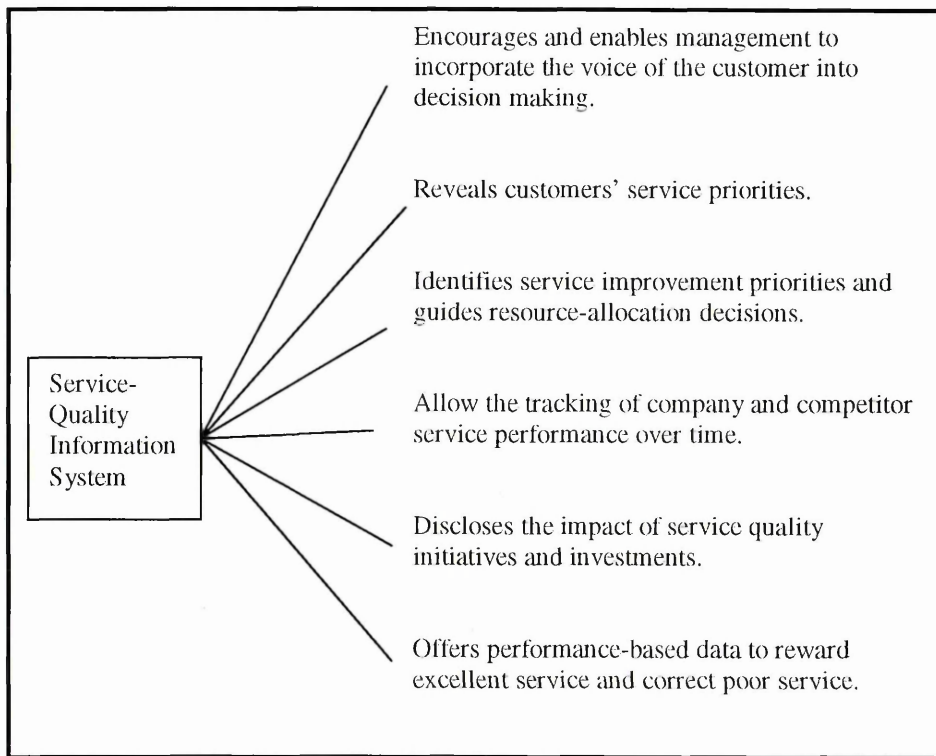
Juran's points clearly suggest that the initial step towards satisfying the customers is to identify the customers and their needs. Berry and Parasuraman (1997) recommended four approaches for identifying the needs of customers. These approaches are:

1. **Transactional surveys:** service satisfaction survey of customers following a service encounter. The purpose of the survey is to obtain customer feedback while the service experience is still fresh, and to act on feedback quickly if negative patterns develop.
2. **Customer complaint, comment, and inquiry capture:** systems to retain, categorise, track, and distribute customer complaints and other communications within the company. The aim is to identify the most common types of service failure for corrective action. Identify through customer communications opportunities to improve service or otherwise strengthen customer relationships.
3. **Total market surveys:** surveys that measure customers' overall assessment of a company's service. Research includes both external customers and competitors' customers, i.e., the total market. The goal is to assess a company's service performance compared to competitors, to identify service-improvement priorities, and to track service improvement over time.
4. **Employee surveys:** surveys concerning the service employees provide and receive, and the quality of their work life to measure internal service quality, to identify employee-perceived obstacles to improved service, and to track employee morale and attitudes. Employee surveys also help answer "why" service performance is what it is.

These approaches, as Berry and Parasuraman argued, teach decision makers which quality attributes are important to customers and prospects, what parts of the firm's system

are working well or breaking down, and which quality investments are paying off. Some of the benefits of the approaches are illustrated in Figure 4.4.1:

Figure 4.4.1: The Principal Benefits of an Effective Service Quality Information System



Source: Berry and Parasuraman (1997).

In relation to identifying customers' needs and requirements, Deming (1986:177) suggested that "The main use of consumer research should be to feed consumer reactions back into the design of the product, so that management can anticipate changing demands and requirements and set an economical production level. Consumer research takes the pulse of the consumer's reactions and demand, and seeks explanations for the findings". Ishikawa (1985:107) added, "A logical reaction to the consumer orientation approach is always to think in terms of another party's position. This means to listen to their opinions and act in a way that will take their views into account".

In searching for customers' needs and requirements, it is essential that the management should be preoccupied with, and aware of, the fact that customers' needs and requirements are unstable, particularly in today's rapid changing markets as a result of information technologies, which result in customers using greater opportunities to access information relating to the products and services they demand. Customers are no longer being restricted

to a particular firm to choose the products and services they are demanding. Morris, D.S., Barnes, B.R., and Lynch, J.E. (1999) stated, "Business environments are today characterised by increasingly saturated markets, changes in the nature of competition and an increased urgency in obtaining knowledge about customers and their needs. At the same time, customers have become more diversified and demanding". To keep pace with customers' changing needs and requirements, it is imperative that management should be able to create and develop customer satisfaction measures that enable the organisation to identify customers' changing needs and anticipate their future requirements. Management should react quickly to improve products and services in order to satisfy its customers.

4.4.2 Continuous Improvement: Continuous improvement is a fundamental characteristic of TQM. The key component of this principle is based on idea that the process of improvement is a never-ending process. It refers to an organisation's ongoing effort for better work procedures and management processes.

To achieve continuous improvement, it is suggested that the process of improvement should be part of the organisation's culture. Natarajan and Pio (1999) stated that continuous improvement must become a cherished value of each and every employees of the company. The principle should be also recognised as a process that never knows an end; or as Atkinson (1997:40) suggested "there will never be a time when Quality and Service Excellence is 100%. There will always be new ways for providing and improving Service Excellence". Harrington and Harrington (1995) stated that continuous improvement is an ongoing process, not a programme that ends in one, two, or even five years. It also suggested that continuous improvement could be best achieved if the people who do the job are involved in the improvement processes. Wilkinson, A., Redman, Snape, E., and Marchington, M. (1998:13) stated that "Satisfying customer requirements involves the continuous improvement of products and processes. The most effective means of improvement is to use the people who do the job to identify and implement appropriate changes".

Drucker (1999:80) stated that "Whatever an enterprise does internally and externally needs to be improved systematically and continuously: product and service, production processes, marketing, service, technology, training and development of people, using information". The information should have such objectives as where to improve, how to improve, who should improve. It is necessary to define the areas of improvement, the methods and tools for improvement, and the people responsible for conducting the tasks of

improvement. All these need to be based on factual data relating to the improvement processes. This would result in what Feigenbaum (1991:836) termed “planning for improvements in the standards” where information relating to the objectives of improvement processes, Ishikawa (1985:60-61) stated that “Once a policy is determined, goals will become self-evident. These goals must be expressed concretely in figures. To do so, you need a rationale as the basis. Goals must also be expressed purposefully. Demonstrate the goals to the employees, using concrete terms and figures; tell them everything they need to know, including information about personnel, quality, cost, profit, amount of production, and date of delivery. Don’t give abstract commands like “study” or “control” effectively. These terms sound good methodologically, but cannot result in good control practices”.

In addition to the above requirements for achieving continuous improvement, it is imperative to measure the progress of improvement processes. Crosby (1980:16) stated that “Measurement is very important. People like to see results”. Harrington and Harrington (1995:425) stated that “measurements are critical to maintain interest in an activity, particularly if you want to improve”. For an effective measurement system, Peters (1987) suggested the followings:

1. The measurement must begin at the outset of the programme. Among other things, if done right, it will inject energy into the programme as the size of the problem – and the opportunity – comes into view.
2. Measurement should be visible. Tracking quality progress by the hour; big charts and readable graphs should be in public display.
3. Measurement should be done by the participants; that is, by the natural work group, team, or department itself. It must not be done “to” such groups by an accounting department or by an “audit” or “inspector” brigade. If it is, there is a high risk (1) that the process will become bureaucratic and (2) that turf fights and squabbles over interpretation of data will break out, setting true involvement back considerably.

Furthermore, for achieving continuous improvement, it is essential to produce high quality outcomes right the first time and every time as this will save time and energy spent on correction and rework; or as Crosby (1980: 200), the main advocate of this concept, recommended, “concentrating on preventing defects rather than just finding and fixing them”. The theme is that all employees, as well as management, should be aware about the

cost of quality, and that doing the work right the first will cost less than redoing or correcting the work and result in great savings in terms of money and time.

Deming's Plan-Do-Check-Act Cycle can be adopted as a systemic approach for implementing and auditing the principle of continuous improvement. Another technique that can be adopted for measuring and ensuring continuous improvement is benchmarking. An organisation could measure its continuous improvement efforts by benchmarking or comparing the process of improvement with competitors' processes, or with its own processes in other areas that seems to be more improved than the process that it attempt to improve.

4.4.3. Employee Involvement and Participation: Employees participation is a unique peculiarity of TQM, which, in fact, distinguishes TQM from other management approaches. Under TQM's working structure or culture, the hierarchy is reduced and part of the authority is delegated to subordinates. The subordinate is involved in the decision making and planning process, encouraged to be suggestive and creative, responsible for his work, and treated as a customer (internal customer) who must be satisfied.

The feature is based on the belief that in order to satisfy the external customer, it imperative to satisfy the internal customer or the employee. Natarajan and Pio (1999) argued that "Probably more important than the external customer is the need to understand the next process – the internal customer – which involves every employee and his need to be treated with respect and consideration. So, every employee of an organisation becomes an internal customer. The internal customer becomes the biggest barrier to true customer orientation". It is also based on the idea that since the employees are involved in the daily routine world of work, they are more knowledgeable about the work and the issues related to work. Juran (1988:30) stated that "...workers have knowledge in depth with respect to needs for quality. That knowledge is derived from extensive "residence" in the workplace and from the repetitive performance of numerous cycles of processing in that workplace. As a consequence of all that residence and processing, they develop expertise in such matters as condition of facilities, environmental variations in the workplace, support provided (or denied) by service departments, variations in inputs to the process, and consistency of management actions. Such expertise is a useful input to many planning projects. For some projects the input is indispensable. All of this means that the workforce should be regarded as internal customers who can tell us a great deal about quality needs".

Wilkinson et al. (1998) noted that TQM has been seen as including three elements of employee involvement. First, there is the educative process at company level, with briefings, videos, posters and newsletters being used to launch and sustain the TQM message. Second, participative structures such as quality circles, improvement and action teams may be established on an *ad hoc* or more permanent basis. These provide an institutional focus for problem-solving activity amongst the workforce. Third, TQM may be associated with changes in the organisation of work, including the elimination of inspectors, or at least a reduction in their number, more teamwork, a shift towards cell organisation and the establishment of semi-autonomous work groups.

The aforementioned means of employee participation suggest information sharing between management employees, as without this employees would be unable to know and understand what is required from them in a quality improvement process. In this regard, Feigenbaum (1991:828) stated, "Quality is everybody's job but it will become nobody's job without a clear infrastructure that supports both the quality work of individuals as well as the quality teamwork among departments. The biggest problem of many quality programs is that they are quality improvement islands without bridges". The above employee participation elements also provide the means of enabling employees to be creative and learn problem solving techniques in addition to taking responsibility for their own work through a reduced supervisory role for management.

For the attainment of employee participation, it is imperative to have appropriate and effective top-down and bottom-up communications systems in an organisation. It is also imperative that there should be a belief, particularly at the top level of an organisation, that quality can be achieved through people. Crosby (1999) stated that his experience showed that the managers did not seem to understand that people were their primary asset; competitors all around the world could purchase the same equipment and materials; the only advantage a company could have was its work force.

For attaining employee involvement, Ishikawa (1985:112) suggested that "Top and middle managers must be bold enough to delegate as much authority as possible. That is the way to establish respect for humanity as your management philosophy. It is a management system in which all employees participate, from the top down and from the bottom up, and humanity is fully respected". In addition, Dessler (1991:471) recommended the following methods as a means for employee motivation and involvement:

1. Fair, equitable, and supportive treatment of employees.

2. An opportunity for all employees to use their skills to the utmost and to self-actualise, to become all that they are capable of becoming.
3. Open, trusting communications between all employees.
4. An opportunity for all employees to take an active role in making important decisions that involves their own jobs.
5. Adequate and fair compensation.
6. A safe healthy environment.

4.4.4. Management Commitment: Management Commitment is essential in TQM implementation and practice, as without management commitment no or little improvement can be attained. Without management's commitment, the objectives of the above three principles would hardly be attained. Dale et al. (1994) argued, "Without the total commitment of the chief executive officer (CEO) and his or her immediate executives and other senior managers nothing much will happen, and anything that does will not be permanent. They have to take charge personally, provide direction and exercise forceful leadership". Dale, B.G., Cooper, C.L., and Wilkinson, A. (1997) added that the senior managers have to encourage the business, which not only requires their personal commitment but also a significant investment of time. These statements clearly suggests that management has to take the leading role in all aspects related to quality management and improvement; it also has to devote enough time to these issues and show visible commitment to them by their actions. Peters (1987) stated that commitment is about attitudes; but the attitude of emotional commitment must also be translated into practical actions, which show up on the calendar each day.

To show an effective commitment to quality matters, managers need to have appropriate skills and abilities. Harrington and Harrington (1995) recommended seven steps that the top management should undertake. These steps are:

1. *Take classes:* top management should attend all improvement classes first to ensure they understand what they are asking their employees to do.
2. *Participate on Executive Improvement Team (EIT):* the improvement process should directed by a team (Executive Improvement Team) that is chaired by the top officer in the organisation and is made up of all department heads and key staff personnel reporting to him or her.
3. *Give talks to employees:* the entire top management team needs to go out of its way to talk about the improvement process with all the organisation's stakeholders.

4. *Join professional improvement organisations and get involved:* top management needs to understand what is going on outside the organisation in the improvement methodologies. To do this, they should join one or more of the organisations that support these types of efforts.
5. *Attend and give presentations at conferences outside your organisation:* there are hundreds of organisations around the world that are putting on conferences that discuss different improvement methods and results that have been achieved.
6. *Audit the improvement process:* as the process develops, start an active top management audit of the functions that report to each of the top managers to determine how effectively the improvement process is being implemented. Don't just rely on verbal communication.
7. *Conduct focus group meetings:* hold frequent focus group meetings with your employees, external customers, and internal customers. Top management should conduct these focus group meetings.

Based on the above discussion of TQM features and characteristics, TQM implementation should result in superior and high quality products and services; improved systems and procedures; reduction in rework and waste; and internal and external customer satisfaction.

Conclusion

The present chapter provided an overview of the TQM literature. This overview reveals that there is no a precise definition of the term "quality", as it means different things to different people. The overview also reveals that quality management concepts have evolved throughout the history; therefore, TQM could be regarded as an extension of the pervious quality management concepts and methods (e.g. inspection, quality control, and quality assurance). The survey of the literature further reveals that the quality Gurus (e.g. Deming, Juran, Crosby, Feigenbaum, Ishikawa, and Taguchi) made a great contribution to the development of TQM. Each of these quality Gurus offered to management a number of methods and management techniques for managing quality and improving organisational processes, although they did not agree on a specific model or approach to transfer their methods and approaches into practice. The survey of the literature shows that there are a number of features and characteristics (customer satisfaction, employee participation, continuous improvement, and management commitment) that could be considered to be the

distinguishing hallmarks of TQM and which serve to differentiate it from the other improvement methods (e.g. BPR, Kaizen).

Due to the lack of a definitive implementational framework emerging from the work of the quality Gurus, the following chapter presents and proposes a conceptual framework for TQM implementation in OMANTEL.

CHAPTER FIVE:
TOTAL QUALITY MANAGEMENT AND ITS
IMPLEMENTATION

Chapter Five: Total Quality Management and its Implementation

Introduction

The previous chapter has provided a theoretical background to TQM and delineated its core features and characteristics. In this chapter it is intended to discuss the issues related to TQM implementation. The chapter, first, explains why there is a need for a framework or model to implement TQM. Second, it explains why there is a need for a consensus between an organisation's management and employees on the implementation of TQM. Third, the chapter proposes a conceptual framework for transferring the principles of TQM into the practice along with a further implementation model. The chapter concludes by proposing a mechanism encompassing quality management tools and techniques for attaining continuous improvement.

5.1. The Need for a Framework

The survey of TQM literature revealed that TQM implementation is perceived as a complex process and as an arduous task and reveals that the quality Gurus provided only guidelines or prescriptions and did not offer a specific model or framework for implementing the concepts and principles of TQM. The Gurus, as Haigh and Morris (1995:87) described, "have acted rather like a swimming coach who explains to non-swimmers what actions are required in general to stay afloat and then consigns the poor unfortunates to the deep end of the pool to implement his prescriptions. The result is inevitable; much fear, panic and thrashing about with a few reaching safety, a few being rescued by pool attendants (the non-swimmers' management consultants) and the unfortunate many sinking, with varying degrees of rapidity, into the depths". Thus, it can be argued that the approaches of the Gurus lack a conceptual framework or sound instructional methodology that could assist organisations intending to translate the components of TQM into practice. In addition to the lack of a framework, the Gurus did not agree on many core features of TQM, such as the structure of improvement, the cost of quality, and the degree of senior managers' involvement in the improvement process. For instance, whilst Crosby defined the costs of quality as the costs of non-conformance and contended that the quality is free, Juran argued that the quality is not free and that there is an optimum; whilst Deming emphasised the use of statistical process control as a tool that must be used for improvement, Crosby rejected it as a tool, and Juran recommended it but warned that it can

lead to a tool-driven approach. The disagreement between the Gurus on these issues can be identified in Table 5.5.1.

Table 5.5.1: The American Quality Gurus Compared

	Crosby	Deming	Juran
Definition of quality	Conformance to Requirements	A predictable degree of uniformity dependability at low cost and suited to the market	Fitness for use
Degree of senior-management responsibility	Responsible for quality	Responsible for 94% of quality problems	Less than 20% of quality problems are due to workers
Performance Standard/motivation	Zero defects	Quality has many scales. Use statistics to measure Performance in all areas. Critical of zero defects	Avoid campaigns to do perfect work
General approach	Prevention, not inspection	Reduce variability by continuous improvement. Ceasemass inspection	General management approach to quality-especially 'human' elements
Structure	Fourteen steps to Quality improvement	Fourteen points for management	Ten steps to quality Improvement
Statistical Process Control (SPC)	Rejects statistically acceptable levels of quality	Statistical methods of Quality control must be used	Recommends SPC but warns that it can lead to tool-driven approach
Improvement basis	A 'process', not a programme. Improvement goals	Continuous to reduce variation. Eliminate goals without methods	Project-by-project team approach. Set goals
Teamwork	Quality improvement teams. Quality councils	Employee participation in decision-making. Break down barriers between departments.	Team and quality circle approach
Costs of quality	Cost of non-conformance. Quality is free	No optimum-continuous improvement	Quality is not free – there is an optimum
Purchasing and goods Received	State requirements. Supplier is extension of business. Most faults due to purchasers themselves	Inspection to late-allows defects to enter . system through AQLs. Statistical evidence and control charts required	Problems are complex. Carry out formal surveys
Vendor rating	Yes <i>and</i> buyers. Quality audits useless	No – critical of most systems	Yes, but help suppliers improve
Single sources of Supply		Yes	No – can neglect to sharpen competitive.

Source: Oakland and Porter (1997).

To the above shortcomings, Golembiewski (1993:8) added that TQM gives little or no attention to questions such as ‘what is the process in TQM?; and ‘how does one generate that process in ways that will raise the chances of a successful application?

In addition, Peters (1987) stated that there is a lot of controversy surrounding TQM implementation: Should you follow Deming via Statistical Process Control? Or Phil Crosby via Quality is Free? Or Armand Feigenbaum’s Total Quality Control? Or Joseph Juran? Or invent a system of your own? Peters suggestion is “Have a system”.

Furthermore, Taylor (1996) reported that despite the existence of many published sources of TQM implementation guidance, successful implementation is still proving difficult for many organisations, and organisations still appear in need of assistance to contextualise this counsel.

Accordingly, it is recommended that an organisation intending to adopt TQM should search for an appropriate framework or model that could guide and assist it to make these principles operational. A model or framework, as Dale and Boaden (1994 stated, is used to present a picture of what is required in the introduction of TQM. The models and frameworks are a means of developing and presenting ideas, concepts, pointers and plans, and are guides to action. Organisations use models to choose an appropriate starting point and course of action, and to develop the improvement process at a pace that suits their business situation and available resources. Thus, models can assist an organisation to identify the logical links between the principles and allow it to identify those that suit its own unique internal and external circumstances.

5.2. The Need for Management and Workforce’s Consensus

The success of any TQM implementation programme depends largely on the part played by managers and employees of an organisation as they are at the centre of the entire implementation process. As a result, in order to implement TQM successfully, there should be a consensus between management and the work force that there is a need for its implementation.

In order to implement a TQM programme in an organisation successfully, it is imperative that there should a consensus between an organisation’s management and work force on the followings:

1. Determining the extent to which there is a need for implementing a TQM programme.
2. Determining an appropriate framework for implementation.
3. Determining the necessary resources required in the implementation process.

4. Laying out the implementation process.
5. Defining the tasks and responsibilities of each group involved in the implementation process.

The consensus between an organisation's management and employees implies their willingness to implement the programme and show commitment to it. Management and employees' willingness are the key motivating factors towards TQM implementation, as without management and work force's consensus and willingness, no decision can be taken to implement TQM and no effort for improvement can be undertaken. Both groups should recognise each other's role in the implementation of a quality management and improvement programme. This would help in eliminating or reducing the level of conflict between management and employees and enhance the effectiveness of the programme.

5.3. The Conceptual Framework for TQM Implementation in OMANTEL

The survey of TQM literature revealed that there is a range of models in the literature that could be undertaken to operationalise the underpinning principles of TQM, but, as Krasachol and Tannock (1998) noted, the lack of an accepted theoretical framework has tended to encourage an indistinct and subjective debate about the nature and effectiveness of different approaches. Within the Sheffield Hallam University, there were found to be two conceptual frameworks offered by the quality practitioners. The first framework was offered by Kanji (1996), and the second was offered by Haigh and Morris (1995). This section discusses the concepts and principles of these frameworks.

The framework offered by Kanji (1996), or "The Pyramid" model (Figure 5.2.1), is based on the following four principles:

1. Delight the Customer.
2. Management by Fact.
3. People-based Management.
4. Continuous Improvement.

Kanji (1996) connected the above principles together to form The Pyramid model, and linked two concepts to each of those principles as follows:

1. Delight the Customer:

- Customer satisfaction.
- Internal customers are real.

2. Management by Fact:

- All work is a process.
- Measurement.

3. People-based Management:

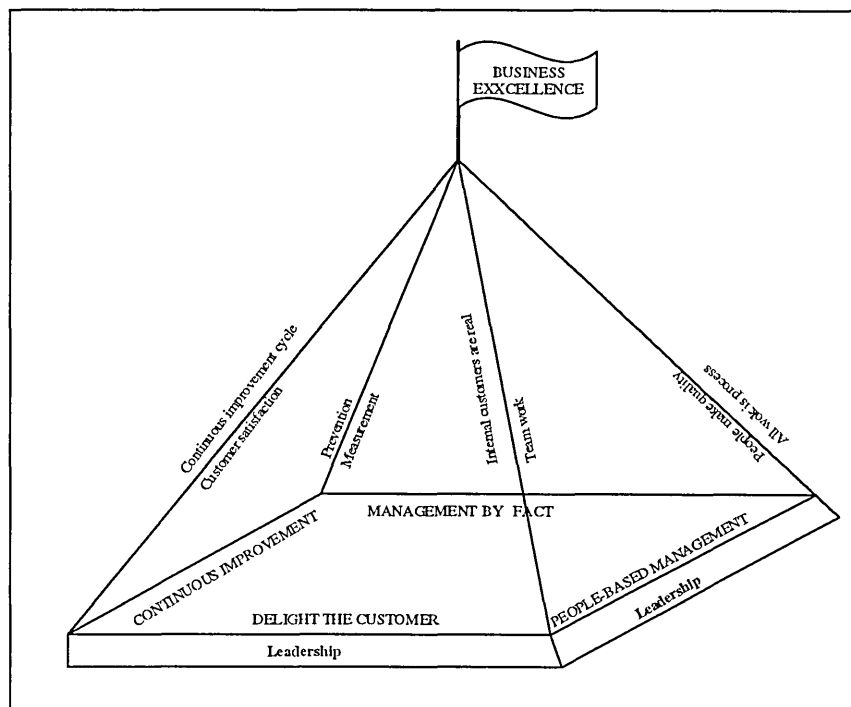
- Teamwork.
- People make quality.

4. Continuous Improvement:

- Continuous improvement cycle.
- Prevention.

The fifth principle, leadership, according to Kanji (1996), is the driving force that can lead the organisation towards achieving quality, which in turn results in business excellence. Leadership provides an essential underpinning to the four principles to which the operational concepts are hinged, and also provides the base of the Pyramid.

Figure 5.2.1: The Pyramid Model



Source: Kanji (1996)

The first principle (Delight the Customer) focuses on both the external and internal customers. It implies understanding the current and future needs and requirements of the customers and meeting these requirements. Meeting customers' expectations and requirements itself, according to Dahlgard, J. J., Kristensen, K., Kanji, G. K. (1998), does not create satisfaction; it only removes dissatisfaction. Creating customer satisfaction

demands more than meeting customers' requirements. It requires delighting the customer, which could be achieved, according to Dahlgaard et al (1998), through 'value-added' quality. Value added quality could be described as adding some unexpected or extra quality features into the products or services that result in delighting the customers. Thus, in order to satisfy the customers, organisations should not only satisfy the customers, but also delight them. In addition, the principle suggests that organisations need first to satisfy their internal customers in order to deliver external customer satisfaction. Internal customers, or employees, need to be satisfied so that they can deliver quality products or services. Internal customer satisfaction can be achieved by eliminating the obstacles to the internal customers. The elimination of obstacles takes such forms as eliminating fear amongst employees and enhancing their capabilities through training and providing them with information as to what is required of them and expected from them.

The second principle (Management by Fact) is based on the idea that information on how an organisation can satisfy the customers and manage the business should be based on facts and accurate data rather than guesswork or opinions. In order to obtain factual information, organisations need to believe in the concept of Measurement. It is imperative, according to this principle, to measure the progress of quality improvement in order to achieve organisational objectives. Organisations need to set up a system for the continuous measurement, collection and reporting of quality facts. Dahlgaard et al. (1998) proposed three types of measurements for obtaining facts: Customer Satisfaction Index, Employee Satisfaction Index, and Quality Checkpoints and Quality Control Points. It is also imperative, according to this principle, to regard work as a process that has inputs and outputs and, in order to attain appropriate outputs, it is essential to feed the process with appropriate inputs; all of which have to be measured.

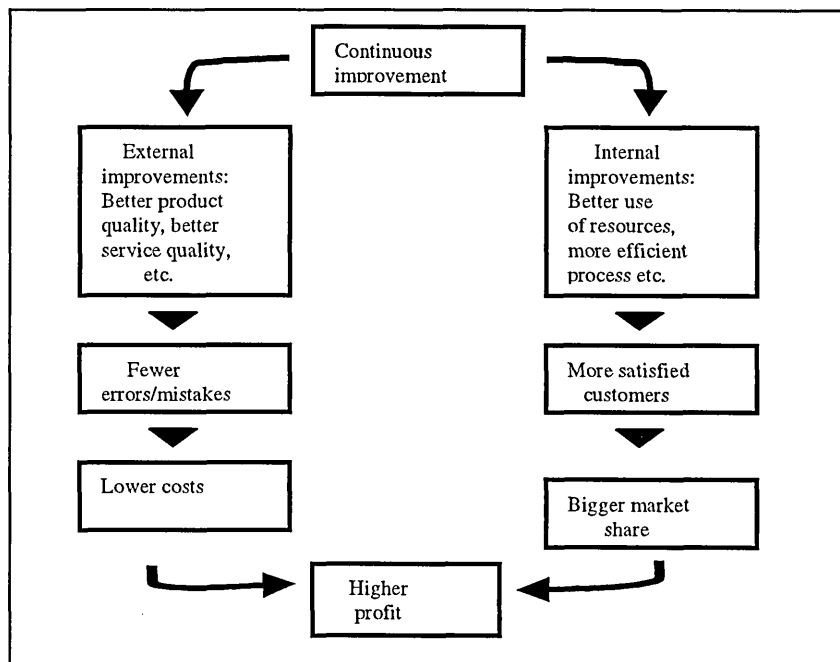
The third principle (People-based Management) emphasises the role of people in the quality improvement process. The principle suggests that an organisation's systems, standards, and technology do not themselves create quality. The quality improvement process is a people-oriented process. The principle is based on the concept of People Make Quality. Based on this concept, the people in an organisation need to be given a prominent role in quality improvement process. The principle is also based on the concept of Teamwork. As a result, everyone in the organisation should participate and work as a team in the improvement process; from external customers to suppliers, and from employees to top management. The management of the organisation must show willingness to involve

employees in the improvement process and should invest in educating and training employees in how to work in teams, how to identify defects and problems and their causes, and how to prevent these causes. Also, the management should encourage the customers and suppliers to participate in the improvement process so that it may secure appropriate feedback that can be utilised in setting up the improvement process and designing the product or service.

The fourth principle (Continuous Improvement) suggests that total quality is not a 'quick fix', rather, it is a long-term process that requires continuous improvement and should not be ended with the achievement of some short-term improvements. Instead, it should be part of an organisation's culture. The process of improvement, as Dahlgaard et al. (1998:38) stated, should and can be achieved through (Figure 5.2.2):

1. Internal quality improvement.
2. External quality improvement.

Figure 5.2.2: Continuous Improvement and their Consequences



Source: Dahlgaard et al. (1998).

The main aim of the internal quality improvement is to lower the costs of quality through making the internal processes of an organisation leaner and preventing defects and problems in those processes. The external quality improvement focuses on the external customers and aims to increase customer satisfaction and to achieve the higher market share that results in higher earnings.

The principle of Continuous Improvement is also based on the concept of Prevention. It is imperative to believe in the concept of preventing the causes of errors and defects from the sources, with the aim of producing quality services from the outset and reducing the costs of poor quality.

As stated earlier, the fifth principle is the base upon which the quality could be achieved. The leadership principle is based on the idea of management's commitment to the process of achieving quality; it suggests that management should show visible commitment so that this can be recognised throughout the organisation.

Kanji and Asher (1993) suggested that the process of implementing TQM can be carried out in four stages (Table 5.2.1) as followings:

Table 5.2.1: The Various Stages of TQM

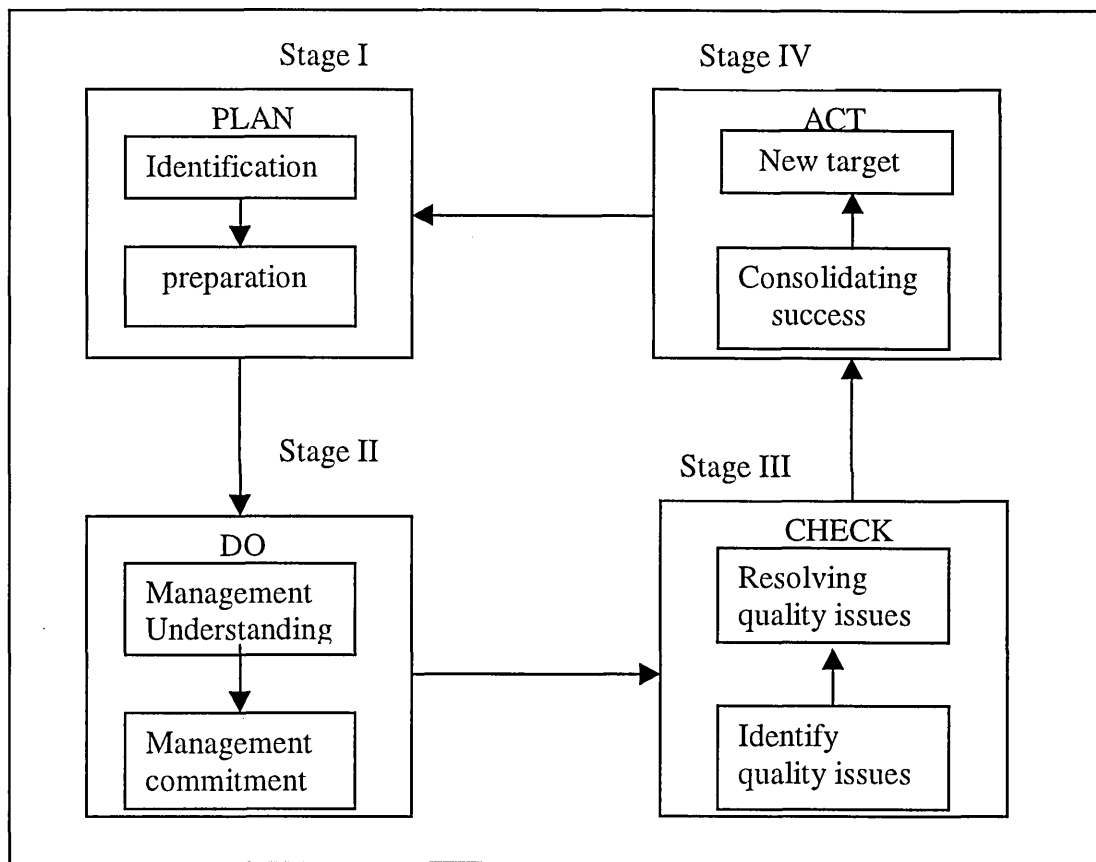
Stages	Normal content	Output
1(Identification and preparation)	Plan Board interviews Management interviews Cost of quality Customer interviews Systems review Prepare presentation Top team workshop Phase 2/3 planning	Steering group commitment Executive-led projects Draft company quality Improvement plan Quality vision Communication of workshop Output
2(Management understanding and commitment)	Steering group meetings Executive project meetings Project training Senior management workshops Facilitator training Communication Further diagnostic Presentations	Local steering group Departmental quality Improvement plans
3(Scheme for improvement)	Management training Steering groups Action teams Task forces Workforce training Communication	Projects Internal customers' agreement Quality improvement plan
4(Critical analysis)	Start new initiative with new targets Take improvement process to everybody Use customer-supplier link in quality chain Obtain information about progress Consolidate success	Plan-do-check-act

Source: Kanji and Asher (1993).

1. **Identification and preparation:** at this stage the organisation identifies and collects information about the prime areas where improvement will have most impact on performance, and it prepares the detailed basic work for the improvement of all the organisation's activities. The information collected at this stage should include the costs of quality such as the total cost of waste, error correction, failure, appraisal and prevention to identify the potential areas for improvement and to direct the improvement efforts towards the areas they are most needed. It also should include the opinions of customers, suppliers, managers and employees to get different views about the problems and the necessary actions that are required for tackling these problems. In general, the aim of collecting information is to ensure that management has correct and accurate information to make its decisions.
2. **Management understanding and commitment:** the aim at this stage is to make sure that management understands the objective and methodology of TQM and is prepared to adopt them all the time. To achieve this, it is necessary to educate management in the TQM approach so that it can take appropriate actions and demonstrate its total commitment and take the leading role in the quality improvement process.
3. **Scheme for improvement:** at this stage it is necessary to develop a scheme for improvement, which should include appropriate training programmes for employees. The scheme should be developed after the realisation of some of the organisational critical aspects, such as customer-supplier relationships, meeting customer needs, main causes of the problems, best solutions to these problems, prevention of recurring problems, priorities for improving efficiency, etc.
4. **Critical analysis:** at this stage it is necessary to obtain information about successes. This will help to review the achievements and to understand the future requirements for continuous quality improvement. It also important that everyone gets feedback on success, and should be given recognition as a result of his/her contribution to the improvement process.

However, Kanji (1996) suggested Deming's Plan-Do-Check-Act cycle for modelling the four stages of implementation. The modelling of the stages is shown in Figure 5.2.3.

Figure 5.2.3: PDCA Model for Implementation



Source: Kanji (1996).

Whilst Kanji's model encompassed many of the essential features of TQM that are demanded for improving the quality of organisations, there remains the question of what constitutes business excellence and what are the features which collectively compares the leadership base of the Pyramid. If business excellence simply defined as the presence of the practice of TQM principles and operational concepts manifested in the Pyramid model, then a tautology is encountered with the features of TQM doing nothing more than generating the features of TQM. What is needed is a definition of business excellence, which is independent of the characteristics of TQM as outlined in the Pyramid model. Currently, the reader is asked to assume that such a distinction exists without its nature being specified. As to the leadership base, a somewhat similar problem is encountered. Here, as with business excellence, a definition of leadership is not offered and the danger exists that the reader or practicing manager will assume that leadership is an homogenous entity. The reality is somewhat different. Leadership is the outward manifestation of the

function of leading which entails "... getting the members of the organisation to perform in ways that will help it achieve the established objectives". (Stoner: 1982, 17).

It is now important to recognise that leadership is performed at all organisational levels and is not the exclusive preserve of senior or top management despite the fact that it is such managers which have attracted the overwhelming attention of writers on TQM. Unless the activities of managers at different levels of an organisation are recognised, then leadership does indeed remain undifferentiated entity. To avoid such an interpretation, it here suggested that leadership differs between differing levels of management in the following way:

First line manager: direct operating employees only, they do not direct other managers. In essence, first line managers are responsible for the task completion of groups or teams of operatives.

Middle managers: direct the activities of other managers and sometimes also those of operating employees. A principle responsibility of middle managers is to direct the activities that implement the policies of the organisation.

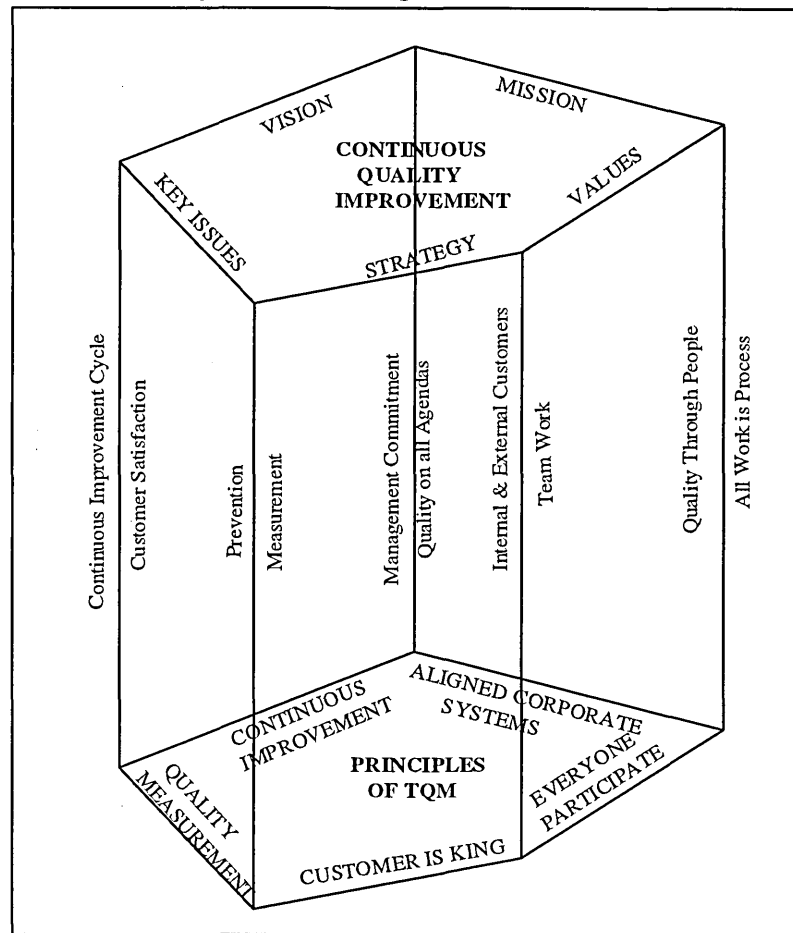
Senior managers: small in number, this group is responsible for the overall management of the organisation. It establishes operating policies and guides the organisation's interactions with its environment. (Stoner: 1982, 15)

Clearly, such a role distinction among leaders demands that each level of management possess differing skills because the responsibilities with which each is charged differs. Yet this important qualification cannot be found in Kanji's model.

Such concerns raise doubts as to the suitability of Kanji's model for providing a practical link between TQM theory and the implementational requirements of OMANTEL.

In discussing the second model, Haigh and Morris (1995) may be said to have offered a more comprehensive model for transforming the principles of TQM into practice. The model offered (Figure 5.2.4) encompasses a set of elements, concepts, and principles, which are discussed in more details in the following paragraphs.

Figure 5.2.4: Haigh and Morris's Model



Source: Haigh and Morris (1995).

Figure 5.2.4 shows that the conceptual TQM implementation framework offered by Haigh and Morris (1995) encompasses five elements, which Haigh and Morris referred to as the macro or contextual elements of TQM. These elements are (Morris and Haigh, 1996 a):

1. **Vision:** refers to the future desired state, the situation which is being sought, to which the organisation and its personnel are committed. It provides a central focus against which the managerial process of planning, leading organising and controlling can be coordinated. Its acceptance serves to give purpose to day-to-day actions and activities at all organisational levels and to all organisational functions.
2. **Mission:** represents a series of statements of discrete objectives, allied to vision, the attainment of all which will ensure the attainment of the future desired state, which is itself the vision.

3. **Strategy:** comprises the sequencing and added specificity of the mission statements to provide a set of objectives which the organisation has pledged itself to attain.
4. **Values:** serve as a source of unity and cohesion between the members of the organisation and also serve to ensure congruence between organisational actions and external customer demands and expectations. Without such congruence, no organisation can expect to attain efficiency, effectiveness and economy, let alone ensure its long-term survival. The values include the followings:
 - *Access* involves approachability and ease of contact.
 - *Communication* means keeping the customers informed in language which they can understand and listening to them.
 - *Competence* means possession by organisation's personnel of the required skills and knowledge to perform the service.
 - *Courtesy* includes politeness, respect, consideration and friendliness of organisation's personnel.
 - *Reliability* involves consistency of performance and dependability.
 - *Responsiveness* involves the willingness, readiness and timeliness of employees to provide service.
 - *Security* is freedom from danger, risk and doubt.
 - *Tangibles* include the physical evidence of the quality of service provision.
 - *Understanding/knowing the customer* involves making effort to understand the customer's needs and expectations.
5. **Key issues:** these are issues which must be addressed in pursuit of the quality which is demanded by customers to meet their needs and expectations. A key issue can be characterised as one which is: important to the customer; creating substantial cost arising from poor quality; happening frequently; having substantial impact upon the organisation; creating substantial delay in the delivery of a service.

The above elements of the framework serve to provide an organisation intending to implement TQM with a mechanism that could assist it to draw its long-term continuous improvement objectives and plans and to respond to its customers changing needs and expectations.

To be of use, it is imperative, according to Morris and Haigh (1996 b), to interconnect the macro or contextual elements of the model with its micro elements or principles, through a number of operational concepts in order to provide the basis for day-to-day

activities that make TQM manifest within an organisation. As shown in Figure 5.2.4, the operational concepts of the model are:

- 1. Internal and External Customers.**
- 2. Teamwork.**
- 3. Quality Through People.**
- 4. Quality on All Agendas.**
- 5. All Work is Process.**
- 6. Management Commitment.**
- 7. Prevention.**
- 8. Customer Satisfaction.**
- 9. Continuous Improvement Cycle.**
- 10. Measurement.**

The first operational concept (Internal and External Customers) emphasises that the organisation and its management must recognise the importance of both internal and external customers, and must work towards satisfying those customers. In practice, according to this concept, it is imperative to satisfy the employees and treat them as internal customers in order to attain external customer satisfaction, as without internal customer satisfaction it would be hard to deliver what satisfy the external customer. The concept is based on giving employees the same status as is accorded to external customers in terms of meeting their needs and requirements.

The second concept (Teamwork) is based on the idea that the quality improvement can be achieved through teamwork. Morris and Haigh (1996 c :324) advocated that it is the activities of teams which facilitate an organisation moving from a traditional work system to a high performance work system. Morris and Haigh added that the source of a team's power in an organisational context, in which the objective is the enhanced quality of the product or service which the organisation offers to its external and internal customers, must emanate from management. In addition, emphasis must be upon the capability of the team to (Morris, D.S., Haigh, R.H., and Kanji, G.,1994): resolve problems of poor quality, which requires that the team has possession of the necessary skills and abilities to analyse symptoms; establish causes; generate remedies; test the chosen remedy under operating conditions; monitor the chosen remedy; and report on the quality gains made and held. The team, according Morris and Haigh (1996 a), need to be trained in the techniques of quality decision-making and possess the skills demanded of that possess. There should be an

emphasis upon the extent to which a team is able to assume responsibility for activities relating to quality planning and quality control in its areas of competence.

The concept of Quality Through People emphasises the role of an organisation's people in the quality improvement process. It is essential according to this concept to believe in the fact that an organisation's systems and procedures could not produce quality without the effective participation and involvement of its human resource in the quality improvement processes. Therefore, the people of an organisation must be given a prominent role in the improvement processes, and must be qualified to conduct improvement tasks.

The concept of Quality on All Agendas requires that quality factors and their related issues must be on management's agendas at all the time in order to attain quality improvement. It is imperative that management should consider quality matters as part of its daily routine work so that quality becomes part of an organisation's culture and is included in every aspect of work undertaken.

The concept of All Work is Process suggests that work should be considered as a process that has inputs and outputs, and thus, it requires appropriate inputs to gain appropriate outputs. As a result, it is necessary to have appropriate and defined inputs to a quality improvement process in order to attain improved and quality outputs.

The concept of Management Commitment emphasises management's role in the quality improvement process. It requires that management show visible, serious, and personal commitment to the quality improvement process, as without that commitments from management, the personnel at the lower levels would not themselves show appropriate and serious commitment to the improvement processes. It is imperative that management shows commitment to the improvement processes by listening to the suggestions of those involved in the improvement processes; regularly reviewing and auditing the progress of the improvement processes; taking corrective and prompt actions when necessary; recognising and rewarding the achievements of those contributing to the improvement processes.

The operational concept of Prevention is based on the idea of "do it right the first time", which is itself based on the idea that doing things right the first time and from the outset will cost less than the corrective action necessitated when errors arise. The concept requires that people involved in the improvement processes adopt the prevention concept and are encouraged to prevent the cause of errors, and are helped to do so by the provision of training and education on quality management improvement tools, techniques and methods.

The concept of Customer Satisfaction focuses on the conception that all improvement activities and the overall objectives of the organisation and its personnel should concentrate on producing that which will satisfy customers and meet customers' needs and expectations. The concept requires that the overall business should be focused upon the attainment of customer satisfaction, which could be accomplished by anticipating customers' current needs and forecasting their future needs and expectations through developing customer satisfaction measures.

The concept of Continuous Improvement Cycle demands that improvement processes must be considered as continuous processes rather than short-term projects that ends by attaining some short-term successes and achievements in these projects. The improvement processes need to be repeated so that new and unexpected problems can be identified and tackled. The continuation of improving processes provides the means for identifying and tackling problems constantly.

The concept of Measurement requires that the progress against quality improvement goals must be evaluated and measured in order to attain quality services and products, as without measurement it would be difficult to achieve the planned goals and objectives of the improvement processes. Therefore, it is necessary that there must be an effective measurement system that enables the people involved in the quality improvement process, as well as management, to regularly review and audit the progress against quality goals and objectives.

The macro (contextual) elements, as Haigh and Morris (1995) suggested, are the responsibility of top management. The micro elements, or the operational concepts are of the responsibility of the first line operatives with middle management playing a crucial linkage role for achieving them. As stated earlier, Haigh and Morris (1995) suggested that it is imperative to interconnect the contextual elements with the operational concepts to provide the holism demanded by the word "**Total**". The word "Total" means integrating all parts, everyone throughout every function and level of the organisation to improve and pursue quality.

In addition to the contextual elements and operational concepts, the model, as shown in Figure 5.2.4, entails the implementation of five TQM principles:

- 1. Customer is King.**
- 2. Everyone Participates.**
- 3. Aligned Corporate Systems.**
- 4. Continuous Improvement.**
- 5. Quality Measurement.**

The principle of Customer is King emphasises that quality is defined in terms of the customer and that the customer must judge the quality. Therefore, the customer must be regarded as a king and as always being right. Based on this principle, the overall aim of the business must be customer satisfaction and meeting customers needs and requirements.

The principle of Everyone Participates is based on the conception that everyone in the organisation from all functional levels, including top and middle managers and first line operatives, must participated and be involved in the quality improvement process. The principle also stresses that it imperative to involve organisation's suppliers and customers in designing and planning for quality.

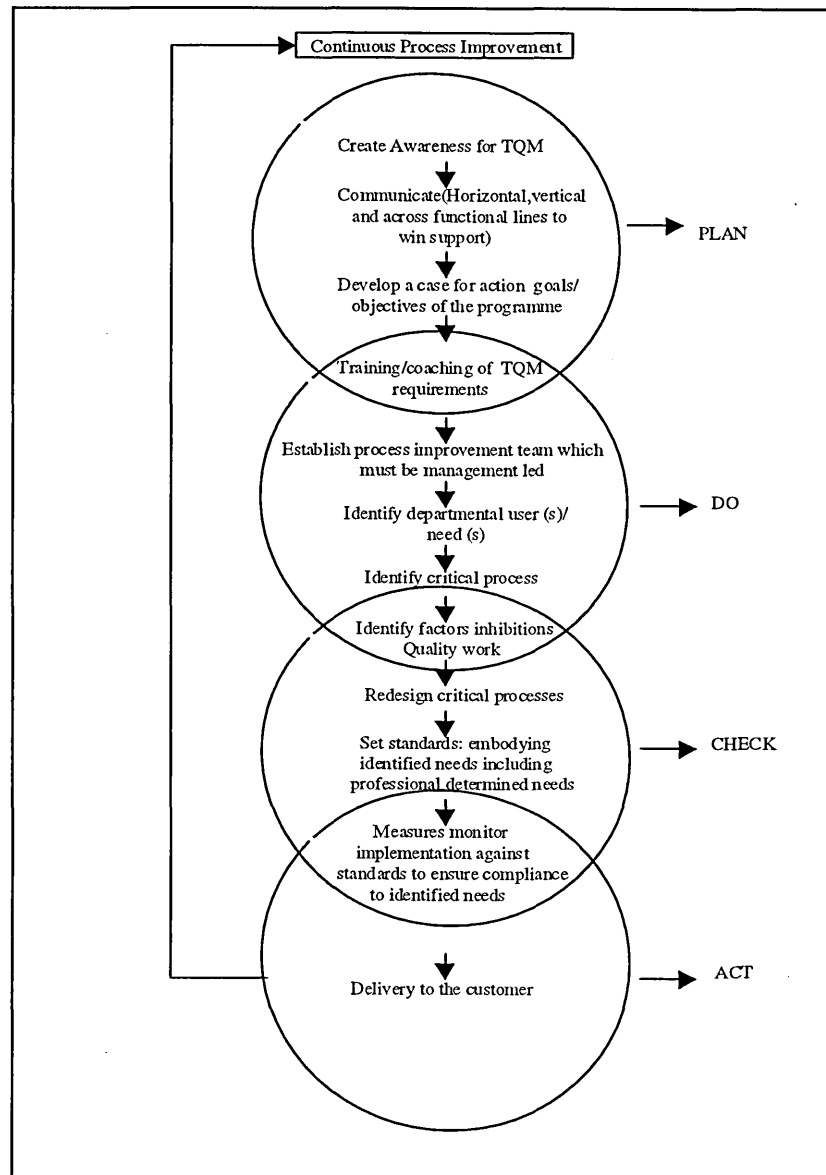
The principle of Aligned Corporate Systems emphasises establishing systematic way actions for quality improvement that incorporate all parts of an organisation so that the quality improvement can be effectively supported. An organisation's systems, structures, and functional areas must work together as part of one system to pursue quality and attain improved processes capable of delivering the highest possible level of customer satisfaction.

The principle of Continuous Improvement requires that the quality improvement process undertaken on an on-going basis in order to achieve improved services and products. Again, improvement processes must be considered to be on-going that must not end with the attainment of short-term achievements. The overall aim of the improvement processes should focus on cost reduction and cost elimination, increased productivity and improved and high quality outputs.

The principle of Quality Measurement requires that the quality management and improvement processes need to be measured and evaluated regularly in order to achieve their desired goals. Every improvement initiative needs to be measured and recorded so that the progress of quality improvement can be evaluated and corrective actions can be taken.

To implement the above conceptual framework and its elements, concepts and principles in a systematic way, Haigh and Morris (1995) suggested a further implementational model (Figure 5.2.5), which is based on Plan Do Check Act Cycle.

Figure 5.2.5: PDCA Implementation Model



Source: Haigh and Morris (1995).

At the Plan stage of the model, there is need for creating awareness for TQM amongst the personnel of an organisation. It is imperative to create awareness of TQM in an organisation before its introduction, as this will assist the personnel to understand the approach's concepts and principles. At this stage it is also imperative to communicate the need and intention for TQM implementation. The need and purpose for TQM implementation need to be communicated horizontally and vertically across all functional lines and areas of an organisation to win support for TQM implementation. Once these objectives have been attained, it is necessary to develop a case for action or a programme

for improvement so that the goals and objectives of improvement can be manifested. To enable the personnel to take the corrective actions required for improving the case or programme, training programmes on TQM methods, tools and techniques need to be undergone by the workforce.

At the Do stage, it is essential to establish and define process improvement teams. Management must lead the team. The next step at this stage is to identify the area for improvement so that improvement efforts are concentrated on that area and process. Once an area for improvement has been identified, the most critical processes that need to be improved should be identified. It is also imperative to identify the causes of the problems and the inhibiting factors to quality improvement in the selected area. Once the critical area and inhibiting factors have been identified, the next step is to redesign critical processes.

The Check stage involves setting up standards against identified needs including professionally determined needs. The stage also involves establishing measures to ensure compliance to identified needs.

At the Action stage the organisation should be able to deliver that which will satisfy its customers, namely, which are quality services or products.

It should be noted that the model is based on the Deming's continuous improvement cycle of Plan-Do-Check-Act; thus, the identification of problems and their resolutions should be conducted constantly so that those problems do not later recur.

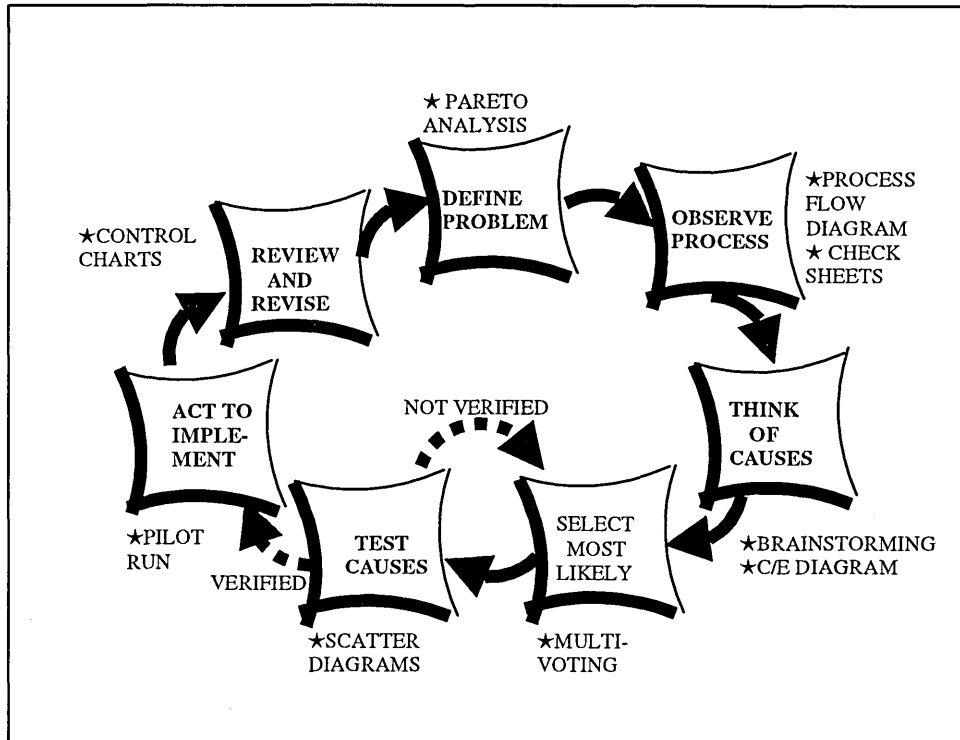
The conceptual TQM framework offered by Haigh and Morris (1995), Figure 5.2.4, offers a comprehensive coverage of TQM principles; the framework clearly assigns responsibilities for managing its elements, concepts and principles; the overall aim of the framework is to provide the holism demanded by the word “**Total**” in TQM, which involves the whole organisation and all of its functional levels and areas. Therefore, this framework is felt to be more suitable, than the Pyramid model, as a vehicle through which to assess the feasibility of introducing TQM into OMANTEL.

5.4. Continuous Improvement Tools and Techniques

The implementation of TQM entails a systematic strategy or methodology and appropriate tools and techniques to be applied in order to attain continuous improvement and to constantly tackle quality problems. The strategy could be defined as a systematic way for informing the improvement process, analysing the process, and solving the

problems encountered in the improvement process. The tools could be defined as quantitative methods, and the techniques could be defined as qualitative methods. Both the tools and techniques can provide the decision-maker with appropriate information and accurate data, which are based on facts rather than opinions, about the areas that need to be improved in a systematic way. Bothe (1988) offered an excellent strategy that is termed as “**DOT★STAR**” cycle (Figure 5.3.1.1). The strategy offered combines seven discrete steps for identifying and solving quality problems, and each step involves various quality tools:

Figure 5.3.1.1: The “DOT★STAR” Cycle



Source: Bothe (1988).

Conclusion:

This chapter discussed the implementation issues relating to TQM. The chapter discussed the lack of an agreed TQM implementation model offered by the quality Gurus in the TQM literature. The chapter presented and discussed the principles and elements of two conceptual TQM implementation frameworks available within Sheffield Hallam University, and one of these frameworks was proposed as a vehicle for introducing the underpinning elements, concepts and principles of TQM into OMANTEL. Along with this conceptual implementation framework, a further implementation model was offered for continuous improvement.

The chapter also offered a continuous improvement cycle and presented quality management tools associated with this cycle. The elements, concepts and principles associated with the proposed implementational framework are to be empirically tested within OMANTEL to assess the feasibility of introducing TQM.

Chapter Six: Data Analysis

The Results of Rating the Significance and Practice of the Proposed Model's Elements, Concepts, and Principles

Introduction

The preceding chapter proposed a conceptual framework for TQM implementation in OMANTEL. The chapter also discussed the principles and elements associated with the proposed framework. This chapter will examine the results of the empirical study that has been conducted to assess the extent to which there is a need in OMANTEL for implementing the proposed conceptual framework, and the extent to which the environment of OMANTEL is compatible with the principles and elements of the framework. The chapter is divided into five sections. The first section presents respondents' demographic variables. The second section provides the results indicating OMANTEL's personnel's level of awareness of TQM; it also provides the results revealing whether or not TQM concepts have been implemented in OMANTEL. The third section provides the results of contextual (macro) elements of the proposed framework. The fourth section provides the results of rating the operational (micro) elements of the framework. The fifth section provides the results of rating the principles of the proposed framework.

It should be noted that the respondents' comments, gained by the means of interviews and the space provided at the end of the questionnaire, regarding the matters raised in the questionnaire are provided along with the data. It should be also noted that a 4-point Interval scale ranging from "Most Significant" to "Less Significant" was used to rate the significance of the elements and principles; and a 5-point Likert scale ranging from "Strongly Agree" to "Strongly Disagree" was used to identify the respondents' degree of agreement with the statements offered.

6.1. The Demographic Variables of Respondents

The field survey included a total of 152 respondents representing different functional levels and areas of OMANTEL. The respondents' demographic profile is presented in Table 6.1.1:

Table 6.1.1: The Respondents' Demographic Variables

Occupational Level	(N)	%
Top Managers	6	3.9%
Middle Managers	15	9.9%
First-Line Managers	22	14.5%
Employees	109	71.7%
Total	(152)	100.0%
Occupation	(N)	%
Administrative	(92)	60.5%
Technician	(60)	39.5%
Total	(152)	100.0%
Gender	(N)	%
Male	(106)	69.7%
Female	(46)	30.3%
Total	(152)	100.0%
Nationality	(N)	%
Omani	(121)	79.6%
Non-Omani	(31)	20.4%
Total	(152)	100.0%
Level of Education	(N)	%
Preparatory and Less	(2)	1.3%
Secondary	(50)	32.9%
College	(36)	23.7%
University	(64)	42.1%
Total	(152)	100.0%

In terms of their occupational levels, 6 out of 152 respondents were Top Managers (3.9%); out of this total, 15 respondents (9.9%) were Middle Managers; 22 (14.5%) were First-Line Managers; and the rest of respondents, 109 (71.7%), were Employees.

Following their Occupational cadre, the majority of respondents were Administrative, as they represented 60.5% of respondents. The Technicians represented 39.5% of the total. According to their Gender, while the Males represented 69.7% of the total, the females represented only 30.3% of respondents. The majority of respondents, in terms of their Nationalities, were Omanis, as they represented 79.6%; Non-Omanis represented only 20.4% of the total. The data show that only 1.3% of respondents had Preparatory and Less level of education; 32.9% had Secondary level of education. The respondents with a College level of education represented 23.7%. The majority of respondents (42.1%) had University and above level of education.

It should be noted that the overall aim of this study is to examine the feasibility of introducing TQM in OMANTEL. It should be also noted that the model clearly assigned the role of each occupational group in conducting its elements and principles. Since the implementation of the model is based on the extent to which OMANTEL's

personnel recognise the need for its implementation, and the extent to which they are willing to practice its principles, it is important to explore the extent to which each occupational group of OMANTEL perceived the principles and elements of the model. Accordingly, the data presented and discussed in the following sections will focus on the respondents' variable of occupational level rather than the other variables.

6.2. The Results Indicating Respondents' Knowledge of TQM and its Implementation

In section C of the questionnaire, the respondents were presented with the statement that "Most employees in OMANTEL have a full knowledge and understanding of the concept of TQM". The extent to which the respondents agreed with this statement is shown in Table 6.2.1:

Table 6.2.1: The Results Indicating the Respondents' Knowledge of TQM and its Implementation in OMANTEL

	% Agree (N)	% Neutral (N)	% Disagree (N)	% Total (N)
1. Most employees in OMANTEL have a full knowledge and understanding of the concept of TQM.	17.1% (26)	23.7% (36)	59.2 (90)	100.0% (152)
2. Some TQM concepts have been implemented within OMANTEL's departments.	0% (0)	72.4% (110)	27.7 (42)	100.0% (152)

Table 6.2.1 shows that a small percentage of respondents were of the opinion that they have a full knowledge and understanding of TQM whilst the majority of respondents either *disagreed* or were *neutral* as to whether or not the employees in OMANTEL have a full knowledge of TQM.

Table 6.2.2: The Respondents' Knowledge of TQM According to their Level of Occupation

		Occupation Level % (N = 152)				% Total (N)
		% Top-Mgt. (N=6)	% Middle Mgt. (N=15)	% First-Line Mgt. (N=22)	% Employees (N=109)	
Most employees in OMANTEL have a full knowledge and understanding of the concept of TQM.	Agree	16.7% (1)	13.3% (2)	22.7% (5)	16.5% (18)	17.1% (26)
	Neutral	33.3% (2)	33.3% (5)	22.7% (5)	22.0% (24)	23.7% (36)
	Disagree	50.0% (3)	53.4% (8)	54.6% (12)	61.5% (67)	59.2% (90)
	Total	100.0% (6)	100.0% (15)	100.0% (22)	100.0% (109)	100.0% (152)

Chi-Square = .217 Asymp. Sig = .975 (Significant Chi-square values are at P<0.05)

The results provided in Table 6.2.2 show that the first-line managers *agreed* with the statement to a higher extent than the other groups, which suggests that they have a better understanding of TQM than the other groups.

However, the results of rating the statement indicate that a small percentage of the respondents have an understanding of TQM, which means that the majority of the respondents do not know much about TQM. This raises the possibility that most of OMANTEL's personnel do not know much about TQM and its methods, tools and techniques. To change this situation would require the creation of awareness amongst the personnel of OMANTEL about what TQM stands for, and how its methods, if implemented appropriately, could lead to an overall improvement in the services and management processes of the organisation. As a result, it is necessary, before implementing the proposed model, to make the personnel of OMANTEL aware of TQM and its concepts and methods. This might be best achieved through providing them courses and seminars related to the subject, and through taking the process of the implementation step by step by following the proposed PDCA implementation model discussed earlier in Chapter 5.

The second question in section C presented respondents with a statement, "Some TQM concepts have been implemented within OMANTEL's departments", which required the explanation of agreement/disagreement. The results of the extent to which the respondents agreed with the statement are provided in Table 6.2.1 and indicate that none of the respondents *agreed* with the statement whilst all the respondents either *disagreed* or were *neutral* about whether or not that TQM or its concepts have been implemented in OMANTEL's departments.

The results provided in Table 6.2.3 show the extent to which each individual group of respondents rated the second statement:

Table 6.2.3: The Implementation of TQM Concepts within OMANTEL According to the Respondents' Occupation Level.

		Occupation Level % (N = 152)				% Total (N)
		% Top-Mgt. (N=6)	% Middle Mgt. (N=15)	% First-Line Mgt. (N=22)	% Employees (N=109)	
Some TQM concepts have been implemented within OMANTEL's departments.	Agree	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)
	Neutral	16.7% (1)	60.0% (9)	72.7% (16)	77.1% (84)	72.4% (110)
	Disagree	83.3% (5)	40.0% (6)	27.2% (6)	23.0% (25)	27.7% (42)
	Total	100.0% (6)	100.0% (15)	100.0% (22)	100.0% (109)	100.0% (152)

Chi-Square = .13.096 Asymp. Sig = .004 (Significant Chi-square values are at $P < 0.05$)

Here there is evidence that the first-line managers and employees were more *neutral* than the other groups of respondents about the statement, and that the top managers *disagreed* with the statement to a higher extent than the other groups. The results provide an indication that the concepts of TQM have not been implemented in OMANTEL.

The data in Table 6.2.3 may also be taken to suggest that the knowledge of middle and first-line managers and employees about the implementation of TQM is low whilst top management is more fully informed and aware that TQM has not been implemented in OMANTEL.

In this regard, a respondent made a comment stating that "TQM has never been a subject that has been seriously addressed by OMANTEL apart from some training that was provided to senior management. No strategy for implementing TQM principles was ever adopted and, to the best of my knowledge, no pilot or trial projects were ever attempted. Perhaps the present rules or structure of OMANTEL cannot facilitate the implementation of TQM or perhaps the major changes that will be required in the work procedures have discouraged the implementation of TQM. Perhaps OMANTEL doesn't know how to go about it, it needs a helping hand! Whatever it is, it will be a major decision, which will require very important unwavering support and encouragement from the very top management. Without this, TQM cannot possibly succeed".

Another respondent stated that "A lot of training has been imparted on TQM to OMANTEL senior and junior management personnel, but none has implemented TQM in practice. No more training in TQM is required but sincerity in the implementation of

TQM is the one thing which is missing”. A third respondent added that “With better training in TQM for all departments, and with a higher commitment to TQM, it can be implemented successfully”.

However, the results obviously indicate that the concepts of TQM in general, and the principles and elements of the proposed model, will be novel and that it will be the first occasion on which an effort will be made to implement TQM in OMANTEL.

6.3. The Results of Rating the Contextual (Macro) Elements

This section provides the results of rating the significance and practice of the contextual or macro elements of the proposed implementation framework. It should be noted that these elements are of the responsibility of Top Management. Thus, this group’s level of agreement should be taken into consideration in examining the extent to which the elements are being practised in OMANTEL.

Vision

Table 6.3.1 shows the results of rating the significance of the “Vision” element, which was presented to the sample as “There must be a vision in OMANTEL that focuses on providing the customers with the latest technology and services in the telecom industry at prices which the customers consider to be reasonable”.

Table 6.3.1: The Significance of “Vision”

<i>Significance</i>	<i>%</i> 1= most significant (N)	<i>%</i> 2= significant (N)	<i>%</i> 3= less significant (N)	<i>%</i> 4= not significant (N)
Vision	68.4% (104)	29.6% (45)	2.0% (3)	0% (0)
Mean of Value = 1.336 Std Dev. = .514				

The results provided in Table 6.3.1 show that almost all respondents rated the Vision as *most significant* and *significant*. A very small percentage of respondents rated the principle as *less significant*, and none of respondents rated it as *not significant*.

The results of the extent to which each group of respondents rated the significance of Vision are provided in Table 6.3.2:

Table 6.3.2: The Significance of “Vision” According to Occupation Level

		Occupation level % (N = 152)				% Total (N)
		% Top-Mgt. (N=6)	% Middle Mgt. (N=15)	% First-Line Mgt. (N=22)	% Employees (N=109)	
Vision	Most significant	66.7% (4)	66.7% (10)	68.2% (15)	68.8% (75)	68.4% (104)
	Significant	33.3% (2)	33.3% (5)	31.8% (7)	28.4% (31)	29.6% (45)
	Less significant	0% (0)	0% (0)	0% (0)	2.8% (3)	2.0% (3)
	Not significant	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)
	Total	100.0% (6)	100.0% (15)	100.0% (22)	100.0% (109)	100.0% (152)

Chi-Square = 3.675 Asymp. Sig = .299 (Significant Chi-square values are at $P < 0.05$)

The results provided in Table 6.3.2 show that all groups of respondents rated Vision as *most significant* and *significant* to a high extent. A small percentage of employees rated the principle as *less significant*. The results show that there was a general agreement among all groups of respondents that Vision is significant indicating that they all were of the opinion that there must be a vision in OMANTEL that focuses on providing the customers with the latest technology and services in the telecom industry at prices that the customers consider to be reasonable.

In relation to the practice of Vision, the respondents were presented with three statements with the intention of identifying whether or not there was a vision statement in OMANTEL and, if there is, the extent to which it is being practised. The results of rating the statements of the questions are provided in Table 6.3.3 and Table 6.3.4:

Table 6.3.3: The Practice of “Vision”

	% Agree (N)	% Neutral (N)	% Disagree (N)	% Total (N)
1. In OMANTEL, there is a vision to be one of the best providers of telecom services in the region, in terms of prompt service delivery, service quality and up-to-date technology.	57.2% (87)	26.3% (40)	16.5% (25)	100.0% (152)
2. OMANTEL’s vision is to provide high quality services with low costs.	59.2% (90)	28.3% (43)	12.5% (19)	100.0% (152)
3. OMANTEL benchmarks the quality of its services with those of the other telecom service providers’ in the region to learn how they are operating, and to catch up with changes in the telecom industry.	64.5% (98)	23.7% (36)	11.8% (18)	100.0% (152)

Table 6.3.4: The Practice of “Vision” According to Occupation Level

	Occupation Level (% of Agree)			
	% Top-Mgt. (N=6)	% Middle Mgt. (N=15)	% First-Line Mgt. (N=22)	% Employees (N=109)
1. In OMANTEL, there is a vision to be one of the best providers of telecom services in the region, in terms of prompt service delivery, service quality and up-to-date technology.	66.7% (4)	46.6% (7)	54.5% (12)	58.7% (64)
2. OMANTEL’s vision is to provide high quality services with low costs.	83.4% (5)	33.3% (5)	77.3% (17)	57.8% (63)
3. OMANTEL benchmarks the quality of its services with those of the other telecom service providers’ in the region to learn how they are operating, and to catch up with changes in the telecom industry.	83.3% (5)	60.0% (9)	90.9% (20)	58.7% (64)

Chi-Square = .014 Asymp. Sig = 1.000 (Significant Chi-square values are at P<0.05)

The first statement aimed to identify whether or not there was a vision in OMANTEL to be one of the best providers of telecom services in the region, in terms of prompt service delivery, service quality and up-to-date technology. The results provided in Table 6.3.3 show that the majority of respondents *agreed* with the statement. A small percentage of respondents were *neutral* about the statement and an even smaller percentage *disagreed* with it. The results provided in Table 6.3.4 show that all groups of respondents, except middle managers, agreed with the statement to a high extent. The low percentage of middle managers agreeing with the statement indicates that they were either uncertain about the organisation’s vision, or disagreed that there is a vision statement in the organisation. This could be due to the fact that they may recognised that the services of OMANTEL are not being delivered on time and are not of a high quality and that OMANTEL is not intending to improve these services and to be a best provider of the services in the region. However, the high percentages of the other respondents agreeing with the statement suggest that there is an intention and a vision in OMANTEL to be the best provider of telecom services in the region, in terms of prompt service delivery, service quality and up-to-date technology.

The second statement intended to test if the vision discussed above is based on the concept of providing high quality services with low costs. The results of rating this statement, shown in Table 6.3.3, indicate that a large percentage of respondents *agreed* with the statement. The results show that a small percentage of respondents were *neutral* and *disagreed* with the statement. The results of rating the statement, provided in Table 6.3.4, show that the middle managers agreed with the statement to a lower

extent than the other groups; as they did with the first statement. The results clearly show a high percentage rate of agreement with the statement, which indicates that OMANTEL's vision is to provide high quality services with low costs. In this regard, a respondent stated that "Providing high quality services with the latest technologies all over the country was the key reason behind creating OMANTEL. We are uncertain whether or not this vision will exist in the future due to the privatisation. There seems to be the prospect of a continuation of this belief as privatisation will bring new entrants to the market, which would result in competition; and this in turn would force us to provide high quality services with low costs. That is, if we are intending to stay in the market".

The third statement was intended to identify whether or not OMANTEL benchmarks the quality of its services with those of the other telecom service providers' in the region to learn how they are operating, and to catch up with the changes in the telecom industry. The results provided in Table 6.3.3 show that the majority of respondents *agreed* with the statement; a low percentage of respondents were *neutral* with the statement; and a very small percentage of them *disagreed* with the statement. The results provided in Table 6.3.4 show that a very large percentage of respondents from all groups *agreed* with the third statement. The results of rating the third statement suggest that OMANTEL benchmarks the quality of its services with those of the other providers' in the region to improve them and catch up with the changes in the telecom industry.

The results of rating Vision showed that it was rated as being *significant* to a large extent indicating that the respondents were of the opinion that there is a need for its attainment in OMANTEL. The results of rating the statements related to the activities of the Vision suggest that it is being utilised in OMANTEL. The results also suggest that OMANTEL benchmarks its services with the other providers' in the region to improve and catch up with the changes in the telecom industry.

Mission

Table 6.3.5 shows the results of rating the significance of "Mission", which was presented to the sample as "OMANTEL must set up a clear mission statement that emphasises that the purpose of its existence is to serve the customers and satisfy them. This statement must be made clear to all employees".

Table 6.3.5: The Significance of “Mission”

<i>Significance</i>	% 1= most significant (N)	% 2= significant (N)	% 3= less significant (N)	% 4= not significant (N)
Mission	64.5% (98)	28.3% (43)	6.6% (10)	0.7% (1)
Mean of Value = 1.434		Std Dev. = .648		

The results of rating “Mission” provided in Table 6.3.5 show that the principle was rated by the majority of respondents as *most significant* and *significant*. The results show that a small percentage of respondents regarded Mission as *less significant* and *not significant* at all.

Table 6.3.6 shows the extent to which each group of respondents rated the significance of Mission:

Table 6.3.6: The Significance of “Mission” According to Occupation Level

		Occupation Level % (N = 152)				% Total (N)
		% Top-Mgt. (N=6)	% Middle Mgt. (N=15)	% First-Line Mgt. (N=22)	% Employees (N=109)	
Mission	Most significant	66.7% (4)	80.0% (12)	59.1% (13)	63.3% (69)	64.5% (98)
	Significant	33.3% (2)	6.7% (1)	31.8% (7)	30.3% (33)	28.3% (43)
	Less significant	0% (0)	13.3% (2)	9.1% (2)	5.5% (6)	6.6% (10)
	Not significant	0% (0)	0% (0)	0% (0)	0.9% (1)	0.7% (1)
	Total	100.0% (6)	100.0% (15)	100.0% (22)	100.0% (109)	100.0% (152)

Chi-Square = 1.672 Asymp. Sig = .643 (Significant Chi-square values are at P<0.05)

The results provided in Table 6.3.6 show that the top managers recognised the significance of Mission to greater extent than the other groups as none of them rated it as *less significant* and *not significant*. This could be due to the fact that they recognised the lack of a clear mission statement in OMANTEL and felt the need for such a statement to be implemented. A large percentage of middle and first-line managers also rated Mission as *most significant* and *significant*, but a small percentage of them rated it as less significant. The employees recognised the significance of the principle to a lower extent than did the managers.

To ascertain the extent to which Mission is being practised in OMANTEL, the respondents were presented with three statements. The results are provided in Table 6.3.7 and Table 6.3.8:

Table 6.3.7: The Practice of “Mission”

	% Agree (N)	% Neutral (N)	% Disagree (N)	% Total (N)
1. In OMANTEL, there is a clear mission statement that focuses on customer service and satisfaction.	53.9% (82)	25.7% (39)	20.4% (31)	100.0% (152)
2. OMANTEL boasts a complete updated index of services that it offers.	46.1% (70)	25.7% (39)	28.3% (43)	100.0% (152)
3. OMANTEL’s main concept of service is based on its knowledge of its customers’ requirements and expectations.	43.4% (66)	36.2% (55)	20.4% (31)	100.0% (152)

Table 6.3.8: The Practice of “Mission” According to Occupation Level

	Occupation Level (% of Agree)			
	% Top-Mgt. (N=6)	% Middle Mgt. (N=15)	% First-Line Mgt. (N=22)	% Employees (N=109)
1. In OMANTEL, there is a clear mission statement that focuses on customer service and satisfaction.	33.4% (2)	40.0% (6)	59.0% (13)	56.0% (61)
2. OMANTEL boasts a complete updated index of services that it offers.	66.7% (4)	40.0% (6)	45.4% (10)	45.8% (50)
3. OMANTEL’s main concept of service is based on its knowledge of its customers’ requirements and expectations.	33.4% (2)	33.4% (5)	54.5% (12)	43.1% (47)

Chi-Square = 1.331 Asymp. Sig = .722 (Significant Chi-square values are at $P < 0.05$)

The first statement was intended to identify whether or not there was a mission statement in OMANTEL that focused on customer service and satisfaction. The results provided in Table 6.3.7 show that the majority of respondents were of the opinion that there was a mission statement in OMANTEL that performed that function. A small percentage of respondents were *neutral* with the statement; and a smaller percentage of them *disagreed* with it. The majority of respondents who *agreed* with the statement, as shown in Table 6.3.8, were first-line managers and employees whilst top and middle managers *agreed* with the statement to a low extent. The percentage of top managers agreeing with the statement would support the earlier finding that they may recognise the lack of a clear mission statement in OMANTEL and feel the need for such a statement to be implemented. The overall results of rating the first statement show that more than half of the respondents agreed with the statement, which suggests that there is

a mission statement in OMANTEL, but it is not necessarily one that focus on customer service and satisfaction. In this regard, a respondent stated that “OMANTEL is a governmental organisation. Its mission is to provide telecom services in a developing country... quality is not an issue at this stage. The introduction of the services and the laying down of an infrastructure for the network has been an issue in OMANTEL since 1980, the year it was founded. But, due to the changes in the environment of the telecom industry, OMANTEL should have a dramatic change. Management process reengineering for the whole organisation, and a long-term mission statement, need to be considered and regarded as the main objective of the organisation”

The second statement relating to Mission tested whether or not OMANTEL boasts a complete updated index of services which it provides as part of its mission statement. The results of rating the second statement, provided in Table 6.3.7, show that a low percentage of respondents *agreed* with the statement; the majority were *neutral* and *disagreed* with it. Table 6.3.8 shows that the top managers *agreed* with the statement to a higher extent than the other groups of respondents. This could be due to the fact that they may felt that there should be a complete updated index of the services that OMANTEL offers to its customers; while a consideration of the other groups suggests that there is a lack of such an index in OMANTEL.

The third statement was intended to identify whether or not OMANTEL’s main concept of service is based on its knowledge of its customers’ expectations. The results provided in Table 6.3.7 show that a low percentage of respondents agreed with the statement. The majority of respondents were *neutral* and *disagreed* with the statement. The results of rating the statement provided in Table 6.3.8 show that the first-line managers *agreed* with the statement to a higher extent than the other groups. This would suggest that they may feel that they are dealing with customers’ expectations, and may suppose that the main concept of service in OMANTEL is based on the customers expectations. However, the overall results suggest that the concept of providing the services according to the customers’ expectations is not being practised and is not regarded as a mission in OMANTEL.

The results of rating the significance of Mission suggest that there is a need for its presence in OMANTEL as a large percentage of respondents rated it as being *significant*. The results suggest that there is a mission statement in OMANTEL, but holding a complete updated index of services and offering services according to the customers’ expectations are not being considered as the main concept or part of such a mission statement. The results also suggest that although OMANTEL has a mission

statement, it lacks effective methods to achieve the objectives contained with that statement.

Strategy

Strategy was presented in the questionnaire as “OMANTEL must set up a long-term strategy, which should focus on how to meet and exceed the current and future needs of its customers”. The results are provided in Table 6.3.9, and show that a large percentage of respondents regarded Strategy as *most significant* and *significant*; a very small percentage of respondents rated the principle as *less significant*, and none of them rated it as *not significant*.

Table 6.3.9: The Significance of “Strategy”

<i>Significance</i>	% 1= most significant (N)	% 2= significant (N)	% 3= less significant (N)	% 4= not significant (N)
Strategy	75.7% (115)	23.0% (35)	1.3% (2)	0% (0)
Mean of Value = 1.257 Std Dev. = .467				

The results provided in Table 6.3.10 show the extent to which each group of respondents rated the significance of Strategy:

Table 6.3.10: The Significance of “Strategy” According to Occupation Level

		Occupation Level % (N = 152)				% Total (N)
		% Top-Mgt. (N=6)	% Middle Mgt. (N=15)	% First-Line Mgt. (N=22)	% Employees (N=109)	
Strategy	Most significant	66.7% (4)	80.0% (12)	63.6% (14)	78.0% (85)	75.7% (115)
	Significant	33.3% (2)	20.0% (3)	36.4% (8)	20.2% (22)	23.0% (35)
	Less significant	0% (0)	0% (0)	0% (0)	1.8% (2)	1.3% (2)
	Not significant	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)
	Total	100.0% (6)	100.0% (15)	100.0% (22)	100.0% (109)	100.0% (152)

Chi-Square = 1.289 Asymp. Sig = .732 (Significant Chi-square values are at P<0.05)

The results provided in Table 6.3.10 show that all groups of respondents rated the Strategy as *most significant* and *significant* whilst only a very small percentage of employees only rated it as *less significant*. The high rating afforded to Strategy by management and employees indicates that the respondents were of the opinion that there

is a need in OMANTEL for setting up long-term objectives and goals, and meeting the customers' future needs. The high rating could be due to the fact that either the organisation is lacking a long-term strategy, or that current strategies are too short term or do not have clear objectives and goals.

However, to test whether or not there was a long-term strategy in OMANTEL that focuses on how to meet and exceed customers needs and clearly states the organisation's objectives and long-term plans, the respondents were presented with four statements. The results of their rating those statements are provided in Table 6.3.11 and Table 6.3.12:

Table 6.3.11: The Practice of "Strategy"

	% Agree (N)	% Neutral (N)	% Disagree (N)	% Total (N)
1. OMANTEL has a clear and written strategy for quality based on information about the customers' needs and requirements.	38.2% (58)	38.2% (58)	23.7% (36)	100.0% (152)
2. OMANTEL regards the concepts of high quality services and customer satisfaction as strategic objectives.	47.3% (72)	26.3% (40)	26.3% (40)	100.0% (152)
3. In OMANTEL, there is a long-term strategic plan answers such questions as where OMANTEL wants to be during the next coming years, who are its future customers, and how it could serve them.	52.6% (80)	35.5% (54)	11.8% (18)	100.0% (152)
4. In OMANTEL, there is a strategy that enhances its capabilities to operate in the marketplace and meet its customers' future demands.	56.6% (86)	32.2% (49)	11.2% (17)	100.0% (152)

Table 6.3.12: The Practice of "Strategy" According to Occupation Level

	Occupation Level (% of Agree)			
	% Top-Mgt. (N=6)	% Middle Mgt. (N=15)	% First-Line Mgt. (N=22)	% Employees (N=109)
1. OMANTEL has a clear and written strategy for quality based on information about the customers' needs and requirements.	33.3% (2)	20.0% (3)	31.8% (7)	42.2% (46)
2. OMANTEL regards the concepts of high quality services and customer satisfaction as strategic objectives.	66.7% (4)	33.4% (5)	40.9% (9)	49.6% (54)
3. In OMANTEL, there is a long-term strategic plan answers such questions as where OMANTEL wants to be during the next coming years, who are its future customers, and how it could serve them.	66.7% (4)	46.6% (7)	63.6% (14)	50.4% (55)
4. In OMANTEL, there is a strategy that enhances its capabilities to operate in the marketplace and meet its customers' future demands.	66.7% (4)	33.4% (5)	59.1% (13)	58.7% (64)

Chi-Square = 2.257 Asymp. Sig = .521 (Significant Chi-square values are at P<0.05)

The first statement relating to the Strategy was intended to identify if there was a clear and written strategy in OMANTEL based on information about the customers'

needs and requirements. The results of rating the statement provided in Table 6.3.11 show that a small percentage of respondents *agreed* that there is such a clear and written strategy in OMANTEL; with a majority being *neutral* and *disagreeing* that there was a clear and written strategy in OMANTEL. The results of rating the statement provided in Table 6.3.12 show that all groups of respondents *agreed* with the statement to a low extent. The results strongly suggest that there is a lack of a clear and written strategy in OMANTEL. One respondent commented that, “I believe that the management of OMANTEL should look into this survey and it will be shocked to know that we do not have a policy or strategy for this institution. After going through this, one can only come to this conclusion: that OMANTEL is run without any clear strategy, it is moreover run on a day to day basis rather than on a long term strategy. OMANTEL should have a department for strategic planning; they should hold strategic management sessions; there should be a strategy and performance evaluation of progress towards this strategy”. This comment clearly indicates that there is a lack of a clear strategy in OMANTEL.

The second statement was intended to identify whether or not OMANTEL regards the concepts of high quality services and customer satisfaction as principal strategic objectives. The results of rating this statement provided in Table 6.3.11 show that less than half of respondents were of the opinion that OMANTEL considers the concepts of quality services and customer satisfaction as principal strategic objectives. The majority of respondents were *neutral* and *disagreed* with the statement. Table 6.3.12 shows that the top managers were much more inclined to *agree* with the statement than were the other groups; which would imply that the former regard the concepts of quality services and customer satisfaction as principal strategic objectives. The overall results suggest that the concepts of providing high quality services and customer satisfaction are not widely regarded as being principal strategic objectives in OMANTEL. One respondent noted that, “It is very easy for everyone to say that I need to improve the services that I provide to my customers, and that this belief is necessary to remain in business anyway. However, believing in something is one situation but actually planning and executing it is another situation. This is where OMANTEL falls down. We all in OMANTEL believe in customer satisfaction as a principal objective, but in reality we rarely implement this objective”.

The third statement aimed to identify whether or not there was a long-term strategic plan in OMANTEL with indicated answers to such questions as: where it wants to be during the next coming years, who are its future customers, and how it could serve

them. The results of rating the statement, presented in Table 6.3.11, show that more than half of respondents were of the opinion that there was a long-term strategic plan in OMANTEL which addressed such questions. Table 6.3.12 shows that the top and first-line managers were of the opinion, to a larger extent than the middle managers and employees, that there is a long-term strategic plan in OMANTEL that states where OMANTEL wants to be in the future and how it could serve its customers. This could be due to the fact that since the policies of the organisation are planned and set up by the top management and implemented by the first-line managers within their sections or units, these groups of respondents agreed with the statement to a higher extent than the other groups. One respondent stated that “As part of the privatisation policy that the government is aiming to introduce into the telecom sector, OMANTEL seems to be reconsidering its future plans. We are all aware of this fact. Without this, we would be unable to serve the market. We believe that management is aware of the fact that the privatisation will demand strategic planning for the future and better customer services”.

The fourth statement was intended to identify the extent to which OMANTEL was strategically prepared to operate in the marketplace and meet its customers’ demands in the next coming years. The results provided in Table 6.3.11 show that the majority of respondents were of the opinion that there is a strategy in OMANTEL that enhances its capabilities to operate in the marketplace and meet its customers’ demand in the future. A low percentage of respondents were *neutral* and *disagreed* with the statement. The results provided in Table 6.3.12 show that the middle managers *agreed* with the statement to a less extent than the other groups. The overall results of rating the statement suggest that there is a strategy in OMANTEL that enhances its capabilities to operate in the marketplace and meet its customers’ demands in the future.

The results reveals that Strategy is rated as of importance to all groups of respondents, which suggests that they were of the opinion that OMANTEL must set up a long-term strategy that should focus on how to meet and exceed the current and future needs of its customers. The results further suggest that Strategy is only being partially utilised in OMANTEL. Whilst there is a long-term strategic plan in OMANTEL that manifests where it wants to be in the future, how it could serve its customers, and how it could operate and meet its customers’ needs during the next coming years, there is also evidence that this strategy might be unclear for many personnel in the organisation, or is not promoted sufficiently in the organisation for everyone to know its contents and understand the organisation’s long-term strategic plans and objectives.

Values

“Values” were presented to respondents through the statement, “OMANTEL must set up a set of values that focuses on customer service and satisfaction; and must promote these values amongst senior managers and employees”.

Table 6.3.13: The Significance of “Values”

<i>Significance</i>	% 1= most significant (N)	% 2= significant (N)	% 3= less significant (N)	% 4= not significant (N)
Values	68.4% (104)	29.6% (45)	2.0% (3)	0% (0)
Mean of Value = 1.336 Std Dev. = .514				

The results, as shown in Table 6.3.13, indicate that Values were rated by the majority of respondents as *most significant* and *significant*; they were rated as *less significant* by a small percentage of respondents, whilst none of respondents rated the element as *not significant*.

The extent to which each occupational group of respondents rated the significance of Values is provided in Table 6.3.14.

Table 6.3.14: The Significance of “Values” According to Occupation Level

		Occupation Level % (N = 152)				% Total (N)
		% Top-Mgt. (N=6)	% Middle Mgt. (N=15)	% First-Line Mgt. (N=22)	% Employees (N=109)	
Values	Most significant	83.3% (5)	73.3% (11)	77.3% (17)	65.1% (71)	68.4% (104)
	Significant	16.7% (1)	20.0% (3)	18.2% (4)	33.9% (37)	29.6% (45)
	Less significant	0% (0)	6.7% (1)	4.5% (1)	0.9% (1)	2.0% (3)
	Not significant	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)
	Total	100.0% (6)	100.0% (15)	100.0% (22)	100.0% (109)	100.0% (152)

Chi-Square = 1.362 Asymp. Sig = .714 (Significant Chi-square values are at P<0.05)

Table 6.3.14 reveals that all groups rated Values as *most significant* and *significant* to a high extent, with top managers being the most positive group. While none of the top managers rated Values as *less significant* or *not significant*, a small percentage of respondents from each group rated it as *less significant*. The results show that almost all respondents were of the opinion that Values are significant and that there is a need for their implementation in OMANTEL.

The results presented in Table 6.3.15 and Table 6.3.16 show the results of rating the statements relating to practice of Values:

Table 6.3.15: The Practice of “Values”

	% Agree (N)	% Neutral (N)	% Disagree (N)	% Total (N)
1. OMANTEL regards the concept of providing the customers an access to the information related to the services as a principal value.	75.6% (115)	14.5% (22)	9.9% (15)	100.0% (152)
2. OMANTEL offers guidance to customers in any new services in a language they can understand, and believes in this as a basic value.	46.7% (71)	28.3% (43)	25.0% (38)	100.0% (152)
3. OMANTEL regards the concept of maintaining close and direct contact with the customers, to understand their needs and expectations, as a principal value.	59.2% (90)	18.4% (28)	22.4% (34)	100.0% (152)
4. OMANTEL consistently follows up that its services are delivered on time with politeness and friendliness.	50.6% (77)	30.9% (47)	18.4% (28)	100.0% (152)
5. OMANTEL audits its employees’ quality knowledge-levels in order to ensure that they provide quality services.	41.8% (71)	21.1% (32)	32.2% (49)	100.0% (152)
6. OMANTEL’s management and employees are always concerned to provide the customers with reliable, tangible, and risk/doubt-free services.	59.9% (91)	24.3% (37)	15.8% (24)	100.0% (152)

Table 6.3.16: The Practice of “Values” According to Occupation Level

	Occupation Level (% of Agree)			
	% Top-Mgt. (N=6)	% Middle Mgt. (N=15)	% First-Line Mgt. (N=22)	% Employees (N=109)
1. OMANTEL regards the concept of providing the customers an access to the information related to the services as a principal value.	50.0% (3)	66.7% (10)	20.8% (16)	78.9% (86)
2. OMANTEL offers guidance to customers in any new services in a language they can understand, and believes in this as a basic value.	66.7% (4)	33.4% (5)	45.5% (10)	47.7% (52)
3. OMANTEL regards the concept of maintaining close and direct contact with the customers, to understand their needs and expectations, as a principal value.	50.0% (3)	60.0% (9)	59.1% (13)	59.6% (65)
4. OMANTEL consistently follows up that its services are delivered on time with politeness and friendliness.	50.0% (3)	40.0% (6)	45.5% (10)	53.2% (58)
5. OMANTEL audits its employees' quality knowledge-levels in order to ensure that they provide quality services.	33.3% (2)	40.0% (6)	40.9% (9)	49.6% (54)
6. OMANTEL's management and employees are always concerned to provide the customers with reliable, tangible, and risk/doubt-free services.	83.4% (5)	46.7% (7)	54.6% (12)	61.4% (67)

Chi-Square = 1.745 Asymp. Sig = .627 (Significant Chi-square values are at $P < 0.05$)

Table 6.3.15 shows that a large percentage of respondents *agreed* with the first statement, which stated that OMANTEL's customers can easily gain access to the information related to the services provided by OMANTEL. A small percentage of the respondents were *neutral* and *disagreed* with the statement. Table 6.3.16 shows that the employees *agreed* with the statement to a higher extent than the managers. This could be due to the fact that since the employees deal and interact with the customers on the daily basis more than the other occupational groups, they were aware whether or not the customers have access to the information related to the services. However, the high percentage of the respondents agreeing with the statement suggests that OMANTEL's customers can easily gain access to the information related to the services provided to them.

The second statement was intended to test whether or not OMANTEL offers guidance to customers in any new services in a language they can understand, and believes in this as a basic value. Table 6.3.15 shows that a small percentage of respondents *agreed* with the statement. The majority of respondents were *neutral* and *disagreed* with the statement. The results provided in Table 6.3.16 indicate that the

majority of the respondents who *agreed* with the statement were top managers; they also show that the other groups *agreed* with the statement to a low extent. Overall, there is the suggestion that OMANTEL does not offer guidance to customers in a language they can understand. In this regard, Horovitz and Cudennec-Poon (1990) stated that, “Are your company’s documentation, bill reminders, brochures, menus in customer-friendly language? Can they be understood? If not, do something about it, otherwise your customer will not understand you and will go elsewhere”.

The third statement aimed to test the extent to which OMANTEL regards the maintenance of close and direct contact with the customers, for understanding their needs and expectations, as a value. The results provided in Table 6.3.15 show that the majority of respondents *agreed* with this statement; a small percentage of respondents were *neutral* and *disagreed* with the statement. The results provided in Table 6.3.16 show that the top management agreed with the statement to a lesser extent than the other groups; which could be due to the fact since it is not dealing directly with the customers. There is evidence to support the idea that occupational groups see maintaining a close contact with more customers as part of their daily interaction with the customers. Overall, the results suggest that both the management and employees maintain a close and direct contact with the customers and believe in this value.

The fourth statement tested whether or not OMANTEL consistently checks that its services are delivered on time with politeness and friendliness. Table 6.3.15 shows that about half of respondents *agreed* with the statement; the other half of them were *neutral* and *disagreed* with the statement. The results of rating the statement, provided in Table 6.3.16, show that the employees and top managers agreed with the statement to a higher extent than the middle and first-line managers. The percentage of top managers would suggest that they may feel that the services provided to the customers should be delivered on time with politeness and friendliness whilst the percentage of employees would imply that they may think that they are already providing the services on time with politeness and friendliness. The overall results of rating the statement indicate that the respondents did not *agree* with the statement to a large extent as only half of them agreed with it, which suggests that there must be some measure of doubt as to whether or not OMANTEL’s services are being provided on time with politeness and friendliness.

The fifth statement was intended to test the extent to which OMANTEL audits its employees’ quality knowledge-levels in order to ensure that they provide quality services. As shown in Table 6.3.15, less than half of respondents *agreed* with the

statement; the majority of them were *neutral* and *disagreed* with the statement. The results of rating the statement provided in Table 6.3.16 show that all groups of respondents gave little support to the statement. However, there is evidence to suggest that OMANTEL does not audits its employees' skills and quality knowledge to enhance their capabilities in performing the services. Similarly, work by Gunasekaran (1999) indicated that most employees investigated felt that the training they were receiving was not particularly job related and effective for promoting understanding of TQM.

The last statement tested whether or not OMANTEL's management and employees are always concerned to provide the customers with reliable, tangible, and risk/doubt-free services. The results provided in Table 6.3.15 show that the majority of respondents were of the opinion that the management as well as employees of OMANTEL are always concerned to provide the customers with reliable, tangible, and risk/doubt-free services. Table 6.3.16 reveals that middle managers *agreed* with the statement to a lower extent than the rest of respondents. This could imply that middle managers might not be concerned to provide the customers with reliable, tangible, and risk/doubt free services and is basically inexplicable. The overall results of rating the statement suggest that the management and employees of OMANTEL are concerned to provide the customers with reliable, tangible, and risk/doubt free services as the majority of respondents *agreed* with this statement. The results of this statement are inconsistent with the results of the statement related to Strategy, which indicated that OMANTEL does not regard the concepts of high quality service and customer satisfaction as strategic objectives. Such incongruity may be attributed to absence of holism in the management of quality at OMANTEL.

The results provided and discussed above indicate that Values were rated as significant to a high extent and that the respondents were of the opinion that there is a need for their implementation in OMANTEL. The results of rating the statements related to the practice of Values suggest that some of the Values are being practised in OMANTEL. This would suggest that OMANTEL has a set of basic beliefs that could be considered as values, which provide a guide in providing services to its customers. These values include: ease of access to the customers to the information of the services; maintaining close and direct contact with the customers in order to understand their needs and requirements; and providing the customers with reliable, tangible, and risk/doubt-free services. The results also suggest that OMANTEL is lacking other values: using customer data when implementing or changing infrastructure and communicating with the customers in a language they can understand; consistently

following up that its services are provided on time with politeness and friendliness; and auditing its employees' skills and quality knowledge levels in order to provide quality services.

Key Issues

Table 6.3.17 shows the results of rating the significance of "Key Issues", which were presented in the questionnaire as "OMANTEL's staff at all levels must be prepared to deal with the key issues that might be raised by customers":

Table 6.3.17: The Significance of "Key Issues"

<i>Significance</i>	% 1= most significant (N)	% 2= significant (N)	% 3= less significant (N)	% 4= not significant (N)
Key Issues	44.1 % (67)	42.1 % (64)	13.2 % (20)	0.7 % (1)
Mean of Value = 1.704 Std Dev. = .717				

Here the majority of respondents rated Key Issues as *most significant* and *significant*. A larger percentage of respondents, than of the other contextual elements, rated the element *less significant*; but this percentage is still low compared with the percentage of the respondents rating it as *most significant* and *significant*.

Table 6.3.18: The Significance of "Key Issues" According to Occupation Level

		Occupation Level % (N = 152)				% Total (N)
		% Top-Mgt. (N=6)	% Middle Mgt. (N=15)	% First-Line Mgt. (N=22)	% Employees (N=109)	
Key Issues	Most significant	83.3 % (5)	33.3 % (5)	27.3 % (6)	46.8 % (51)	44.1 % (67)
	Significant	16.7 % (1)	60.0 % (9)	50.0 % (11)	39.4 % (43)	42.1 % (64)
	Less significant	0 % (0)	6.7 % (1)	22.7 % (5)	12.8 % (14)	13.2 % (20)
	Not significant	0 % (0)	0 % (0)	0 % (0)	0.9 % (1)	0.7 % (1)
	Total	100.0 % (6)	100.0 % (15)	100.0 % (22)	100.0 % (109)	100.0 % (152)

Chi-Square = 3.461 Asymp. Sig = .326 (Significant Chi-square values are at P<0.05)

The results presented in Table 6.3.18 show that the top managers rated the element as *most significant* and *significant* to a higher extent than the other groups. Other

occupational groups recognised the significance of the element to a lesser extent than top management. A very small percentage of employees rated the element as *not significant* at all. The high percentage of top managers rating the element as *significant* could be due to the fact that they may have assumed, possibly ill-advisedly, that the personnel of OMANTEL in general, and the employees in particular, are prepared and able to deal with the key issues raised by the customers.

To identify the extent to which the systems and personnel of OMANTEL were prepared to deal with the Key Issues raised by the customers, and the extent to which the element is being practised in OMANTEL, respondents were presented with two statements related to the principle. The results the statements are provided in Table 6.3.19 and Table 6.3.20:

Table 6.3.19: The Practice of “Key Issues”

	% Agree (N)	% Neutral (N)	% Disagree (N)	% Total (N)
1. OMANTEL’s systems and employees are prepared to deal with the issues raised by its customers.	53.3% (81)	26.3% (40)	20.4% (31)	100.0% (152)
2. OMANTEL respects the issues raised by its customers and deals with them effectively and seriously.	38.8% (59)	39.5% (60)	42.1% (33)	100.0% (152)

Table 6.3.20: The Practice of “Key Issues” According to Occupation Level

	Occupation Level (% of Agree)			
	% Top-Mgt. (N=6)	% Middle Mgt. (N=15)	% First-Line Mgt. (N=22)	% Employees (N=109)
1. OMANTEL’s systems and employees are prepared to deal with the issues raised by its customers.	66.7% (4)	53.4% (8)	59.0% (13)	51.4% (56)
2. OMANTEL respects the issues raised by its customers and deals with them effectively and seriously.	66.6% (4)	46.7% (7)	27.2% (6)	38.5% (32)

Chi-Square = 6.965 Asymp. Sig = .073 (Significant Chi-square values are at P<0.05)

The first statement related to Key Issues tested whether or not the systems and employees of OMANTEL are prepared to deal with the issues raised by its customers. Table 6.3.19 shows that more than half of the respondents indicated preparedness to do so. The results of rating the statement provided in Table 6.3.19 show that all occupational groups *agreed* with the statement to a large extent; although this was more evidence among top and first-line managers than among middle managers and employees. Overall, the results suggest that the systems and personnel of OMANTEL are prepared to deal with the key issues raised by the customers.

The second statement tested how effectively and seriously the systems and personnel of OMANTEL are dealing with the key issues raised by the customers. Table 6.3.19 shows that a small percentage of respondents *agreed* with the statement; the majority of respondents were *neutral* and *disagreed* with the statement. The results provided in Table 6.3.20 show that the strongest supporters of the statement were top managers. The results of rating the second statement show that the personnel and systems are not dealing effectively with the key issues raised by customers. Comparing the responses to the first statement with those to second statement, it seems that the systems and employees of OMANTEL could be prepared to deal with the key issues, but these issues seem to be not taken seriously and dealt with them effectively. This could be due to the fact that the personnel of OMANTEL either do not care about these issues, although they are prepared to do so; or they are not encouraged to do so; or they are not rewarded when dealing with these issues effectively.

It is noteworthy here that an empirical study carried out by Nwabueze and Kanji (1997), on the implementation of TQM in the NHS, revealed that the implementation of TQM in one of the hospitals studied seemed to be ineffective due to the lack of the following factors:

1. Vision.
2. Mission.
3. Strategy.
4. Identification of values/beliefs.
5. Meeting customer needs.
6. Realigning organisational processes.
7. Measurement.

The results of this research suggest that this would not be the case in OMANTEL, as the elements of Vision, Mission, Strategy, Values, and Key Issues, which provide the context which continuous improvement can take place, are being practised to some extent in OMANTEL.

6.4. The Results of Rating the Operational (Micro) Concepts

This section provides the results of rating the significance and practice of the operational or micro concepts of the proposed implementation framework. It should be noted that these concepts, according to the model, are being the responsibility of first-line operatives. As a result, this group's ratings of the concepts, particularly in terms of

their practice, will be considered as the key factor for measuring the extent to which the concepts are being practised in OMANTEL.

Internal and External Customers

Table 6.4.1 shows the results of rating the significance of the “Internal and External Customers” concept, which was presented in the questionnaire as “The overall aim of OMANTEL’s customer satisfaction strategy must focus on satisfying both the external and internal (employees) customers”.

Table 6.4.1: The Significance of “Internal and External Customers”

<i>Significance</i>	% 1= most significant (N)	% 2= significant (N)	% 3= less significant (N)	% 4= not significant (N)
Internal and External Customers	59.9% (91)	35.5% (54)	3.9% (6)	0.7% (1)
Mean of Value = 1.454 Std Dev. = .607				

The results of rating the concept of Internal and External Customers show that the majority of respondents found it to be as *most significant* and *significant*. A small percentage of respondents rated it as *less significant*. Only a very small percentage of respondents rated the concept as *not significant*.

**Table 6.4.2: The Significance of the “Internal and External Customers”
Concept According to Occupation Level**

		Occupation Level % (N= 152)				% Total (N)
		% Top Mgt. (N=6)	% Middle Mgt. (N=15)	% First-Line Mgt. (N=22)	% Employees (N=109)	
Internal and External Customers	Most significant	100.0%	40.0%	81.8%	56.0%	59.9%
		(6)	(6)	(18)	(61)	(91)
	Significant	0%	46.7%	18.2%	39.4%	35.5%
		(0)	(7)	(4)	(43)	(54)
	Less significant	0%	6.7%	0%	4.6%	3.9%
		(0)	(1)	(0)	(5)	(6)
	Not significant	0%	6.7%	0%	0%	0.7%
		(0)	(1)	(0)	(0)	(1)
Total	100.0%	100.0 %	100.0%	100.0%	100.0%	
	(6)	(15)	(22)	(109)	(152)	

Chi-Square = 3.296 Asymp. Sig = .348 (Significant Chi-square values are at P<0.05)

The results provided in Table 6.4.2 show the extent to which each occupational group of respondents rated the significance of the element. The data reveal that none of the top and first-line managers rated the element as *less significant* and *not significant*. A small percentage of middle managers and employees rated it *as less significant* and *not significant*. The results show that the top managers were of the opinion, to a higher extent than the other groups, that in order to satisfy the external customers, it is necessary to satisfy the employees; which would imply that they recognise the importance of the employees. It would also imply their willingness to adopt the concept of External and Internal Customers.

In relation to the practice of the concept, the respondents were presented with two statements in order to enable the identification of the extent to which the element of Internal and External Customers is being practised in OMANTEL. The results are provided in Table 6.4.3 and Table 6.4.4:

Table 6.4.3: The Practice of the “Internal and External Customers” Concept

	% Agree (N)	% Neutral (N)	% Disagree (N)	% Total (N)
1. Employees at different levels and departments of OMANTEL are aware of such an attitude.	42.8% (65)	19.7% (30)	37.5% (57)	100.0% (152)
2. Each employee in OMANTEL treats his/her colleagues as customers and tries to satisfy them.	37.5% (57)	25.7% (39)	36.8% (56)	100.0% (152)

Table 6.4.4: The Practice of the “Internal and External Customers” Concept According to Occupation Level

	Occupation Level (% of Agree)			
	% Top-Mgt. (N=6)	% Middle Mgt. (N=15)	% First-Line Mgt. (N=22)	% Employees (N=109)
1. Employees at different levels and departments of OMANTEL are aware of such an attitude.	50.0% (3)	33.4% (5)	45.4% (10)	43.1% (47)
2. Each employee in OMANTEL treats his/her colleagues as customers and tries to satisfy them.	66.7% (4)	20.0% (3)	31.8% (7)	39.5% (43)

Chi-Square = 12.187 Asymp. Sig = .007 (Significant Chi-square values are at $P < 0.05$)

The first statement tested the extent to which the employees and departments of OMANTEL are aware of the attitude that the employees of the organisation should be regarded as internal customers and must be satisfied in order to produce quality service satisfying to the external customers. Table 6.4.3 shows that a small percentage of respondents *agreed* with the statement. The majority of respondents were *neutral* and

disagreed with the statement. Table 6.4.4 shows that all groups of respondents *agreed* with the statement to a low extent, but the top managers *agreed* with the statement to a higher extent than the other groups. The stronger support exhibited by the top managers would suggest that they assume that the personnel of OMANTEL is treating each other as customers. However, the results indicate that the employees of OMANTEL are unaware of the Internal and External Customers concept.

Support for this interpretation is found with the second statement, which was intended to test the extent to which the employees of OMANTEL treat each other as customers and try to satisfy each other. Table 6.4.3 shows that a small percentage of respondents were of the opinion that the employees of OMANTEL treat their colleagues as customers and try to satisfy them; with strongest support being found among top management. The results show that the majority of respondents were *neutral* and *disagreed* with the statement. The low percentage of the respondents agreeing with the statement provides ample confirmation of the earlier finding that the employees of OMANTEL do not treat or regard each other as customers.

The results of rating the significance of the Internal and External Customers concept showed that it was rated as a significant concept suggesting that the respondents were of the opinion that overall aim of OMANTEL's customer satisfaction strategy must focus on satisfying both the external and internal customers, which in turn suggests that there is a need for implementing the concept in OMANTEL. The results of rating the statements related to the practice of the concept suggest that it is not being practised in OMANTEL. A respondent commented that "In TQM, the organisation's employees are regarded as internal customers, and they must be satisfied in order to produce quality service and to satisfy the external customers, but this is not the case in OMANTEL. Hardly 5% of OMANTEL employees are satisfied with the management's attitude towards them".

However, it is argued in the literature that in order to satisfy the external customers, it is first important to satisfy the employees (internal customers). Kotler (1994) stated that "Excellent service companies believe that employee relations will reflect on customer relations. Management carries out internal marketing and creates an environment of employee support and rewards for good service performance. Management regularly audits employees' satisfaction with their jobs". Horovitz and Cudennec-Poon (1990) added, "when the front-line people feel good, the customers feel good too which in turn makes the front-line people feel even better because they have done a good job". Gunasekaran (1999) argued that improvement of customer

satisfaction begins through understanding of customers' (internal as well as external) expectations and specifications; the efficiency of business operations can always be improved by reflecting customer needs and requirements; also, job satisfaction in the organisation helps to promote customer satisfaction by way of supporting TQM.

Teamwork

Table 6.4.5 shows the results of examining the significance of the "Teamwork" concept, which was presented in the questionnaire via the statement "OMANTEL must give a great attention to teamwork spirit; and must encourage and prepare its employees to work in teams":

Table 6.4.5: The Significance of the "Teamwork" Concept

Significance	% 1= most significant (N)	% 2= significant (N)	% 3= less significant (N)	% 4= not significant (N)
Teamwork	72.4% (110)	25.7% (39)	0.7% (1)	1.3% (2)
Mean of Value = 1.31		Std Dev. = .550		

The majority of respondents rated the concept as *most significant* and *significant*. Only a small percentage of respondents rated the concept as *less significant* and *not significant*.

Table 6.4.6 shows the extent to which each occupational group of respondents rated the significance of the Teamwork concept:

Table 6.4.6: The Significance of the "Teamwork" Concept According to Occupation Level

		Occupation Level % (N = 152)				% Total (N)
		% Top- Mgt. (N=6)	% Middle Mgt. (N=15)	% First-Line Mgt. (N=22)	% Employees (N=109)	
Teamwork	Most significant	83.3% (5)	80.0% (12)	72.7% (16)	70.6% (77)	72.4% (110)
	Significant	16.7% (1)	20.0% (3)	22.7% (5)	27.5% (30)	25.7% (39)
	Less significant	0% (0)	0% (0)	4.5% (1)	0% (0)	0.7% (1)
	Not significant	0% (0)	0% (0)	0% (0)	1.8% (2)	1.3% (2)
	Total	100.0% (6)	100.0% (15)	100.0% (22)	100.0% (109)	100.0% (152)

Chi-Square = .149 Asymp. Sig = .985 (Significant Chi-square values are at P<0.05)

The findings presented in Table 6.4.6 indicate that all of the top and middle managers rated the concept as *most significant* and *significant*. The first-line managers and employees also rated the concept as *most significant* and *significant* to a high extent, but a small percentage of them rated it as less significant, and a very small percentage of employees rated the it as *not significant*. The results show that all groups of the respondents recognised the significance of the concept, which suggests that OMANTEL must give a great attention to teamwork; and must encourage and prepare employees to work in teams.

To ascertain the extent to which the concept of Teamwork and its methods are being practised in OMANTEL, the sample was presented with seven statements. The results are provided in Table 6.4.7 and Table 6.4.8:

Table 6.4.7: The Practice of the “Teamwork” Concept

	% Agree (N)	% Neutral (N)	% Disagree (N)	% Total (N)
1. Top management of OMANTEL regards team spirit as an important factor for improvement and encourages the employees to work in teams.	57.2% (87)	23.7% (36)	19.1% (29)	100.0% (152)
2. In OMANTEL, there are many cross-functional teams solving quality problems and planning the quality of services.	40.8% (62)	32.2% (49)	26.9% (41)	100.0% (152)
3. The training sessions of OMANTEL prepare its personnel to work in teams and use quality improvement tools and techniques on the job.	49.4% (75)	23.7% (36)	27.0% (41)	100.0% (152)
4. OMANTEL identifies gaps between its training and TQM training needs.	51.3% (78)	19.7% (30)	28.9% (44)	100.0% (152)
5. OMANTEL trains its qualified personnel to be team facilitators.	42.1% (64)	24.3% (37)	33.6% (51)	100.0% (152)
6. OMANTEL encourages its senior managers to work in teams to create and set up its long-term strategies.	54.6% (83)	23.7% (36)	21.7% (33)	100.0% (152)
7. OMANTEL trains the senior managers to become team facilitators and educated in TQM.	59.2% (90)	25.0% (38)	15.8% (24)	100.0% (152)

Table 6.4.8: The Practice of the “Teamwork” Concept According to Occupation Level

	Occupation Level (% of Agree)			
	% Top-Mgt. (N=6)	% Middle Mgt. (N=15)	% First-Line Mgt. (N=22)	% Employees (N=109)
1. Top management of OMANTEL regards team spirit as an important factor for improvement and encourages the employees to work in teams.	83.3% (5)	66.7% (10)	50.0% (11)	56.0% (61)
2. In OMANTEL, there are many cross-functional teams solving quality problems and planning the quality of services.	33.3% (2)	19.7% (3)	45.5% (10)	43.2% (47)
3. The training sessions of OMANTEL prepare its personnel to work in teams and use quality improvement tools and techniques on the job.	33.3% (2)	46.7% (7)	54.6% (12)	49.5% (54)
4. OMANTEL identifies gaps between its training and TQM training needs.	33.4% (2)	46.6% (7)	63.6% (14)	50.4% (55)
5. OMANTEL trains its qualified personnel to be team facilitators.	33.4% (2)	46.7% (7)	45.4% (10)	41.3% (45)
6. OMANTEL encourages its senior managers to work in teams to create and set up its long-term strategies.	50.0% (3)	46.6% (7)	68.2% (15)	53.2% (58)
7. OMANTEL trains the senior managers to become team facilitators and educated in TQM.	50.0% (3)	46.6% (7)	59.1% (13)	61.4% (67)

Chi-Square = 1.004 Asymp. Sig = .800 (Significant Chi-square values are at $P < 0.05$)

The first statement aimed to identify the extent to which OMANTEL's top management regards teamwork as an important factor for improvement and encourages the employees to work in teams. The results, as shown in Table 6.4.7, indicate that the majority of respondents *agreed* with the statement. A small percentage of respondents were *neutral* and *disagreed* with the statement. Since the main concern of the statement was the top management, it is perhaps not surprising that the majority of the respondents who *agreed* with the statement were top managers. The other occupational groups of respondents also agreed with the statement to a large extent, but to a lesser extent than top managers. The results indicate that there was a general agreement to a large extent among all groups of the respondents that the management of OMANTEL regards teamwork as an important factor for improvement and encourages the employees to work in teams. Thus, it could be said that there is awareness in OMANTEL about the importance of teamwork.

The second statement aimed to identify whether or not there were cross-functional teams in OMANTEL solving quality problems and planning the quality of services. Here, a small percentage of respondents agreed with the statement; the majority of

respondents were *neutral* and *disagreed* with the statement. The results provided in Table 6.4.8 show that all groups of respondents agreed with the statement to a low extent, although the first-line managers and employees agreed with it to a higher extent than the top and middle managers. The results suggest that there are no cross-functional teams in OMANTEL intended to solve quality problems and plan to improve service quality.

The third statement was intended to identify whether or not the training offered by OMANTEL prepare its personnel to work in teams and use the quality improvement tools and techniques on the job. The results, shown in Table 6.4.7, indicate that less than half of respondents *agreed* with the statement. The results show that more than half of respondents were *neutral* and *disagreed* with the statement. The results further show that the first-line managers and employees were more inclined to *agree* with statement than were top and middle managers; this could be due to the fact that either they intended to show that they are prepared to work in teams, or willing and have the ability to work in teams. However, it could not be said that the training sessions currently offered by OMANTEL prepare its employees to work in teams and use quality improvement tools and techniques.

The fourth statement tested whether OMANTEL identifies gaps between its current training and TQM training needs. More than half of respondents *agreed* with the statement, with the first-line managers and employees *agreeing* with the statement to a greater extent than top and middle managers. The high percentage of the first-line managers and employees agreeing with the statement could be due to the fact that they may suppose that OMANTEL should know and identify the gaps between its current and TQM training needs. Overall, however, the results suggest that OMANTEL identifies the gaps between its current training and TQM training needs.

The fifth statement tested whether OMANTEL identifies and trains the best people to be team facilitators. A low percentage of respondents *agreed* with the statement; the majority of them were *neutral* and *disagreed* with the statement. Top managers *agreed* with the statement to a lesser extent than the other groups, which indicates that they were of the opinion that OMANTEL does not identify and train its best people to be team facilitators. The percentages of the other groups would suggest that they might felt that OMANTEL identifies and trains the best people to be team facilitators. However, the overall results of rating the statement indicate that OMANTEL is not making sufficiently serious efforts to identify and train its best people to be team facilitators and that this issue is not being taken seriously.

The sixth statement sought to discern the extent to which OMANTEL encourages its senior managers to work together as a team to create the organisational mission, vision, values, and implementation strategies. The results, presented in Table 6.4.7, show that the majority of respondents *agreed* with the statement. The results also show that a low percentage of respondents were *neutral* and *disagreed* with the statement. The results of rating the statement provided in Table 6.4.8 show that the middle managers agreed with the statement to a lower extent than the other groups, which could be due to the fact that they may felt that they are not encouraged to work in teams and participate in setting up the organisation's policies and strategies. The other groups agreed with the statement to a high extent. The results show that more than half of the respondents agreed with the statement, which suggests that OMANTEL encourages its senior managers to work as a team to create its mission, vision, values, and implementation strategies.

The last statement was intended to identify whether OMANTEL trains its senior managers to become educated in TQM. A high percentage of respondents *agreed* with the statement, with the first-line managers and employees *agreeing* with the statement to a higher extent than the top and middle managers. The high percentage of first-line managers and employees agreeing with the statement could be due to the fact that these groups of respondents may feel or assume that the senior managers of the organisation should have been trained and educated in TQM.

The results of rating the significance of the Teamwork concept indicated that it was rated as *significant* to a large extent, which suggests that the respondents recognised the significance of the concept and were of the opinion that OMANTEL must give teamwork attention and must encourage and prepare its personnel to work in teams. Where the practice of the concept was concerned, the results suggest that the top management of OMANTEL regards teamwork as an important factor for improvement and encourages the employees to work in teams and identifies the gaps between its current training and TQM training needs. The results also suggest that OMANTEL encourages its senior managers to work as a team to create its mission, vision, values, and strategies, and to become educated in TQM; but that it lacks cross-functional teams to solve quality problems and its training programmes do not prepare or qualify its personnel to work in teams and use quality improvement methods to solve quality problems and to become team facilitators.

An empirical survey of TQM implementation in Thailand, carried out by Krasachol and Tannock (1999), revealed that the factors such as working in team, human resource

development, and effective training programmes were the key success factors of TQM implementation in the companies studied.

Quality Through People

The concept of “Quality Through People” appeared in the questionnaire as “There must be a basic belief in OMANEL that quality can be achieved through people, and that people make quality, not equipment or systems”. The results of rating the significance of this concept are provided in Table 6.4.9 and Table 6.4.10:

Table 6.4.9: The Significance of the “Quality Through People” Concept

<i>Significance</i>	% 1= most significant (N)	% 2= significant (N)	% 3= less significant (N)	% 4= not significant (N)
Quality Through People	53.3% (81)	36.8% (56)	7.2% (11)	2.6% (4)
Mean of Value = 1.592 Std Dev. = .740				

Table 6.4.9 shows that the majority of respondents rated the concept as *most significant* and *significant*. A small percentage of respondents rated the concept as *less significant*, and a very small percentage of them rated it as *not significant* at all.

**Table 6.4.10: The Significance of the “Quality Through People” Concept
According to Occupation Level**

		Occupation Level % (N = 152)				% Total (N)
		% Top-Mgt. (N=6)	% Middle Mgt. (N=15)	% First-Line Mgt. (N=22)	% Employees (N=109)	
Quality Through People	Most significant	66.7% (4)	46.7% (7)	59.1% (13)	52.3% (57)	53.3% (81)
	Significant	33.3% (2)	26.7% (4)	27.3% (6)	40.4% (44)	36.8% (56)
	Less significant	0% (0)	20.0% (3)	13.6% (3)	4.6% (5)	7.2% (11)
	Not significant	0% (0)	6.7% (1)	0% (0)	2.8% (3)	2.6% (4)
	Total	100.0% (6)	100.0% (15)	100.0% (22)	100.0% (109)	100.0% (152)

Chi-Square = 2.947 Asymp. Sig = .400 (Significant Chi-square values are at P<0.05)

The results in Table 6.4.10 show that the top managers regarded the concept as *significant* to a higher extent than the other groups and that no occupational group rated it as *less significant* or *not significant*. The results similarly show that the majority of respondents from the other groups also rated the concept as *significant*, but a small percentage in those other groups rated it as *less significant*, whilst only a smaller percentage of middle managers and employees rated the principle as *not significant* at all. This would suggest that top managers have a greater awareness of the importance of people in achieving quality and improvement; it would also suggest that they recognised the importance of implementing such a concept in OMANTEL.

To test the extent to which the importance of people is manifested in practice in OMANTEL, the respondents were asked if the employees or the personnel in general are encouraged to play an important role in improving the quality of services. The results are provided in Table 6.4.11 and Table 6.4.12:

Table 6.4.11: The Practice of the “Quality Through People” Concept

	% Agree (N)	% Neutral (N)	% Disagree (N)	% Total (N)
1. Within OMANTEL, the employees are encouraged to play an important role in improving the quality of services.	55.3% (84)	21.1% (32)	23.7% (36)	100.0% (152)

Table 6.4.12: The Practice of the “Quality Through People” Concept According to Occupation Level

	Occupation Level (% of Agree)			
	% Top-Mgt. (N=6)	% Middle Mgt. (N=15)	% First-Line Mgt. (N=22)	% Employees (N=109)
1. Within OMANTEL, the employees are encouraged to play an important role in improving the quality of services.	50.0% (3)	46.7% (7)	54.6% (12)	56.9% (62)

Chi-Square = 1.806 Asymp. Sig = .614 (Significant Chi-square values are at $P < 0.05$)

Table 6.4.11 shows that the majority of respondents *agreed* with the statement; a low percentage of respondents were *neutral* and *disagreed* with the statement. The results provided in Table 6.4.12 show that the middle managers *agreed* with the statement to a less extent than other occupational groups. Some variation was noted in that half of the top managers *agreed* with the statement, but first-line managers and

employees *agreed* with the statement to a greater extent than did both the top and middle managers. The findings in respect of the middle managers might suggest that they may felt that employees are not encouraged and given an important role in improving the quality of services. The percentage of the first-line managers and employees agreeing with the statement and the overall results of rating the statement, suggest that the employees in OMANTEL are encouraged to play an important role in improving the quality of services. This would suggest that there is a belief in OMANTEL that quality is achieved through people.

The results of rating the significance and statement related to the practice of the Quality Through People concept suggest that there is a basic belief in OMANTEL that quality is achieved through the organisation's people instead of its equipment and systems and that people make quality. The results also suggest that this was recognised by respondents.

Quality on All Agendas

The concept of "Quality on all Agendas" was presented via the statement "The quality issues must be on all of OMANTEL's top management's agendas".

Table 6.4.13: The Significance of the "Quality on All Agendas" Concept

<i>Significance</i>	% 1= most significant (N)	% 2= significant (N)	% 3= less significant (N)	% 4= not significant (N)
Quality on All Agendas	50.0% (76)	40.1% (61)	9.2% (14)	0.7% (1)
Mean of Value = 1.605		Std Dev. = .682		

The results provided in Table 6.4.13 show that the majority of respondents rated the concept as *most significant* and *significant* although a high percentage of them, as compared to the support afforded to other concepts, rated it as *less significant* and *not significant*.

Table 6.4.14: The Significance of the “Quality on all Agendas” Concept According to Occupation Level

		Occupation Level % (N = 152)				% Total (N)
		% Top-Mgt. (N=6)	% Middle Mgt. (N=15)	% First-Line Mgt. (N=22)	% Employees (N=109)	
Quality on All Agendas	Most significant	66.7% (4)	26.7% (4)	50.0% (11)	52.3% (57)	50.0% (76)
	Significant	33.3% (2)	66.7% (10)	36.4% (8)	37.6% (41)	40.1% (61)
	Less significant	0% (0)	6.7% (1)	9.1% (2)	10.1% (11)	9.2% (14)
	Not significant	0% (0)	0% (0)	4.5% (1)	0% (0)	0.7% (1)
	Total	100.0% (6)	100.0% (15)	100.0% (22)	100.0% (109)	100.0% (152)

Chi-Square = 2.811 Asymp. Sig = .422 (Significant Chi-square values are at $P < 0.05$)

Table 6.4.14 reveals that the majority of respondents who rated the concept as *most significant* and *significant* were top managers as none of them rated it as *less significant* and *not significant*. A small percentage of respondents from the other groups rated the principle as *less significant* in addition to a small percentage of first-line managers rating it as *not significant*. This means that top managers rated the concept as *significant* to a greater extent than the other groups of the respondents, indicating that this group of the respondents recognised, more than the other groups, the importance of having the quality issues on their agendas. This, in turn, suggests the awareness and willingness of top management to emphasise importance of quality throughout OMANTEL.

To examine the extent to which the concept is being practised in OMANTEL, the respondents were presented with five statements. The results provided in Table 6.4.15 and Table 6.4.16 show the extent to which the respondents agreed with those statements:

Table 6.4.15: The Practice of the “Quality on All Agendas” Concept

	% Agree (N)	% Neutral (N)	% Disagree (N)	% Total (N)
1. The issues related to quality, customer service and satisfaction are on the agendas of OMANTEL’s management all the time.	57.2% (87)	23.0% (35)	19.8% (30)	100.0% (152)
2. The management of OMANTEL encourages the employees to produce quality services and includes quality factors in every employee’s job description.	46.7% (71)	24.3% (37)	28.9% (44)	100.0% (152)
3. The management of OMANTEL takes into the consideration the quality factors when appraising and promoting the employees.	52.6% (80)	30.3% (46)	17.1% (26)	100.0% (152)
4. The management of OMANTEL takes into the consideration the quality factors in designing and setting up its marketing and sales strategies.	53.3% (81)	32.9% (50)	13.9% (21)	100.0% (152)

Table 6.4.16: The Practice of the “Quality on All Agendas” Concept According to Occupation Level

	Occupation Level (% of Agree)			
	% Top- Mgt. (N=6)	% Middle Mgt. (N=15)	% First-Line Mgt. (N=22)	% Employees (N=109)
1. The issues related to quality, customer service and satisfaction are on the agendas of OMANTEL’s management all the time.	66.7% (4)	33.3% (5)	63.6% (14)	58.7% (64)
2. The management of OMANTEL encourages the employees to produce quality services and includes quality factors in every employee’s job description.	16.7% (1)	53.3% (8)	27.3% (6)	47.7% (52)
3. The management of OMANTEL takes into the consideration the quality factors when appraising and promoting the employees.	33.3% (2)	40.0% (6)	40.9% (9)	49.5% (54)
4. The management of OMANTEL takes into the consideration the quality factors in designing and setting up its marketing and sales strategies.	50.0% (3)	40.0% (6)	54.6% (12)	54.1% (59)

Chi-Square = 3.160 Asymp. Sig = .368 (Significant Chi-square values are at $P < 0.05$)

The first statement relating to the practice of the Quality on All Agendas concept sought to ascertain whether the issues of quality, customer service and satisfaction appeared on the agendas of OMANTEL’s management all the time. Table 6.4.15 shows that the majority of respondents *agreed* with the statement; a small percentage of respondents were *neutral* with the statement; and a very small percentage of them *disagreed* with the statement. Table 6.4.16 shows strong support for the concept from top and first-line managers and employees. The middle managers *agreed* with the

statement to a lower extent than the other groups, which suggests that they might be not taking quality issues seriously.

The second statement aimed to test whether the management of OMANTEL encourages the employees to produce high quality services and to include quality factors in every employee's job description. The results, provided in Table 6.4.15, show that a low percentage of respondents *agreed* with the statement; the majority of the respondents were *neutral* and *disagreed* with the statement. The results provided in Table 6.4.16 show that top and first-line managers agreed with the statement to a very low extent. The middle managers and employees agreed with the statement to a higher extent than the top and first-line managers. The percentage of middle managers would suggest that they may encourage their employees to produce quality services and include this factor in their employees' job descriptions. The percentage of employees would suggest that they may supposed that the management is concerned about producing high quality services and accordingly they are required to do so. The results imply that the quality is not aligned or involved in the employees' job descriptions. There is the distinct possibility that employees are not required to take quality as a critical factor in their routine work, and that the management is not concerned about ensuring that quality is an essential component of daily work.

The third statement aimed to identify whether the management of OMANTEL takes into consideration quality factors when appraising employees' performance and promoting employees. Table 6.4.15 shows that a low percentage of respondents were of the opinion that the management of OMANTEL takes the quality into the consideration in the matters related to appraisal and promotion with the majority of respondents either being *neutral* and *disagreeing* with the statement. The results provided in Table 6.4.16 show that a low percentage of respondents, from all groups, *agreed* with the statement. The employees *agreed* with the statement to a higher extent than the other groups, which would suggest that they think that management is appraising and promoting them according to their contributions to quality. The low percentage of respondents, particularly from the management levels, agreeing with the statement suggests that the management of OMANTEL does not align quality with promotion and appraisal. This is supported by the low percentage of the respondent at all managerial levels agreeing with the statement. Accordingly, it could be said that the quality is not taken as an important factor when appraising the job or the performance of the employees, and that the employees are not promoted or rewarded according to their performance quality or contribution in quality improvements. As one respondent observed, "The management

of OMANTEL seldom aligns quality with appraisal and promotion. When the question of promotion, increment and/or bonus comes, the management rewards employees on the basis of personal favouritism and not on account of their merit or quality output, leading to frustration amongst staff. The management neither reward staff for a good job nor take action against undisciplined staff, which results in staff's indifference to the TQM concept."

The last statement was aimed to identify whether the management of OMANTEL took into the consideration the quality factor in designing and setting up its marketing and sales strategies. As Table 6.4.15 shows, the majority of respondents *agreed* with the statement; a low percentage of respondents were *neutral* toward the statement; and a very low percentage of them *disagreed* with it. Table 6.4.16 shows that the middle managers were least in *agreement* with the statement; with strongest support being exhibited by first-line managers and employees. Overall, however, the results imply that the management of OMANTEL aligns the quality with marketing and sales to some extent, particularly at the top and first-line management levels.

The overall results of rating the statements related to the practice of the Quality on All Agendas concept indicate that quality and customer satisfaction are on management's agendas, and taken into the consideration in designing marketing and sales strategies. The results suggest that the quality factors are not being taken into consideration when rewarding and promoting employees, nor are they used in employees' job descriptions. The overall results suggest that the concept is being practised to some extent in OMANTEL, and that the respondents were of the opinion that quality issues must be on all of OMANTEL's top management's agendas.

All Work is Process

Table 6.4.17 shows the results of rating the significance of the "All Work is Process" concept, which appeared in the questionnaire as the statement, "The process of quality improvement must be regarded as a process rather than a project":

Table 6.4.17: The Significance of the "All Work is Process" Concept

<i>Significance</i>	% 1= most significant (N)	% 2= significant (N)	% 3= less significant (N)	% 4= not significant (N)
All Work is Process	65.8% (100)	32.2% (49)	2.0% (3)	0% (0)
Mean of Value = 1.360 Std Dev. = .520				

Almost all respondents rated the concept as *most significant* and *significant*, with only a very small percentage of respondents rating the concept as *less significant*.

The results provided in Table 6.4.18 show the extent to which each group of respondents evaluated the All Work is Process concept; and show that the top and first-line managers recognised the significance of the concept to a higher extent than the middle managers and employees. Further, the results show that all groups of the respondents considered the concept as *significant* to a large extent; meaning that all of them were of the opinion that the process of quality improvement must be regarded as a process rather than a project.

Table 6.4.18: The Significance of the “All Work is Process” Concept According to Occupation Level

		Occupation Level % (N = 152)				% Total (N)
		% Top-Mgt. (N=6)	% Middle Mgt. (N=15)	% First-Line Mgt. (N=22)	% Employees (N=109)	
All Work is Process	Most significant	66.7% (4)	66.7% (10)	77.3% (17)	63.3% (69)	65.8% (100)
	Significant	33.3% (2)	26.7% (4)	22.7% (5)	34.9% (38)	32.2% (49)
	Less significant	0% (0)	6.7% (1)	0% (0)	1.8% (2)	2.0% (3)
	Not significant	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)
	Total	100.0% (6)	100.0% (15)	100.0% (22)	100.0% (109)	100.0% (152)

Chi-Square = 1.056 Asymp. Sig = .788 (Significant Chi-square values are at P<0.05)

To test the extent to which the concept of the All Work is Process is being practised in OMANTEL, the respondents were presented with two statements relating to it. The results are provided in Table 6.4.19 and Table 6.4.20:

Table 6.4.19: The Practice of the “All Work is Process” Concept

	% Agree (N)	% Neutral (N)	% Disagree (N)	% Total (N)
1. In OMANTEL, the process of improvement is regarded as a process that needs appropriate inputs in order to produce appropriate outputs.	57.2% (87)	28.9% (44)	13.80% (21)	100.0% (152)
2. OMANTEL’s senior managers regard each project of improvement as a process.	55.3% (84)	32.9% (50)	11.8% (18)	100.0% (152)

Table 6.4.20: The Practice of the “All Work is Process” Concept According to Occupation Level

	Occupation Level (% of Agree)			
	% Top- Mgt. (N=6)	% Middle Mgt. (N=15)	% First-Line Mgt. (N=22)	% Employees (N=109)
1. In OMANTEL, the process of improvement is regarded as a process that needs appropriate inputs in order to produce appropriate outputs.	50.0% (3)	33.3% (5)	59.1% (13)	60.5% (66)
2. OMANTEL’s senior managers regard each project of improvement as a process.	50.0% (3)	46.7% (7)	54.6% (12)	56.9% (62)

Chi-Square = 1.651 Asymp. Sig = .648 (Significant Chi-square values are at $P < 0.05$)

The first statement relating to the practice of the All Work is Process concept sought to discover whether the process of improvement in OMANTEL is regarded as a process that needs appropriate inputs in order to produce appropriate outputs. The results, shown in Table 6.4.19, reveal that the majority of respondents were of the opinion that in OMANTEL the process of improvement is regarded as a process that needs appropriate inputs in order to produce appropriate outputs. A small percentage of respondents were *neutral* toward this statement, and a smaller percentage of them *disagreed* with it. First-line managers and employees *agreed* with the statement to a higher extent than the top and middle managers. This would indicate that the people who actually conduct the work and improvement processes recognise that the improvement processes require appropriate inputs to produce appropriate outputs. Top managers appear to be aware of this fact and collectively there is evidence to suggest that the improvement processes in OMANTEL are being regarded as long-term processes that need appropriate inputs in order to produce appropriate outputs, rather than short-term projects.

The second statement tested whether the senior managers of OMANTEL regarded each project of improvement as a process. Table 6.4.19 shows that the majority of respondents were of the opinion that the senior managers regard each project of improvement as a process. A small percentage of respondents were *neutral* toward the statement; a very small percentage of them *disagreed* with the statement. The highest percentage of respondents *agreeing* with the statement were to be found amongst the first-line managers and employees; much less support was evidenced by middle managers. Overall, the results suggest that the senior managers of OMANTEL regard each improvement project as a process, and the employees seem to be carrying out these processes accordingly.

Management Commitment

Table 6.4.21 illustrates the results of rating the significance of the “Management Commitment” concept, which was presented in the questionnaire as the statement “Quality improvement requires senior managers’ participation and commitment. OMANTEL’s senior managers must play a guiding role and must show visible involvement in quality improvement initiatives”:

Table 6.4.21: The Significance of the “Management Commitment” Concept

<i>Significance</i>	% 1= most significant (N)	% 2= significant (N)	% 3= less significant (N)	% 4= not significant (N)
Management Commitment	65.8% (100)	30.9% (47)	2.6% (4)	0.7% (1)
Mean of Value = 1.382		Std Dev. = .575		

The majority of respondents rated the concept as *most significant* and *significant*. A small percentage of respondents rated the concept as *less significant* and *not significant*.

Table 6.4.22: The Significance of the “Management Commitment” Concept According to Occupation Level

		Occupation Level % (N = 152)				% Total (N)
		% Top- Mgt. (N=6)	% Middle Mgt. (N=15)	% First-Line Mgt. (N=22)	% Employees (N=109)	
Management Commitment	Most significant	83.3% (5)	66.7% (10)	63.6% (14)	65.1% (71)	65.8% (100)
	Significant	16.7% (1)	26.7% (4)	27.3% (6)	33.0% (36)	30.9% (47)
	Less significant	0% (0)	6.7% (1)	9.1% (2)	0.9% (1)	2.6% (4)
	Not significant	0% (0)	0% (0)	0% (0)	0.9% (1)	0.7% (1)
	Total	100.0% (6)	100.0% (15)	100.0% (22)	100.0% (109)	100.0% (152)

Chi-Square = 2.559 Asymp. Sig = .467 (Significant Chi-square values are at P<0.05)

Table 6.4.22 shows that top managers rated the concept as *significant* to a higher extent than the other groups of the respondents. This would suggest their seriousness and willingness to show commitment to quality. The other groups also rated the concept

as *significant* to a high extent, but a small percentage of respondents from each group rated it as *less significant*, and a very small percentage of employees rated it as *not significant*. The overall results of rating the significance of the concept indicate that the respondents were strongly of the opinion that the senior managers of OMANTEL must show visible commitment and involvement in matters concerning quality in order to improve the quality of services.

The respondents were presented with six statements relating to the practice of the Management Commitment concept. The results of rating the statements are provided in Table 6.4.23 and Table 6.4.24:

Table 6.4.23: The Practice of the “Management Commitment” Concept

	% Agree (N)	% Neutral (N)	% Disagree (N)	% Total (N)
1. The senior managers of OMANTEL take proactive roles and show commitment to the matters related to quality and customer service and satisfaction.	61.2 % (93)	28.9% (44)	9.9% (15)	100.0% (152)
2. The senior managers of OMANTEL show personal and visible commitment in designing customer services and quality improvement processes and projects.	57.9 % (88)	29.6% (45)	12.5% (19)	100.0% (152)
3. The contribution of employees in quality improvement is recognised and rewarded by the senior managers of OMANTEL.	54.0 % (82)	27.6% (42)	18.4% (28)	100.0% (152)
4. The senior managers of OMANTEL review the progress of quality improvement and take prompt corrective actions when necessary.	42.1 % (64)	42.1% (64)	15.8% (24)	100.0% (152)
5. The senior managers of OMANTEL listen to the voice of employees they raise matters related to quality improvement.	42.2 % (64)	30.3% (46)	27.6% (42)	100.0% (152)
6. The senior managers of OMANTEL show visible commitment and take ownership of improvement processes.	51.4 % (78)	32.9% (50)	15.8% (24)	100.0% (152)

Table 6.4.24: The Practice of the “Management Commitment” Concept According to Occupation Level

	Occupation Level (% of Agree)			
	% Top-Mgt. (N=6)	% Middle Mgt. (N=15)	% First-Line Mgt. (N=22)	% Employees (N=109)
1. The senior managers of OMANTEL take proactive roles and show commitment to the matters related to quality and customer service and satisfaction.	66.7% (4)	53.3% (8)	63.6% (14)	61.4% (67)
2. The senior managers of OMANTEL show personal and visible commitment in designing customer services and quality improvement processes and projects.	50.0% (3)	46.6% (7)	50.0% (11)	61.4% (67)
3. The contribution of employees in quality improvement is recognised and rewarded by the senior managers of OMANTEL.	83.3% (5)	53.3% (8)	50.0% (11)	53.2% (58)
4. The senior managers of OMANTEL review the progress of quality improvement and take prompt corrective actions when necessary.	50.0% (3)	33.3% (5)	36.3% (8)	44.0% (48)
5. The senior managers of OMANTEL listen to the voice of employees they raise matters related to quality improvement.	66.6% (4)	40.0% (6)	31.8% (7)	43.1% (47)
6. The senior managers of OMANTEL show visible commitment and take ownership of improvement processes.	66.6% (4)	60.0% (9)	40.9% (9)	51.3% (56)

Chi-Square = 1.009 Asymp. Sig = .799 (Significant Chi-square values are at P<0.05)

The first statement relating to the practice of the Management Commitment concept tested whether the senior managers of OMANTEL take proactive roles and show commitment to the matters related to quality and customer satisfaction. Table 6.4.23 reveals that the majority of respondents *agreed* with the statement; a small percentage of them were *neutral*; and a very small percentage of them *disagreed* with the statement. Table 6.4.24 shows a tendency by all occupational groups to *agree* with the statement to a large extent, particularly top managers. The results of rating the statement suggest that the senior managers of OMANTEL are concerned about the quality and customer satisfaction and take proactive roles in these matters. The results of this statement are consistent with the results of rating the statement related to the principle of Quality on All Agendas, which indicated that the issues related to quality, customer service and satisfaction are on the agendas of OMANTEL’s management all the time.

The second statement tested whether the senior managers of OMANTEL are personally and visibly committed to designing the quality improvement processes and projects. Table 6.4.23 shows that the majority of respondents *agreed* with the statement.

The results also show that a small percentage of respondents were *neutral* with the statement; and a very low percentage of them disagreed with it. The results of rating the statement revealed in Table 6.4.24 show that the middle managers *agreed* with the statement to a less extent than the other groups, which could be due to the fact that they recognised that the senior managers are not showing visible involvement in designing quality processes. The other groups of respondents agreed with the statement to a high extent, which suggests that the senior managers of OMANTEL are personally and visibly involved in designing quality improvement processes and projects.

The third statement tested whether OMANTEL's senior managers recognise and rewarded the contribution made by their employees to quality improvement. Table 6.4.23 shows that the majority of respondents *agreed* with the statement; with a small percentage of respondents being *neutral* or *disagreeing* with the statement. The results provided in Table 6.4.24 reveal that all groups of respondents *agreed* with the statement to a high extent; thus suggesting that OMANTEL's senior managers recognise the contribution of their employees in quality improvement processes. Such a finding is consistent with the results of the statement related to the Quality Through People concept, which indicated that within OMANTEL the employees are encouraged to play an important role in improving the quality of services.

The fourth statement was intended to identify if management is committed to quality matters by the means of regularly reviewing the progress of quality and achievements gained, and taking of corrective actions when necessary. The results of rating this statement show that a low percentage of respondents *agreed* with the statement; the majority of respondents were *neutral* and *disagreed* with the statement. Table 6.4.24 shows that the top managers agreed with the statement to higher extent than the other groups, which could be due to the fact that they may intend to show that they are concerned about the progress of quality, whilst not being actively involved its attainment. The overall results suggest that the senior managers of OMANTEL are not concerned about the achievements in quality and do not review the status and progress of quality and take actions and thus fall short of manifestly showing their commitment.

The fifth statement aimed to identify if OMANTEL's senior managers are committed to quality by the mean of listening to the employees. Table 6.4.23 shows that a low percentage of respondents *agreed* with the statement; the majority of them were *neutral* and *disagreed* with the statement. Since the statement mentioned the top managers and tested whether they were listening to the employees, it is not surprising that the results provided in Table 6.4.24 show that the largest percentage of respondents

agreeing with the statement was to be found amongst the top managers. The overall results and the percentages of the other groups suggest that the senior managers at OMANTEL are not being committed to quality by the mean of listening to the voice of their employees. A survey by Gunsekaran (1999), dealt with the implementation issues of TQM in the manufacturing sector of the UK, revealed that lack of communication was one of the major problems faced in the implementation of TQM. Most respondents in Gunsekaran's study felt that some managers or supervisors did not communicate with them properly. In this regard, Chowdhury (2000) stated that "Effective communication helps to breakdown traditional organisational hierarchy. It also encourages communication of both good and bad news, so that any type of news can travel from one end of the company to the other, and through all levels. The 21st century leader will be a firm believer in such people-to-people communication, which is fast and all-enveloping".

The last statement tested if the senior managers of OMANTEL are committed to quality by taking ownership of improvements processes. Table 6.4.23 shows that more than half of respondents *agreed* with the statement. The results provided in Table 6.4.24 show that the first-line managers *agreed* with the statement to a low extent, which suggests that there might be a feeling amongst them that the senior managers are not taking ownership of improvement processes. Since the statement mentioned the senior managers, the top and middle managers *agreed* with the statement to a higher extent than the first-line managers and employees.

The results of rating the Management Commitment concept show that it was rated as a *significant* principle, which suggests that the respondents were of the opinion that OMANTEL's senior management must play a guiding role and must show visible involvement in quality improvement initiatives. The results of rating the statements relating to the practice of the concept indicate that it is being practised to some extent in OMANTEL. This suggests that the management of OMANTEL is committed to quality - by taking proactive roles in matters concerning quality, designing the quality improvement processes, recognising the contribution of the employees to quality, and taking ownership of improvement processes - but that it does not show commitment to quality by taking effective correction actions to review the progress of quality and listen to the voice of employees.

Prevention

Table 6.4.25 gives the results of rating the significance of the "Prevention" concept, which appeared in the questionnaire as "The causes of errors and problems need to be

identified from the sources, and prevented or tackled as soon as they are identified in order to reduce their costs”. Table 6. 4. 26 shows the extent to which each occupational group of respondents rated the significance of the concept:

Table 6.4.25: The Significance of the “Prevention” Concept

<i>Significance</i>	% 1= most significant (N)	% 2= significant (N)	% 3= less significant (N)	% 4= not significant (N)
Prevention	69.7% (106)	29.6% (45)	0.7% (1)	0% (0)
Mean of Value = 1.308 Std Dev. = .478				

Table 6.4.26: The Significance of the “Prevention” Concept According to Occupation Level

		Occupation level % (N = 152)				% Total (N)
		% Top-Mgt. (N=6)	% Middle Mgt. (N=15)	% First-Line Mgt. (N=22)	% Employees (N=109)	
Prevention	Most significant	50.0% (3)	66.7% (10)	72.7% (16)	70.6% (77)	69.7% (106)
	Significant	50.0% (3)	33.3% (5)	27.3% (6)	28.4% (31)	29.6% (45)
	Less significant	0% (0)	0% (0)	0% (0)	0.9% (1)	0.7% (1)
	Not significant	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)
	Total	100.0% (6)	100.0% (15)	100.0% (22)	100.0% (109)	100.0% (152)

Chi-Square = .796 Asymp. Sig = .850 (Significant Chi-square values are at $P < 0.05$)

Almost all respondents rated the concept as *most significant* and *significant*. A very small percentage of respondents rated the concept as *less significant*; with all occupational groups rating it as *significant* to a high extent. Overall, the results indicate that all respondents regarded the concept as *significant*, which indicates that all of them were of the opinion that preventing the causes of errors and problems from the sources costs less than rework and correction.

Where the practice of the Prevention concept was concerned, the respondents were presented with two statements. The results are provided in Table 6.4.27 and Table 6.4.28:

Table 6.4.27: The Practice of the “Prevention” Concept

	% Agree (N)	% Neutral (N)	% Disagree (N)	% Total (N)
1. OMANTEL’s senior managers and employees are aware of the Prevention principle.	57.2% (87)	23.0% (35)	19.7% (30)	100.0% (152)
2. There is a basic belief amongst OMANTEL’s employees to produce quality services right from the first time and every time in order to reduce the costs of rework and corrections.	56.5% (86)	21.1% (32)	22.3% (34)	100.0% (152)

Table 6.4.28: The Practice of the “Prevention” Concept According to Occupation Level

	Occupation Level (% of Agree)			
	% Top-Mgt. (N=6)	% Middle Mgt. (N=15)	% First-Line Mgt. (N=22)	% Employees (N=109)
1. OMANTEL’s senior managers and employees are aware of the Prevention concept.	66.7% (4)	66.7% (10)	54.5% (12)	55.9% (61)
2. There is a basic belief amongst OMANTEL’s employees to produce quality services right from the first time and every time in order to reduce the costs of rework and corrections.	66.7% (4)	46.7% (7)	59.1% (13)	56.8% (62)

Chi-Square = 1.256 Asymp. Sig = .740 (Significant Chi-square values are at $P < 0.05$)

The first statement tested the extent to which the employees and management of OMANTEL were aware of the concept of Prevention. The results of rating the statement are shown in Table 6.4.27 and support the view that the majority of respondents *agreed* that they were aware of the Prevention concept; a small percentage of respondents were *neutral* with the statement; and a very small percentage of respondents *disagreed* with it. All groups of respondents *agreed* with the statement to a large extent, but the results seem to suggest that the top and middle managers are aware of the concept to greater extent than the first-line managers and employees.

The second statement tested whether there was a basic belief amongst OMANTEL’s employees to produce quality services right from the first time and every time in order to reduce the costs of rework and corrections. Table 6.4.27 shows that the majority of respondents *agreed* with the statement; a small percentage of respondents were *neutral* and *disagreed* with the statement. The fact that the middle managers *agreed* with the statement to a low extent, may suggest that they may have felt or recognised that employees were not producing the work effectively to produce quality services right

from the first time. However, the overall results suggest that the employees of OMANTEL believe in producing the services right from the first time, and that they are aware of the fact that producing error-free services would cost less than rework and correcting the causes of the errors or problems. The results of this statement are consistent with the results of the statement related to the Values element, which indicated that OMANTEL's management and employees are always concerned to provide customers with reliable, tangible, and risk/doubt free services.

Customer Satisfaction

Table 6.4.29 shows the results of rating the significance of the "Customer Satisfaction" concept, which appeared in the questionnaire as the statement "The overall aim of the business must be customer satisfaction and profitability through increased productivity". Table 6.4.30 shows the extent to which each group of the respondents rated the significance of the concept.

Table 6.4.29: The Significance of the "Customer Satisfaction" Concept

<i>Significance</i>	% 1= most significant (N)	% 2= significant (N)	% 3= less significant (N)	% 4= not significant (N)
Customer Satisfaction	48.7% (74)	43.4% (66)	7.2% (11)	0.7% (1)
Mean of Value = 1.610 Std Dev. = .650				

Table 6.4.30: The Significance of the "Customer Satisfaction" Concept According to Occupation Level

		Occupation Level % (N = 152)				% Total (N)
		% Top Mgt. (N=6)	% Middle Mgt. (N=15)	% First-Line Mgt. (N=22)	% Employees (N=109)	
Customer Satisfaction	Most significant	100.0% (6)	33.3% (5)	36.4% (8)	50.5% (55)	48.7% (74)
	Significant	0% (0)	60.0% (9)	59.1% (13)	40.4% (44)	43.4% (66)
	Less significant	0% (0)	6.7% (1)	4.5% (1)	8.3% (9)	7.2% (11)
	Not significant	0% (0)	0% (0)	0% (0)	.9% (1)	.7% (1)
	Total	100.0% (6)	100.0% (15)	100.0% (22)	100.0% (109)	100.0% (152)

Chi-Square = 3.759 Asymp. Sig = .289 (Significant Chi-square values are at P<0.05)

As shown in Table 6.4.29, a small percentage of respondents rated it as *less significant*; and a very small percentage of respondents rated it as *not significant*. The results show that all respondents at the top management level rated the concept of the Customer Satisfaction as *most significant*. The other groups also rated it as *most significant* and *significant*, but small percentages of them rated it as *less significant*; and a very small percentage of employees rated the concept as *not significant*. These findings suggest that the respondents were of the opinion that the overall aim of the business in OMANTEL must be customer satisfaction and profitability through increased productivity.

To test whether the concept of Customer Satisfaction is being practised in OMANTEL, the respondents were presented with three statements relating to the concept.

Table 6.4.31: The Practice of the “Customer Satisfaction” Concept

	% Agree (N)	% Neutral (N)	% Disagree (N)	% Total (N)
1. OMANTEL’s business strategy is based on the concept of customer satisfaction through high quality and improved services.	42.8% (65)	32.9% (50)	24.4% (37)	100.0% (152)
2. OMANTEL links customers’ requirements to the development and improvement of the services.	67.7% (103)	22.4% (34)	9.9% (15)	100.0% (152)
3. OMANTEL anticipates its customers’ future needs and expectations.	67.1% (102)	18.4% (28)	14.5% (22)	100.0% (152)

Table 6.4.32: The Practice of the “Customer Satisfaction” Concept

According to Occupation Level

	Occupation Level (% of Agree)			
	% Top-Mgt. (N=6)	% Middle Mgt. (N=15)	% First-Line Mgt. (N=22)	% Employees (N=109)
1. OMANTEL’s business strategy is based on the concept of customer satisfaction through high quality and improved services.	50.0% (3)	40.0% (6)	31.8% (7)	44.9% (49)
2. OMANTEL links customers’ requirements to the development and improvement of the services.	66.7% (4)	66.7% (10)	63.6% (14)	68.9% (75)
3. OMANTEL anticipates its customers’ future needs and expectations.	66.7% (4)	86.7% (13)	77.2% (17)	62.3% (68)

Chi-Square = 7.669 Asymp. Sig = .053 (Significant Chi-square values are at P<0.05)

The first statement sought to identify whether OMANTEL’s business strategy is based on the concept of customer satisfaction through high quality and improved

services. The results of rating this statement, provided in Table 6.4.31, show that less than half of the respondents *agreed* with the statement. The majority of the respondents were *neutral* and *disagreed* with the statement. As shown in Table 6.4.32, the majority of respondents who *agreed* with the statement are to be found amongst the top managers. The other groups *agreed* with the statement to a lesser extent. The results of rating the statement indicate that the business strategy of OMANTEL is not based on the concept of customer satisfaction and high quality services.

The second statement was intended to identify the extent to which OMANTEL links its customers' requirements to the development and improvement of its services. Table 6.4.31 shows that the majority of the respondents were of the opinion that OMANTEL does this as only a small percentage of the respondents were *neutral* and *disagreed* with the statement. The results provided in Table 6.4.32 show almost an equal distribution of the responses, which indicates that all groups of the respondents *agreed* with the statement to the same extent.

The third statement was intended to test the extent to which OMANTEL's management anticipates its customers' future needs and expectations. Table 6.4.31 shows that the majority of respondents were of the opinion that OMANTEL anticipates its customers' future needs. A small percentage of respondents were *neutral* toward this, and a smaller percentage of them *disagreed* with the statement. As shown in Table 6.4.32, the highest *agreement* come from the respondents at the managerial levels, as the employees *agreed* with it to a lesser extent than managers, but all groups of respondents *agreed* with the statement to a high extent. The higher percentage of managers *agreeing* with the statement could be due to the fact that the respondents at the managerial levels know the organisation's future plans and goals better than do the employees, since the overall objectives of the organisation are decided by the former, who are thus better informed as to whether the organisation is anticipating its customers' future needs. Overall, the results derived from this data are somewhat inconsistent with the results of the statement related to the Strategy element, which indicated that OMANTEL regards the concepts of high quality services and customer satisfaction as strategic objectives and do not lend it unqualified support. As one respondent observed, "Many of the projects that OMANTEL has carried out achieve a high degree of technical excellence but unfortunately fall short of expectations when they reach the customer interface through lack of proper planning and strategy. There seems to be great importance attached to selecting the best systems but much less importance is given to making these systems known to our users and encouraging them

to use the systems". Another respondent pointed, "If today our customers had a choice, more than 99% of them will migrate to a competitor". A third respondent added that "OMANTEL being the only service provider in Oman has made the concept of quality a side issue. The customer is restricted to OMANTEL and whether he is happy with the service or not he has to get the service from it (monopoly). However, things will change if there going to be another service provider as this will allow more competition in the market and the customer will have a choice".

Continuous Improvement Cycle

Table 6.4.33 and Table 6.4.34 show the results of rating the significance of the "Continuous Improvement Cycle" concept, which appeared in the questionnaire as the statement "The quality process must be carried out on the continuous basis and must not be ended by achieving short-term success. The process of improvement in OMANTEL must be regarded accordingly":

Table 6.4.33: The Significance of the "Continuous Improvement Cycle" Concept

<i>Significance</i>	% 1= most significant (N)	% 2= significant (N)	% 3= less significant (N)	% 4= not significant (N)
Continuous Improvement Cycle	63.2% (96)	32.2% (49)	3.9% (6)	0.7% (1)
Mean of Value = 1.420 Std Dev. = .610				

Table 6.4.34: The Significance of the "Continuous Improvement Cycle" Concept According to Occupation Level

		Occupation Level % (N = 152)				% Total (N)
		% Top-Mgt. (N=6)	% Middle Mgt. (N=15)	% First-Line Mgt. (N=22)	% Employees (N=109)	
Continuous Improvement Cycle	Most significant	66.7% (4)	46.7% (7)	68.2% (15)	64.2% (70)	63.2% (96)
	Significant	33.3% (2)	40.0% (6)	27.3% (6)	32.1% (35)	32.2% (49)
	Less significant	0% (0)	13.3% (2)	0% (0)	3.7% (4)	3.9% (6)
	Not significant	0% (0)	0% (0)	0% (0)	4.5% (1)	0.7% (1)
	Total	100.0% (6)	100.0% (15)	100.0% (22)	100.0% (109)	100.0% (152)

Chi-Square = .339 Asymp. Sig = .953 (Significant Chi-square values are at $P < 0.05$)

The results of rating the significance of the Continuous Improvement Cycle concept show that the majority of respondents rated the concept as *most significant* and *significant*. Table 6.4.34 shows that all groups of respondents rated the principle as *significant* to a high extent, although some respondents from the middle managers and employees' levels rated it as *less significant* and *not significant*. The results indicate that the concept was rated as *most significant* and *significant* by the majority of all groups of respondents, which suggests that almost all respondents were of the opinion that the quality improvement process must be carried out on the continuous basis and must not be ended by achieving short-term success, and that the process of improvement in OMANTEL must be regarded accordingly.

In terms of its practice, the respondents were presented with one statement relating to the concept of the Continuous Improvement Cycle.

Table 6.4.35: The Practice of the “Continuous Improvement Cycle” Concept

	% Agree (N)	% Neutral (N)	% Disagree (N)	% Total (N)
1. OMANTEL effectively and consistently evaluates and improves its service quality in line with its customers' changing needs.	67.7% (103)	19.7% (30)	12.5% (19)	100.0% (152)

**Table 6.4.36: The Practice of the “Continuous Improvement Cycle” Concept
According to Occupation Level**

	Occupation Level (% of Agree)			
	% Top- Mgt. (N=6)	% Middle Mgt. (N=15)	% First-Line Mgt. (N=22)	% Employees (N=109)
1. OMANTEL effectively and consistently evaluates and improves its service quality in line with its customers' changing needs.	50.0% (3)	60.0% (9)	68.2% (15)	69.7% (76)

Chi-Square = 2.573 Asymp. Sig = .462 (Significant Chi-square values are at $P < 0.05$)

The results of rating this statement, provided in Table 6.4.35, show that the majority of respondents *agreed* with the statement. A small percentage of respondents were neutral toward the statement and a very low percentage of respondents *disagreed* with the statement. Table 6.4.36 shows that the strongest support come from first-line managers and employees; a finding which could be due to their direct interaction with customers which allows them to recognise whether or not OMANTEL is improving its services in line with the customers' changing needs. The results here are consistent with the results of the statement related to the Customer Satisfaction concept that indicated that OMANTEL anticipates its customers' future needs and expectations.

Measurement

Table 6.4.37 and Table 6.4.38 show the results of rating the significant of the “Measurement” concept, which was presented to the sample as “The quality improvement process must be measured and evaluated periodically in order to achieve improved services”.

Table 6.4.37: The Significance of the “Measurement” Concept

<i>Significance</i>	% 1= most significant (N)	% 2= significant (N)	% 3= less significant (N)	% 4= not significant (N)
Measurement	63.2% (96)	35.5% (54)	1.3% (2)	0% (0)
Mean of Value = 1.380 Std Dev. = .510				

The rating of the significance of the Measurement concept provided in Table 6.4.37 show that almost all respondents rated it as *most significant* and *significant* as only a small percentage of them rated it as *less significant*:

Table 6.4.38: The Significance of the “Measurement” Concept According to Occupation Level

		Occupation Level % (N = 152)				% Total (N)
		% Top-Mgt. (N=6)	% Middle Mgt. (N=15)	% First-Line Mgt. (N=22)	% Employees (N=109)	
Measurement	Most significant	50.0% (3)	66.7% (10)	68.2% (15)	62.4% (68)	63.2% (96)
	Significant	50.0% (3)	33.3% (5)	27.3% (6)	36.7% (40)	35.5% (54)
	Less significant	0% (0)	0% (0)	4.5% (1)	0.9% (1)	1.3% (2)
	Not significant	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)
	Total	100.0% (6)	100.0% (15)	100.0% (22)	100.0% (109)	100.0% (152)

Chi-Square = .452 Asymp. Sig = .929 (Significant Chi-square values are at P<0.05)

and show that the top and middle managers rated the concept as *most significant* and *significant* to a higher extent than the other groups. The first-line managers and employees also rated the concept as *significant* to a high extent, but to a lesser extent than the top and middle managers. The output of evidence suggests that the respondents believe in that the quality improvement process must be measured and evaluated periodically in order to achieve improved services.

To test whether or not the concept of Measurement is being practised in OMANTEL, the respondents were presented with two statements relating to the concept. The results of rating the statements are provided in Table 6.4.39 and Table 6.4.40:

Table 6.4.39: The Practice of the “Measurement” Concept

	% Agree (N)	% Neutral (N)	% Disagree (N)	% Total (N)
1. Top management periodically conducts a comprehensive audit, at least annually, of critical quality improvement activities.	38.2% (58)	42.8% (65)	19.1% (29)	100.0% (152)
2. OMANTEL measures its quality and operational levels relative to those in the telecommunication sector in the region.	50.0% (76)	36.2% (55)	13.8% (21)	100.0% (152)

Table 6.4.40: The Practice of the “Measurement” Concept According to Occupation Level

	Occupation Level (% of Agree)			
	% Top-Mgt. (N=6)	% Middle Mgt. (N=15)	% First-Line Mgt. (N=22)	% Employees (N=109)
1. Top management periodically conducts a comprehensive audit, at least annually, of critical quality improvement activities.	33.4% (2)	26.7% (4)	40.9% (9)	39.4% (43)
2. OMANTEL measures its quality and operational levels relative to those in the telecommunication sector in the region.	66.7% (4)	40.0% (6)	50.0% (11)	50.5% (55)

Chi-Square = .646 Asymp. Sig = .886 (Significant Chi-square values are at $P < 0.05$)

The first statement aimed to identify if the management of OMANTEL conducts a comprehensive audit to assess the progress of quality improvement activities and the results show that a small percentage of respondents *agreed* with the statement. The majority respondents were *neutral* and *disagreed* with the statement. The results of rating the statement provided in Table 6.4.40 confirm this lack of support for the statement and make it evident that the management of OMANTEL does not conduct a comprehensive audit of critical quality improvement activities. This finding is in marked contrast to that of Danaher and Gallagher (1997) who, in describing the Telecom New Zealand effort to improve customer satisfaction, state that “interest in improvement process is maintained by giving feedback on the monthly survey results to both operators and management. Moreover, part of each manager’s bonus has been linked to achievement of the overall quality targets, which has proved a very effective driver in raising the awareness of the need to improve customer satisfaction”.

The second statement was intended to identify the extent to which OMANTEL measures the quality of its services relative to those in the telecom sector in the region. Table 6.4.39 shows that only half of respondents were of the opinion that OMANTEL does so. Table 6.4.40 indicates that the majority of the respondents who agreed with the statement were top and first-line managers and employees and that there was little support for the statement among middle managers. The results suggest that OMANTEL measures or benchmarks, to some extent, the quality of its services with the services of the other providers of the telecom services in the region. The results of this statement are consistent with the results related to the Vision element, which indicated that OMANTEL benchmarks the quality of its services with those of the other telecom services providers in the region to learn how it is operating, and to catch up with the changes in the telecom industry.

6.5. The Results of Rating the Principles

This section provides the results of rating the core principles of TQM as presented in the proposed implementation conceptual framework.

Customer is King

The principle of “Customer is King” was elaborated in the questionnaire as “The customers must judge the quality of OMANTEL’s services; and OMANTEL must regard the customer as a king and meet his/her requirements”. The results of the extent to which this principle was rated as significant are provided in Table 6.5.1:

Table 6.5.1: The Significance of the “Customer is King” Principle

<i>Significance</i>	% 1= most significant (N)	% 2= significant (N)	% 3= less significant (N)	% 4= not significant (N)
Customer is King	75.0% (114)	22.4% (34)	1.3% (2)	1.3% (2)
Mean of Value = 1.289		Std Dev. = .559		

Table 6.5.1 shows that the majority of respondents rated the principle of Customer is King as *most significant* and *significant*. A small percentage of respondents rated the principle as *less significant* and *not significant*. The results indicate that almost all respondents were of the opinion that OMANTEL must regard the Customer as a King, and that there is a need for the principle’s implementation.

However, the results provided above represent the significance of the principle from the respondents' point of view in general. The results provided in Table 6.5.2 illustrate how each individual group of respondents, in terms of its occupational levels, rated the significance of the principle:

Table 6.5.2: The Significance of the “Customer is King” Principle According to Occupation Level

		Occupation level %				% Total (N)
		(N = 152)				
		% Top-Mgt. (N=6)	% Middle Mgt. (N=15)	% First-Line Mgt. (N=22)	% Employees (N=109)	
Customer Is King	Most significant	83.3% (5)	66.7% (10)	81.8% (18)	74.3% (81)	75.0% (114)
	Significant	16.7% (1)	33.3% (5)	18.2% (4)	22.0% (24)	22.4% (34)
	Less significant	0% (0)	0% (0)	0% (0)	1.8% (2)	1.3% (2)
	Not significant	0% (0)	0% (0)	0% (0)	1.8% (2)	1.3% (2)
	Total	100.0% (6)	100.0% (15)	100.0% (22)	100.0% (109)	100.0% (152)

Chi-Square = 1.168 Asymp. Sig = .761 (Significant Chi-square values are at $P < 0.05$)

and show that the highest percentages of those rating the principle as *most significant* and *significant* are to be found among respondents at the managerial levels, as none of the respondents at these levels rated the principle as *less significant* or *not significant*, while some respondents from the employees' level rated the principle as *less significant* and *not significant* at all.

The results indicate that managers realise the importance of the principle more than the employees. The high rating of the principle by managers could be due to several factors. It could be due to the greatest awareness amongst the managers about the importance of the customer. This could be due to their level of education and the positions they are holding. It could be due also to the fact that managers felt the lack of such a concept in OMANTEL and wished the concept to be implemented and promoted in OMANTEL.

In order to identify to what extent the concept of Customer is King is being practised in OMANTEL, the respondents were offered with four statements relating to this principle. The responses of rating the statements are provided in Table 6.5.3. Table

6.5.4 shows the results of rating the same statements according to the respondents' occupational levels.

Table 6.5.3: The Practice of the “Customer is King” Principle

	% Agree (N)	% Neutral (N)	% Disagree (N)	% Total (N)
1.The management and employees of OMANTEL regard the customer as king and always being right.	40.8% (62)	15.8% (24)	43.4% (66)	100.0% (152)
2.The management of OMANTEL gathers continuous feedback from the customers in order to identify their needs and expectations.	35.5% (54)	30.9% (47)	33.6% (51)	100.0% (152)
3. In OMANTEL, there is a comprehensive record of customer care.	48.7% (74)	32.9% (50)	18.4% (28)	100.0% (152)
4. Customer complaints received by OMANTEL are taken seriously and examined carefully.	52.7% (80)	29.6% (45)	17.7% (27)	100.0% (152)

Table 6.5.4: The Practice of the “Customer is King” Principle According to Occupation Level

	Occupation Level (% of Agree)			
	% Top-Mgt. (N=6)	% Middle Mgt. (N=15)	% First-Line Mgt. (N=22)	% Employees (N=109)
1. The management and employees of OMANTEL regard the customer as king and always being right.	16.7% (1)	26.6% (4)	40.9% (9)	44.0% (48)
2. The management of OMANTEL gathers continuous feedback from the customers in order to identify their needs and expectations.	50.0% (3)	33.3% (5)	31.8% (7)	62.3% (39)
3. In OMANTEL, there is a comprehensive record of customer care.	33.3% (2)	53.3% (8)	59.1% (13)	46.8% (51)
4. Customer complaints received by OMANTEL are taken seriously and examined carefully.	66.7% (4)	60.0% (9)	40.9% (9)	53.2% (58)

Chi-Square = 1.346 Asymp. Sig = .718 (Significant Chi-square values are at P<0.05)

The first statement related to the Customer is King principle was indented to test the extent to which the employees and management of the OMANTEL regard the Customer as a King and always being right. The results provided in Table 6.5.3 show that a small percentage of the respondents were of the opinion that the employees and management in OMANTEL regard the Customer as King and as always being right. The majority of respondents were *neutral* and *disagreed* that the Customer is regarded as a King.

The results of rating the first statement, provided in Table 6.5.4, indicate that the employees were of the opinion that the Customer is regarded as a King and always being right to a higher extent than the managers. The lower percentage of managers

agreeing with the statement would imply that the managers might feel that there is a shortfall in the implementation of the Customer is King Principle. This would support the earlier finding that managers felt the lack of Customer is King concept in OMANTEL and wished such a concept to be promoted. However, the results suggest that the customer is not regarded as a king and always being right. In this regard, a respondent stated that “Since OMANTEL is the monopoly provider of telecommunication service and customers have no other option/choice, the concept in OMANTEL that “The customer is always right and the king” is totally absent. If a survey of customers is carried out, it will reveal that not even 1% of the customers is satisfied with OMANTEL services and the attitude of OMANTEL staff towards them”. This comment obviously indicates that the principle of the Customer is King is not being practised by OMANTEL’s personnel.

To further investigate the possibility that the principle is being practised, the second statement aimed to identify the extent to which the management of OMANTEL gathers continuous feedback from the customers as part of regarding the Customer as King. The results of rating the statement provided in Table 6.5.3 show that a small percentage of the respondents were of the opinion that the management of OMANTEL gathers continuous feedback from the customers. The majority of the respondents were *neutral* and *disagreed* with the fact that the management of OMANTEL gathers feedback from the customers. The results of rating the second statement provided in Table 6.5.4 show that the majority of respondents who *agreed* with the statement were employees and top managers. The middle and first-line managers *agreed* with the statement to a low extent. The percentage of top managers agreeing with the statement could be due to the fact that since the statement was related to management, they may attempted to show that they are concerned about the customers and gathering feedback from them. However, in this regard, a senior manager stated that “There is a general feeling of the great need to improve the quality of the services that we are providing to our customers and to achieve better customer satisfaction. However, there does not seem to be the machinery in place to provide guidance and the means to achieve this objective. There is no declared and detailed policy of objectives on what to achieve and how to go about achieving it”. This comment and the overall results of rating the statement suggest that the management of OMANTEL does not gather continuous feedback from the customers and that this activity is not being practised in OMANTEL. Such a conclusion is, however, inconsistent with the results of the statement related to the Values element, which indicated that both the management and employees of OMANTEL maintain a

close and direct contact with the customers in order to identify their needs and expectations. Such a contradiction may itself be a consequence of the presence of a gap between belief and practice or of inconsistencies in practice.

The aim of the third statement was to identify the extent to which OMANTEL keeps accurate and factual records of customer care. As shown in Table 6.5.3, a small percentage of the respondents *agreed* that OMANTEL has a record of customer care. The largest percentage of the respondents were *neutral* and *disagreed* with the statement. The highest percentage of the respondents who agreed with the statement, as shown in Table 6.5.4, were middle and first-line managers. The employees and top managers agreed with the statement to a lesser degree than middle and first-line managers. The high percentage of middle and first-line managers agreeing with the statement could be due to the fact that they may keep record of customer care within their departments or units; but the overall results of rating the statement suggest that OMANTEL in general does not keep a record of customer care.

The last statement was intended to identify the extent to which OMANTEL takes customers' complaints seriously. The results of rating this statement, as shown in Table 6.5.3, indicate that more than half of the respondents were of the opinion that the OMANTEL takes its customers' complaints seriously and deals with them carefully; whilst less than half of the respondents preferred not to make comments about the statement and disagreed with it. The results provided in Table 6.5.4 show that the top and middle managers *agreed* with the statement to a higher extent than the first-line managers and employees. The results of rating the statement indicate that the top and middle managers thought that OMANTEL takes its customers' complaints seriously and deals with them carefully, which could be due to the fact that they may supposed the personnel at the lower levels would be dealing with the customers' complaints seriously; it could be due also to the fact that the top and middle managers may treat customers' complaints seriously. Overall, there is evidence to suggest that OMANTEL takes and deals with its customers' complaints seriously.

In relation with the last three statements, an empirical study carried out by Doyle and Wong (1998) on marketing and competitive performance revealed that successful companies placed a great emphasis on learning about customers and their problems. Hines (1995), the Chief Operating Officer at AT&T Universal Card Service Corporation, stated that the AT&T's Universal Card's success was mainly due to the information collected from the customers. Hines stated that "Each month, we conduct random phone interviews of 4,500 of our card members who have contacted us. We call

them within 48 to 72 hours of the event while it is still fresh in their minds. We often find that important changes in customer satisfiers become clear through these contactor surveys. Our goal is to be on the top of these trends, not learning of them when it is too late. Additionally, listening to actual customer calls is a central part of our day-to-day quality process and our daily business routine". Walsh (1995), the Manager of Consumer Relations at BT, stated that "Unless companies constantly monitor customers' expectations and their delivery against those expectations they will not survive in an increasingly crowded marketplace".

However, the overall results of the Customer is King principle are positive in rating the significance of the principle as almost all of the respondents rated the principle as significant, which suggests that they agreed that there is a need for its implementation. The results of rating the statements related to the practice of the principle indicate that the results are negative for most parts, as the respondents agreed to a reasonable extent with only one statement; namely, "Customer complaints received by OMANTEL are taken seriously and examined carefully". For the rest of the statements, the respondents *agreed* to a low extent, which implies that the activities posed in the statements are not being practised in OMANTEL. Accordingly, it could be said that the customer is not regarded as a king and always being right by the personnel of OMANTEL. It could be also said that the management of OMANTEL does not always gather continuous feedback from the customers as a means of identifying their needs and expectations. In addition, it could be said that OMANTEL does not have a record of customer care, which could be utilised as a source of information to identify whether or not its customers are satisfied with the services provided. The overall results of rating the statements relating to the practice of the Customer is King principle suggest that the principle is not being practised in OMANTEL.

Everyone Participates

The second principle, the significance of which was tested, was the principle of "Everyone Participates". The principle was presented in the questionnaire as "To improve service quality, OMANTEL must involve everyone, including senior managers, employees at all functional levels, and customers, in designing and improving its services". The results of rating the significance of this principle are shown in Table 6.5.5:

Table 6.5.5: The Significance of the “Everyone Participates” Principle

<i>Significance</i>	% 1= most significant (N)	% 2= significant (N)	% 3= less significant (N)	% 4= not significant (N)
Everyone Participates	77.6% (118)	17.1% (26)	4.6% (7)	0.7% (1)
Mean of Value = 1.283 Std Dev. = .580				

The results provided in Table 6.5.5 indicate that a large percentage of respondents rated the principle of Everyone Participates as being either *most significant* or *significant*; whilst a small percentage of them rated it as *less significant* or *not significant* at all.

Table 6.5.6 shows how each individual group of respondents rated the significance of the principle:

Table 6.5.6: The Significance of the “Everyone Participates” Principle According to Occupation Level

		Occupation level % (N = 152)				% Total (N)
		% Top-Mgt. (N=6)	% Middle Mgt. (N=15)	% First-Line Mgt. (N=22)	% Employees (N=109)	
Everyone Participates	Most significant	66.7% (4)	60.0% (9)	68.2% (15)	82.6% (90)	77.6% (118)
	Significant	33.3% (2)	33.3% (5)	27.3% (6)	11.9% (13)	17.1% (26)
	Less significant	0% (0)	6.7% (1)	4.5% (1)	4.6% (5)	4.6% (7)
	Not significant	0% (0)	0% (0)	0% (0)	0.9% (1)	0.7% (1)
	Total	100.0% (6)	100.0% (15)	100.0% (22)	100.0% (109)	100.0% (152)

Chi-Square = .123 Asymp. Sig = .898 (Significant Chi-square values are at $P < 0.05$)

The above results show that all groups of respondents rated the principle as being *most significant* or *significant*. The principle was rated as *less significant* and *not significant* by a small percentage of respondents from middle and first-line managers and employees' levels. The first-line managers and employees, the respondents at the lower levels of the organisation, gave the highest rating to the principle. The high rating

of the principle as most significant by the first-line managers and employees would suggest that the respondents at these levels of the organisation were in favour of this principle more than the middle and top managers. This would imply that first-line managers and employees might be lacking appropriate participation in the organisation. It would also imply that the first-line managers and employees may feel the principle to be most significant since its implementation would result in their greater participation in decision-making processes. However, the results indicate that the principle was rated as most significant and significant to a large extent, which suggests that there is a need in OMANTEL for its implementation.

To test the extent to which the principle is being practised in OMANTEL, the respondents were offered statements relating to the principle. The results of rating the statements are provided in Table 6.5.7 and Table 6.5.8:

Table 6.5.7: The Practice of the “Everyone Participates” Principle

	% Agree (N)	% Neutral (N)	% Disagree (N)	% Total (N)
1. In OMANTEL, everyone participates in quality improvement process.	47.4% (72)	16.4% (25)	36.1% (55)	100.0% (152)
2. As part of participating everyone, the employees in OMANTEL are given a prominent role in improving quality by top management.	50.0% (76)	25.0% (38)	25.0% (38)	100.0% (152)
3. As part of everyone participates, all departments of OMANTEL are involved in setting up its goals and objectives.	46.8% (71)	23.7% (36)	29.6% (45)	100.0% (152)
4. In OMANTEL, employees get a fair hearing from management when they raise issues related to quality and customer service.	38.2% (58)	30.3% (46)	31.6% (48)	100.0% (152)
5. In OMANTEL, employees are encouraged to contribute new ideas regarding quality and customer service.	40.1% (61)	27.0% (41)	32.9% (50)	100.0% (152)
6. OMANTEL’s top management includes all affected people in planning change, improving quality, and setting up its policies.	33.6% (51)	31.6% (48)	34.9% (53)	100.0% (152)

Table 6.5.8: The Practice of the “Everyone Participates” Principle According to Occupation Level

	Occupation Level (% of Agree)			
	% Top-Mgt. (N=6)	% Middle Mgt. (N=15)	% First-Line Mgt. (N=22)	% Employee s (N=109)
1. In OMANTEL, everyone participates in quality improvement process.	33.4% (2)	40.0% (6)	27.2% (6)	53.2% (58)
2. As part of participating everyone, the employees in OMANTEL are given a prominent role in improving quality by top management.	50.0% (3)	66.7% (10)	54.5% (12)	46.8% (51)
3. As part of everyone participates, all departments of OMANTEL are involved in setting up its goals and objectives.	33.3% (2)	33.3% (5)	40.9% (9)	50.0% (55)
4. In OMANTEL, employees get a fair hearing from management when they raise issues related to quality and customer service.	66.7% (4)	40.0% (6)	50.0% (11)	34.0% (37)
5. In OMANTEL, employees are encouraged to contribute new ideas regarding quality and customer service.	50.0% (3)	40.0% (6)	50.0% (11)	37.6% (41)
6. OMANTEL’s top management includes all affected people in planning change, improving quality, and setting up its policies.	50.0% (3)	26.7% (4)	22.7% (5)	35.8% (39)

Chi-Square = 4.997 Asymp. Sig = .172 (Significant Chi-square values are at $P < 0.05$)

The first statement relating to the Everyone Participates principle tested the universality of participation in the quality improvement process at OMANTEL. The results of rating the statement, provided in Table 6.5.7, show that less than half of the respondents were of the opinion that in OMANTEL everyone participates in the quality improvement process; the majority of them were either *neutral* or *disagreed* with the statement. The results of rating the statement provided in Table 6.5.8 show that a low percentage of respondents from all groups *agreed* with the statement, which suggests that there is a lack of appropriate participation from the personnel of OMANTEL in quality improvement processes.

The second statement was intended to test the extent to which the employees are given a prominent role by the management in quality improvement process. The results provided in Table 6.5.7 show an equal distribution of the responses in rating the statement, as half of the respondents were of the opinion that the employees are given a prominent role in quality improvement process. The other half of the respondents was *neutral* or *disagreed* with the statement. The results of rating the statement provided in Table 6.5.8 show that the majority of respondents who *agreed* with the statement were

from the managerial levels. The employees *agreed* with the statement to a lesser extent than the managers. This would suggest a dichotomy between management and employees over the extent to which the principle is practised. One respondent noted that “Since the customers have no other choice, staff in OMANTEL are never seriously advised/guided by senior management to have proper attitude towards customers or improve the quality of their work. They are not even given opportunities to provide their opinions; so how could we expect the management to give them a prominent role in any aspect, let alone in improving quality, which is itself not a major issue for our management”.

The third statement aimed to test the extent to which the departments of OMANTEL are involved in setting up organisation’s goals and objectives. The results shown in Table 6.5.7 show that less than half of the respondents *agreed* with the statement; the majority of the respondents were *neutral* and *disagreed* with the statement. The results provided in Table 6.5.8 show that all groups of respondents agreed with the statement to a low extent indicating that the departments of OMANTEL are not involved in setting up its goals and objectives.

The fourth statement of the Everyone Participates principle tested the extent to which the employees at OMANTEL get a fair hearing from the management when they raise issues related to quality and customer service. The results of rating this statement, as shown in Table 6.5.7, indicate that the largest percentage of respondents were *neutral* or *disagreed* with the statement; a low percentage of them *agreed* with the statement. The results of rating the statement, provided in Table 6.5.8, show that the top managers were of the opinion to a higher extent than the other groups that the employees in OMANTEL get fair hearing from the management when raising issues related to quality and customer service. The high percentage of top managers agreeing with the statement would imply that there was a feeling amongst the top managers that they are listening to the employees when the later raised issues related to quality; but the percentages of the other groups would suggest that the quality and customer service issues raised by the employees are not given enough attention by the top management. However, the overall results of rating the statement indicate that the respondents *agreed* with the statement to a low extent, which suggests that the employees in OMANTEL do not get fair hearing from the management.

The fifth statement tested the extent to which the employees in OMANTEL are encouraged to contribute new ideas regarding quality and customer service. The results of rating the statement provided in Table 6.5.7 show that a low percentage of

respondents *agreed* with the statement. The largest percentage of the respondents were *neutral* or *disagreed* with the statement. The largest percentage of the respondents who *agreed* with the statement, as shown in Table 6.5.8, were top and first-line managers, which would suggest that they believe that they are encouraging their subordinates to contribute new ideas. Employees, however, noted a lack of encouragement given to them to contribute new ideas regarding quality and customer service. The findings here are inconsistent with the results of the statement related to the Quality Through People concept, which indicated that the employees are not being encouraged to contribute new ideas regarding quality and customer service.

The last statement was intended to identify the extent to which the management of OMANTEL includes the affected people in planning change and setting up policies. The results provided in Table 6.5.7 show an almost equal distribution of the responses between *agree*, *neutral*, and *disagree*. Comparing the percentage of the respondents who *agreed* with the statement to the percentages of those who were *neutral* and *disagreed*, indicates that a low percentage of the respondents agreed with the statement. The results provided in Table 6.5.8 show that the largest percentage of the respondents who *agreed* with the statement were top managers, which suggests that since the statement was related to top management, the responses it gave were intended to show that it included the affected people when it planned changes. The other groups of respondents *agreed* with the statement to a very low extent, which suggests that the management of OMANTEL does not involve or include the affected people in planning change and setting up the policies of the organisation. Such a contrast, however, is potentially disruptive.

The results of rating the statements related to the Everyone Participates principle provided in Tables 6.5.7 and 6.5.8 indicate that the principle is not being practised in OMANTEL. The results indicated that there is a lack of everyone's participation in the quality improvement process and that the employees are not given a prominent role by top management in improving quality. The results showed that not all of OMANTEL's departments are involved in setting up organisation's goals and objectives. The results also showed that there is a lack of fair hearing and appropriate encouragement from the management to employees when raising issues related to the improvement of quality and customer service. The results showed that the respondents were not of the opinion that the management of OMANTEL includes all affected people in planning change and setting up the policies of the organisation.

In relation to the Everyone Participates principle, a number of writers have argued that participating everyone is a critical factor in achieving quality. Handy (1999) stated that “If you’re going to employ people who are intelligent, and who like to think for themselves, then you’ve got to give them a lot of responsibility, a lot of power. Otherwise they will leave you, because nobody wants to be a robot or an instrument—they each need their individual doughnut”. Covey (1999) argued that “...quality requires that everyone up and down the entire process has quality in their heart and in their mind. They have to really believe that ‘quality begins with me’, and they need to make their decisions based on the right principles and values. So empowerment and quality are totally integrated in a high-trust culture. Trustworthiness precedes trust which precedes empowerment which precedes quality”. Prahalad (1999) stated “We must ask ourselves what the role of hierarchy is, how the administrative boundaries between levels, functions and business units are broken, how the boundaries between customers and the company and between the suppliers and the company are broken, and how the boundary between top management and the operating is broken. Lastly, we must ask ourselves how the boundary between investors and employees is broken”. Steve Young of A.T. Kearney’s (see the Economist, 1992) stressed that “those firms whose quality programmes had succeeded were twice as likely to have pushed responsibility for quality down to shop floor, flattened their organisational structures and broken down functional barriers. Only by going that far, can the quality gospel be spread throughout the firm”.

Aligned Corporate Systems

The third principle the significance and practice of which was tested is the principle of Aligned Corporate Systems, which appeared in the questionnaire as “The service quality improvement process needs to be set up in a systemic way and must be incorporated into all parts of the organisation”. The results of rating the significance of the principle are provided in Table 6.5.9:

Table 6.5.9: The Significance of the “Aligned Corporate Systems” Principle

<i>Significance</i>	% 1= most significant (N)	% 2= significant (N)	% 3= less significant (N)	% 4= not significant (N)
Aligned Corporate Systems	80.3% (122)	19.1% (29)	0.7% (1)	0% (0)
Mean of Value = 1.204 Std Dev. = .420				

and show that almost all of the respondents rated the principle as *most significant* and *significant*. Only one respondent rated it as *less significant*.

**Table 6.5.10: The Significance of the “Aligned Corporate Systems” Principle
According to Occupation Level**

		Occupation Level % (N = 152)				% Total (N)
		% Top-Mgt. (N=6)	% Middle Mgt. (N=15)	% First-Line Mgt. (N=22)	% Employees (N=109)	
Aligned Corporate Systems	Most significant	100.0% (6)	80.0% (12)	68.2% (15)	81.7% (89)	80.3% (122)
	Significant	0% (0)	20.0% (3)	31.8% (7)	17.4% (19)	19.1% (29)
	Less significant	0% (0)	0% (0)	0% (0)	0.9% (1)	0.7% (1)
	Not significant	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)
	Total	100.0% (6)	100.0% (15)	100.0% (22)	100.0% (109)	100.0% (152)

Chi-Square = .965 Asymp. Sig = .810 (Significant Chi-square values are at $P < 0.05$)

The results provided in Table 6.5.10 show that all groups of respondents rated the principle as *most significant* to a high extent, and all top managers rated it as *most significant*. A large percentage of middle managers, first-line managers and employees rated the principle as *most significant* and *significant*. A very small percentage of employees rated the principle as *less significant*. None of the respondents rated the principle as *not significant*.

The results of rating the significance of the principle show that all respondents were of the opinion that the quality improvement processes need to be set up in a systemic way capable of incorporating all parts of the organisation; which suggests that they agreed that there is a need for the principle’s implementation in OMANTEL.

To test the extent to which the principle is being practised in OMANTEL, the respondents were asked five questions relating to the principle. The results of rating the statements are provided in Table 6.5.11 and Table 6.5.12:

Table 6.5.11: The Practice of the “Aligned Corporate Systems” Principle

	% Agree (N)	% Neutral (N)	% Disagree (N)	% Total (N)
1. This principle of Aligned Corporate Systems is highly utilised within OMANTEL’s departments.	42.1 % (64)	25.7 % (39)	32.2 % (49)	100.0 % (152)
2. Co-ordination is effectively used to reduce conflict within OMANTEL’s departments.	50.0 % (76)	27.6 % (42)	22.3 % (34)	100.0 % (152)
3. Upward communication is highly utilised within OMANTEL.	44.1 % (67)	23.0 % (35)	32.9 % (50)	100.0 % (152)
4. Most OMANTEL’s departments understand how they could contribute to improve quality and customer service.	50.0 % (76)	27.0 % (41)	23.0 % (35)	100.0 % (152)
5. The general climate of all departments is supportive of staff working together to improve quality and customer service.	50.0 % (76)	17.8 % (27)	32.2 % (49)	100.0 % (152)

Table 6.5.12: The Practice of the “Aligned Corporate Systems” Principle According to Occupation Level

	Occupation Level (% of Agree)			
	% Top-Mgt. (N=6)	% Middle Mgt. (N=15)	% First-Line Mgt. (N=22)	% Employees (N=109)
1. This principle of Aligned Corporate Systems is highly utilised within OMANTEL’s departments.	33.4% (2)	40.0% (6)	45.4% (10)	42.2% (46)
2. Co-ordination is effectively used to reduce conflict within OMANTEL’s departments.	33.3% (2)	60.0% (9)	45.4% (10)	50.5% (55)
3. Upward communication is highly utilised within OMANTEL.	33.3% (2)	40.0% (6)	45.4% (10)	44.9% (49)
4. Most OMANTEL’s departments understand how they could contribute to improve quality and customer service.	66.6% (4)	46.6% (7)	36.3% (8)	52.3% (57)
5. The general climate of all departments is supportive of staff working together to improve quality and customer service.	33.3% (2)	40.0% (6)	54.6% (12)	51.4% (56)

Chi-Square = 3.525 Asymp. Sig = .317 (Significant Chi-square values are at $P < 0.05$)

The first statement relating to the principle of Aligned Corporate Systems aimed to test the extent to which the principle is being practised within OMANTEL’s departments. Table 6.5.11 shows that less than half of the respondents *agreed* that the principle is utilised within OMANTEL. More than half of the respondents were *neutral* and *disagreed* with the statement. Table 6.5.12 shows that all groups of respondents *agreed* with the statement to a low extent indicating that the majority of the respondents

were of the opinion that the principle is not being highly utilised in OMANTEL's departments.

The second statement tested the extent to which co-ordination is effectively used to reduce conflict within OMANTEL's departments. The results of rating the statement, provided in Table 6.5.11, show that half of respondents were of the opinion that co-ordination is effectively used to reduce conflict between departments. The other half of respondents were *neutral* and *disagreed* with the statement. As shown in Table 6.5.12, the majority of the respondents who *agreed* with the statement were middle managers. The other groups of respondents *agreed* with the statement to a low extent. The high percentage of middle managers agreeing with the statement could be due to the fact that there could be a high level of co-ordination between the middle managers in the organisation, but it does not necessarily mean that there is an effective co-ordination between OMANTEL's departments to reduce conflict. The results of rating the statement suggest that co-ordination is not being effectively used in OMANTEL as a concept for reducing conflict between the departments as only half of respondents agreed with the statement. One respondent noted, "We all know that there is a conflict to some extent in every organisation. This is a fact; without it, it would be hard for the organisation to operate. In our case, we rarely use co-ordination as a mean for reducing the conflict. We use it not for the sake of reducing conflicts, but for getting things done when we feel that it is hard to get them done without it".

The third statement was intended to test whether or not there was an effective upward communication in OMANTEL. The results provided in Table 6.5.11 show that a low percentage of respondents were of the opinion that there is an effective upward communication in OMANTEL. The largest percentage of respondents were *neutral* and *disagreed* with the statement. Table 6.5.12 shows that a low percentage of respondents, from all groups, *agreed* with the statement. The results suggest that there is a lack of an effective communication between employees and management.

The fourth statement tested the extent to which the departments of OMANTEL understand how they could contribute to improve quality and customer service as part of a whole system. The results of rating the statement, as shown in Table 6.5.11, reveal that only half of the respondents *agreed* with the statement. The other half of the respondents were *neutral* and *disagreed* with the statement. Table 6.5.12 shows again that the top managers *agreed* with the statement to a greater extent than the other groups, which implies that there was a feeling amongst the top managers that the departments at OMANTEL understand their role in quality and customer service

improvement processes. The other groups of respondents were of the opinion that the departments at OMANTEL understand how they could contribute to improve quality and customer service to lower extent than the top managers. The fact that the respondents who are directly responsible for the departments *agreed* with the statement to a low extent, suggests that there is a lack of understanding in OMANTEL's departments on how to improve the quality and customer service.

The last statement was intended to test the extent to which the general climate of OMANTEL's departments' was supportive of staff working together to improve quality and customer services. Table 6.5.11 shows that half of respondents *agreed* with the statement; the other half of respondents were *neutral* and *disagreed* with the statement. Table 6.5.12 shows that the first-line managers and employees *agreed* with the statement to a greater extent than did the top and middle managers. The percentages of first-line managers and employees suggest that there was a feeling amongst them that the climate of the departments is supportive of them; but the overall results of rating the statement implies that the general climate of the departments of OMANTEL is not supportive of staff working together, as part of corporate system, to improve quality and customer service, as only half of respondents *agreed* with the statement. The survey of Gunasekaran (1999), mentioned earlier, revealed that many respondents felt that improving the work environment was one of the fundamental issues to be addressed in attempts to improve quality.

The principle of Aligned Corporate Systems is argued to be a critical principle for involving every part of the organisation in the quality improvement processes. Senge (1999) for instance, stated that "We have to develop a sense of connectedness, a sense of working together as part of a system, where each part of the system is affecting and being affected by the others, and where the whole is greater than the sum of its parts".

However, the results of rating the significance and practice of the Aligned Corporate Systems principle showed that the respondents were to a large extent of the opinion that the principle is *significant* for improving the quality of OMANTEL's services. The results of rating the statements related to the practice of the principle suggest that the principle is not being practised as the respondents did not *agree* to a large extent with the statements.

Continuous Improvement

The principle of "Continuous Improvement" presented in the questionnaire via the statement of "The service quality improvement process needs to be taken on a continuous basis, and must not be regarded as a 'quick fix', that ends by achieving some

short-term improvements”. The results of rating the significance of the principle are provided in Table 6.5.13 and Table 6.5.14:

Table 6.5.13: The Significance of the “Continuous Improvement” Principle

<i>Significance</i>	% 1= most significant (N)	% 2= significant (N)	% 3= less significant (N)	% 4= not significant (N)
Continuous Improvement	75.0% (114)	23.7% (36)	1.3% (2)	0% (0)
Mean of Value = 1.263		Std Dev. = .471		

Table 6.5.13 shows that the majority of respondents rated this principle as *most significant* and *as significant*. The sum of the respondents who rated the principle as *most significant* and *significant* makes up almost the total percentage of the respondents as only a very small percentage of them rated the principle as *less significant* and none of them rated it as *not significant*.

**Table 6.5.14: The Significance of the “Continuous Improvement” Principle
According to Occupation Level**

		Occupation Level % (N = 152)				% Total (N)
		% Top-Mgt. (N=6)	% Middle Mgt. (N=15)	% First-Line Mgt. (N=22)	% Employees (N=109)	
Continuous Improvement	Most significant	66.7% (4)	80.0% (12)	86.4% (19)	72.5% (79)	75.0% (114)
	Significant	33.3% (2)	13.3% (2)	13.6% (3)	26.6% (29)	23.7% (36)
	Less significant	0% (0)	6.7% (1)	0% (0)	0.9% (1)	1.3% (2)
	Not significant	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)
	Total	100.0% (6)	100.0% (15)	100.0% (22)	100.0% (109)	100.0% (152)

Chi-Square = .826 Asymp. Sig = .843 (Significant Chi-square values are at P<0.05)

Table 6.5.14 indicates that all groups of respondents rated the principle as *most significant* and *significant* to a high extent. The results show that a small percentage of middle managers and employees rated the principle as *less significant*. None of the respondents rated the principle as *not significant*. The results show that all respondents

agreed to a large extent that the principle is *significant* and that there is a need for its implementation in OMANTEL.

To test the extent to which the concepts of the principle are being practised in OMANTEL, the respondents were asked to assess three statements relating to the principle. The results are provided in Table 6.5.15 and Table 6.5.16:

Table 6.5.15: The Practice of the “Continuous Improvement” Principle

	% Agree (N)	% Neutral (N)	% Disagree (N)	% Total (N)
1. OMANTEL regards the process of improvement as a continuous process.	72.4% (110)	21.1% (32)	6.6% (10)	100.0% (152)
2. OMANTEL selects its quality projects on the basis of customer evaluation of services and costs of poor quality.	47.4% (72)	28.9% (44)	23.7% (36)	100.0% (152)
3. The improvement data relate to all activities in the organisation and have sufficient information to be the basis for selecting quality improvement processes and projects.	42.8% (65)	37.5% (57)	19.7% (30)	100.0% (152)

Table 6.5.16: The Practice of the “Continuous Improvement” Principle According to Occupation Level

	Occupation Level (% of Agree)			
	% Top-Mgt. (N=6)	% Middle Mgt. (N=15)	% First-Line Mgt. (N=22)	% Employees (N=109)
1. OMANTEL regards the process of improvement as a continuous process.	66.7% (4)	53.3% (8)	86.3% (19)	71.6% (78)
2. OMANTEL selects its quality projects on the basis of customer evaluation of services and costs of poor quality.	66.7% (4)	46.7% (7)	40.9% (9)	47.7% (52)
3. The improvement data relate to all activities in the organisation and have sufficient information to be the basis for selecting quality improvement processes and projects.	50.0% (3)	40.0% (6)	36.4% (8)	44.0% (48)

Chi-Square = 2.175 Asymp. Sig = .537 (Significant Chi-square values are at $P < 0.05$)

The first statement focused upon whether or not OMANTEL regards the process of improvement as a continuous process. The results provided in Table 6.5.15 show that a large percentage of respondents were indeed of the opinion that OMANTEL regards the process of improvement as a continuous process, a small percentage of respondents were *neutral* about the statement, and a very small percentage *disagreed* with the statement. As shown in Table 6.5.16, all groups of the respondents *agreed* to a large extent with the statement.

It should be noted that the percentages of the respondents *agreeing* with the statement at the lower levels of the organisation, first-line managers and employees, is higher than the percentages of the respondents at the upper levels of the organisation. This could be due to the fact that the respondents at these levels could be familiar with the work processes since they conduct the work and know, better than the managers at the top levels, whether or not the processes of work and improvement were undertaken on a continuous basis; thus, they *agreed* with the statement to a larger extent than the managers at the top levels. However, the large percentage of respondents from all levels *agreeing* with the statement implies that the improvement processes in OMANTEL are regarded as continuous processes and might be carried out accordingly.

To further investigate the extent to which the principle is being practised in OMANTEL, the respondents were asked to rate the extent to which OMANTEL selects its quality projects on the basis of customer evaluation of services and costs of poor quality. The results of rating this statement, provided in Table 6.5.15, indicate that less than half of respondents *agreed* with the statement; the majority of respondents were *neutral* and *disagreed* with the statement. Table 6.5.16 reveals that the top managers *agreed* with the statement to a higher extent than the other groups. The percentage of the top managers *agreeing* with the statement implies that this group of respondents may feel that the quality improvement projects of OMANTEL are being selected on the basis of a customer-driven evaluation of performance and the costs of poor quality. The overall results of rating the statement suggest that OMANTEL does not select its quality projects on the basis of a customer-driven evaluation of performance and the costs of poor quality.

The last statement tested whether or not the improvement data at OMANTEL relate to all activities in the organisation and had sufficient detail to be the basis for selecting quality improvement projects. The results provided in Table 6.5.15 show that a small percentage of respondents *agreed* with the statement; the majority of respondents were *neutral* and *disagreed* with the statement. Table 6.5.16 shows that the top managers *agreed* with the statement to a higher extent than the other groups indicating that they may feel that the improvement projects relate to all activities in the organisation and have sufficient detail to be the basis for selecting quality improvement projects. The overall results of rating the statement indicate that the respondents did not *agree* with the statement to a great extent, which suggests that the improvement projects of OMANTEL are not being selected and based on sufficient data and nor are they related to all activities in the organisation.

The results of rating the significance of the Continuous Improvement principle indicated that there was agreement among all respondents that the principle is *significant* and that there is a need for its implementation in OMANTEL. The results of rating the statements related to the practice of the principle suggest that although OMANTEL regards the processes of improvement as continuous processes, it does not select its quality improvement projects on the basis of customers' evaluation of performance and the costs of poor quality, and nor does its improvement data relate to all activities of organisation nor does it have sufficient detail to be the basis for selecting quality improvement projects. The results suggest that the principle is not being practised in OMANTEL.

However, the principle of Continuous Improvement is an important principle both for constantly improving quality and the organisation's processes in order to keep pace with the customers' changing needs and requirements. In this regard, Drucker (1999:81) stated that "Continuous improvements in any area eventually transform the operation. They lead to product innovation. They lead to service innovation. They lead to new processes. They lead to new businesses. Eventually continuous improvements lead to fundamental change".

Quality Measurement

The fifth principle, the significance and practice of which was tested, was the principle of "Quality Measurement", which was presented in the questionnaire via the statement "The service quality improvement must be measured and evaluated if it is to achieve its goals and objectives". The results are provided in Table 6.5.17 and Table 6.5.18:

Table 6.5.17: The Significance of the "Quality Measurement" Principle

<i>Significance</i>	% 1= most significant (N)	% 2= significant (N)	% 3= less significant (N)	% 4= not significant (N)
Quality Measurement	69.1% (105)	28.3% (43)	2.6% (4)	0% (0)
Mean of Value = 1.340 Std Dev. = .530				

Table 6.5.17 shows that the majority of respondents regarded and rated the principle as *most significant* and *significant*. A very small percentage of respondents rated the principle as *less significant*, and none of them rated it as *not significant*.

The results provided in Table 6.5.18 show the extent to which each occupational level of respondents rated the significance of the principle.

**Table 6.5.18: The Significance of the “Quality Measurement” Principle
According to Occupation Level**

		Occupation Level % (N = 152)				% Total (N)
		% Top Mgt. (N=6)	% Middle Mgt. (N=15)	% First-Line Mgt. (N=22)	% Employees (N=109)	
Quality Measurement	Most significant	66.7% (4)	73.3% (11)	77.3% (17)	67.0% (73)	69.1% (105)
	Significant	33.3% (2)	26.7% (4)	18.2% (4)	30.3% (33)	28.3% (43)
	Less significant	0% (0)	0% (0)	4.5% (1)	2.8% (3)	2.6% (4)
	Not significant	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)
	Total	100.0% (6)	100.0% (15)	100.0% (22)	100.0% (109)	100.0% (152)

Chi-Square = .939 Asymp. Sig = .816 (Significant Chi-square values are at P<0.05)

The results provided in Table 6.5.18 show that all groups of respondents rated the principle as *most significant* and *significant* to a high extent although a small percentage of first-line managers and employees rated it as *less significant*. The results indicate that top and middle managers recognised the significance of the principle more than the first-line managers and employees, as none of the former rated it as *less significant* or *not significant*. This could be due to the fact the respondents at these levels could be more aware than other groups about the importance of measuring and evaluating the performance of improvement process since they are responsible and accountable more than the other groups for achieving the objectives and goals of the processes and of the organisation in general.

To test the extent to which the principle of Quality Measurement is being practised in OMANTEL, the respondents were presented with three statements relating to the principle. The results of rating the statements are provided in Table 6.5.19 and Table 6.5.20:

Table 6.5.19: The Practice of the “Quality Measurement” Principle

	% Agree (N)	% Neutral (N)	% Disagree (N)	% Total (N)
1. In OMANTEL, the progress against quality goals is measured and reviewed regularly to take corrective actions.	28.2% (58)	34.2% (52)	27.6% (42)	100.0% (152)
2. In OMANTEL, there is an updated and reliable information system to assess the progress of quality improvement activities.	45.4% (69)	30.3% (46)	24.3% (37)	100.0% (152)
3. In OMANTEL, there is a frequent recognition for achievements in quality.	31.6% (48)	22.4% (34)	46.0% (70)	100.0% (152)

Table 6.5.20: The Practice of the “Quality Measurement” Principle According to Occupation Level

	Occupation Level (% of Agree)			
	% Top- Mgt. (N=6)	% Middle Mgt. (N=15)	% First-Line Mgt. (N=22)	% Employees (N=109)
1. In OMANTEL, the progress against quality goals is measured and reviewed regularly to take corrective actions.	50.0% (3)	26.7% (4)	31.8% (7)	40.3% (44)
2. In OMANTEL, there is an updated and reliable information system to assess the progress of quality improvement activities.	33.3% (2)	26.7% (4)	54.5% (12)	46.8% (51)
3. In OMANTEL, there is a frequent recognition for achievements in quality.	33.3% (2)	26.7% (4)	31.8% (7)	32.1% (35)

Chi-Square = .947 Asymp. Sig = .814 (Significant Chi-square values are at P<0.05)

The first statement tested the extent to which the progress against quality goals in OMANTEL is measured and the results are reviewed regularly to permit the taking of corrective actions. The results of rating this statement provided in Table 6.5.19 show that a small percentage of respondents *agreed* with the statement. The majority of respondents were *neutral* and *disagreed* with the statement.

The highest percentage of respondents who *agreed* with the statement, as shown in Table 6.5.20, were top managers; the other groups *agreed* with the statement to a lesser extent. Overall, there is evidence to indicate that the practice of measuring and evaluating the progress of quality and taking corrective actions is not being conducted at OMANTEL.

The second statement was intended to identify whether or not there was an updated and reliable information system in OMANTEL to assess the progress of quality improvement activities. The results, given in Table 6.5.19, show that less than half of respondents *agreed* with the statement. The majority of respondents were either *neutral* or *disagreed* with the statement. The largest percentage of respondents who *agreed* with the statement were first-line managers and employees. The results of rating the second statement suggest that there is a lack of a systemic and reliable information system in OMANTEL to assess the progress of quality improvement.

The third statement aimed to identify whether or not there was frequent recognition for achievements in quality. The results provided in Table 6.5.19 show that a small percentage of respondents *agreed* with the statement. The majority of respondents were *neutral* and *disagreed* with the statement. Table 6.5.20 shows that all groups of respondents *agreed* with the statement to a low extent indicating that there is a lack of recognition for achievements in quality, meaning that the people are not recognised in OMANTEL for improving quality. Such findings are compatible with those driven from a study carried out by Gunasekaran (1999), mentioned earlier, which revealed that most of the individual workers in the company studied claimed that one of the issues they faced was that recognition for good ideas often goes to the wrong people, without an acknowledgement of the original source of the ideas; these workers felt that they did not receive the praise and recognition commensurate with a job well done.

The results of rating the significance and practice of the Quality Measurement principle show that the principle was rated as a *significant* to a high extent by all groups of respondents indicating that the respondents recognised the need for its implementation in OMANTEL. The results of rating the statements related to the practice of the principle indicate that the principle is not being practised in OMANTEL, which suggests that the quality improvement processes are not being measured and evaluated to identify their progresses and achievements. The importance of measurement is manifested in the words of Hamel and Prahalad (1996) who stated that “It is undoubtedly true that you can’t improve it if you can’t measure it”. Harrington and Harrington (1995) added, “Measurements are essential. If you cannot measure it, you cannot control it. If you cannot control it, you cannot manage it. If you cannot manage it, you cannot improve it. Without measurements, every result is a surprise. Measurements are the starting point for improvement, because they enable you to understand where you are and set goals that help you get where you want to go. Without them, needed changes and improvements to the process are severely hindered. You need

to develop effectiveness (quality), efficiency (productivity), and adaptability (flexibility) measurements and targets for all your critical processes”.

Conclusion

The results presented and discussed in this chapter provide a number of conclusions. In relation to the first statements presented in the questionnaire, which tested the extent to which OMANTEL’s personnel were aware of TQM and have an understanding about its concepts and methods, the data analysis revealed that there is a little understanding and awareness of TQM and its concepts amongst the personnel of OMANTEL, and that these concepts have never been implemented in OMANTEL. Therefore, the conceptual framework for TQM implementation proposed by this study will be the first occasion on which an effort will be made to implement TQM in OMANTEL.

Table 6.6.1: The Means of Rating the Elements and Principles

	Significance				Practice			
	Top Managers	Middle Managers	First-Line Managers	Employees	Top Managers	Middle Managers	First-Line Managers	Employees
Macro Elements								
Vision	1.33	1.33	1.32	1.34	2.05	2.33	2.21	2.45
Mission	1.33	1.33	1.50	1.44	2.55	2.82	2.83	2.65
Strategy	1.33	1.20	1.36	1.24	2.75	2.86	2.64	2.64
Values	1.17	1.33	1.27	1.36	2.41	2.54	2.70	2.50
Key Issues	1.17	1.73	1.95	1.68	2.08	2.46	2.81	2.70
Micro Elements								
Internal and External Customers	1.00	1.80	1.18	1.49	2.41	3.06	3.18	2.89
Teamwork	1.17	1.20	1.32	1.33	2.83	2.63	2.64	2.66
Quality Through People	1.33	1.87	1.55	1.58	2.77	2.76	2.81	2.56
Quality on All Agendas	1.33	1.80	1.68	1.58	2.83	2.78	2.84	2.57
All Work is Process	1.33	1.40	1.23	1.39	2.33	2.46	2.59	2.38
Management Commitment	1.17	1.40	1.45	1.38	2.44	2.61	2.80	2.52
Prevention	1.50	1.33	1.27	1.30	2.33	2.36	2.61	2.54
Customer Satisfaction	1.00	1.73	1.68	1.60	2.38	2.26	2.69	2.49
Continuous Improvement Cycle	1.33	1.67	1.41	1.39	2.33	2.33	2.27	2.25
Measurement	1.50	1.33	1.36	1.39	2.58	2.80	2.68	2.65
TQM Principles								
Customer is King	1.17	1.33	1.18	1.31	2.66	2.56	2.90	2.80
Everyone Participates	1.33	1.47	1.36	1.24	2.69	2.86	2.93	2.87
Aligned Corporate Systems	1.00	1.20	1.32	1.19	2.73	2.66	2.90	2.73
Continuous Improvement	1.33	1.27	1.14	1.28	2.38	2.57	2.60	2.49
Quality Measurement	1.33	1.27	1.27	1.36	3.00	3.13	2.95	2.92

Values = (Most Significant 1, Significant 2, Less Significant 3, Not Significant 4)

Values = (Strongly Agree 1, Agree 2, Neutral 3, Disagree 4, Strongly Disagree 5)

Table 6.6.2: Chi-square Analysis: The Significance of the Occupational Level Variable in Rating the Elements and Principles

	Occupational Level			
	Significance		Practice	
	Chi-Square	Asymp. Sig.	Chi-Square	Asymp. Sig.
Macro Elements				
Vision	3.675	.299	.014	1.000
Mission	1.672	.643	1.331	.722
Strategy	1.289	.732	2.257	.521
Values	1.362	.714	1.745	.627
Key Issues	3.461	.326	6.965	.073
Micro Elements				
Internal and External Customers	3.296	.348	12.187	.007
Teamwork	.149	.985	1.004	.800
Quality Through People	2.947	.400	1.806	.614
Quality on All Agendas	2.811	.422	3.160	.368
All Work is Process	1.056	.788	1.651	.648
Management Commitment	2.559	.465	1.009	.799
Prevention	.796	.850	1.256	.740
Customer Satisfaction	3.759	.289	7.669	.053
Continuous Improvement Cycle	.339	.953	2.573	.462
Measurement	.452	.929	.646	.886
TQM Principles				
Customer is King	1.168	.761	1.346	.718
Everyone Participates	.123	.989	4.997	.172
Aligned Corporate Systems	.965	.810	3.525	.317
Continuous Improvement	.826	.843	2.175	.537
Quality Measurement	.939	.816	.947	.814

Note: Significant Chi-square values are at $P < 0.05$

The data presented in Table 6.6.1 and Table 6.6.2 summarise the results of rating the elements, concepts and principles of the proposed TQM implementation model, which have been presented and analysed in this chapter.

The means presented in tables above show that there was no significant difference between the occupational levels in rating the elements, concepts and principles of the model. Such a finding suggests that the independent variable (Occupational Level) did not report a significant effect on rating the dependent variables (elements, concepts and principles). This provides an evidence that the respondents' level of occupation did not affect the way they rated the elements, concepts and principles, which means that both the managers and employees of OMANTEL perceived to the same extent the

importance of the model and the extent to which its elements, concepts and principles are being practised in OMANTEL.

The data analysis and the means of rating the significance and practice of model's elements, concepts and principles presented in the table provided above reveal that elements, concepts and principles of the proposed model were rated as significant to a great extent, which indicates that the respondents were of the opinion to a very high extent that the elements, concepts and principles were significant to be implemented in OMANTEL. This suggests that the respondents believed that the proposed conceptual framework would act as a vehicle for changing management processes and improving the quality of OMANTEL's services.

In relation to the practice of the model's elements and concepts (macro and micro elements), the data analysis and the means of rating these elements reveal that the respondents agreed with the statements relating to these elements, which indicates that the elements are being practised in OMANTEL. In relation to the practice of the model's principles, the results reveal that the respondents agreed to a low extent with most of the statements relating to the principles, which indicates that the principles are not being practised in OMANTEL. These results suggest that OMANTEL's environment is compatible for TQM implementation, but its personnel are lacking an effective method to sustain its principles.

Overall, the results analysed and presented reveal that there is a critical need for improvement and for the implementation of TQM in OMANTEL. The results also reveal that the environment of OMANTEL is compatible and its personnel are able to practice the elements and concepts of the proposed implementation model, although there is a lack of understanding amongst its personnel about how to sustain its principles.

The conclusion drawn from the data presented in the form of percentages are confirmed by the use of statistical testing (Chi-square). This is not surprising given the high level of response rate (80.47%) to the questionnaire from which the data were derived. When response levels enter that range, validity and reliability can be assumed with a degree of certainty.

CHAPTER SEVEN:

TOTAL QUALITY MANAGEMENT AND THE BARRIERS TO ITS IMPLEMENTATION

Chapter Seven: Total Quality Management and the Barriers to its Implementation

Introduction

It is generally agreed in the literature that implementing TQM is not an easy process. It requires time and effort, since it might be faced with some serious pitfalls which, if ignored, may result in inappropriate implementation. For the purpose of understanding and overcoming, or at least minimising these barriers, it is useful to discuss them. Thus, this chapter explores the potential barriers that could be encountered by many organisations in their efforts to implement TQM.

7.1. The Common Barriers to TQM Implementation

In discussing the difficulties and barriers associated with TQM implementation, although each organisation is unique in itself and the barriers depend on its unique circumstances, there are some common barriers encountered by most organisations in their efforts to implement TQM. Morris and Haigh (1996 d) stated that the following barriers are likely to emerge in implementing TQM:

- **Organisational:** lack of management will
lack of a properly discernible and properly managed
implementational vehicle i.e. a comprehensive and coherent model
- **Executional:** problem statement contains inherent flaws e.g. the statement of the
quality problem is too broad and/or implies cause-effect and thus
prevents systemic diagnosis and rational solution
teams lack appropriate training and education are improperly
constructed and their activities are improperly coordinated
past practice and limited solutions:
solutions only work in the short term because of a failure to
appreciate that there is a hierarchy of desirable solutions involving
quality and acceptance
- **Perceptual:** stereotyping of problems generates incomplete problem
identification, incomplete solution generation and incomplete
solution implementation
- **Emotional:** fear of taking risks
no appetite for uncertainty
judging rather than generating ideas
- **Environmental:** autocratic supervision
lack of trust and cooperation
lack of support: money, moral, physical and emotional

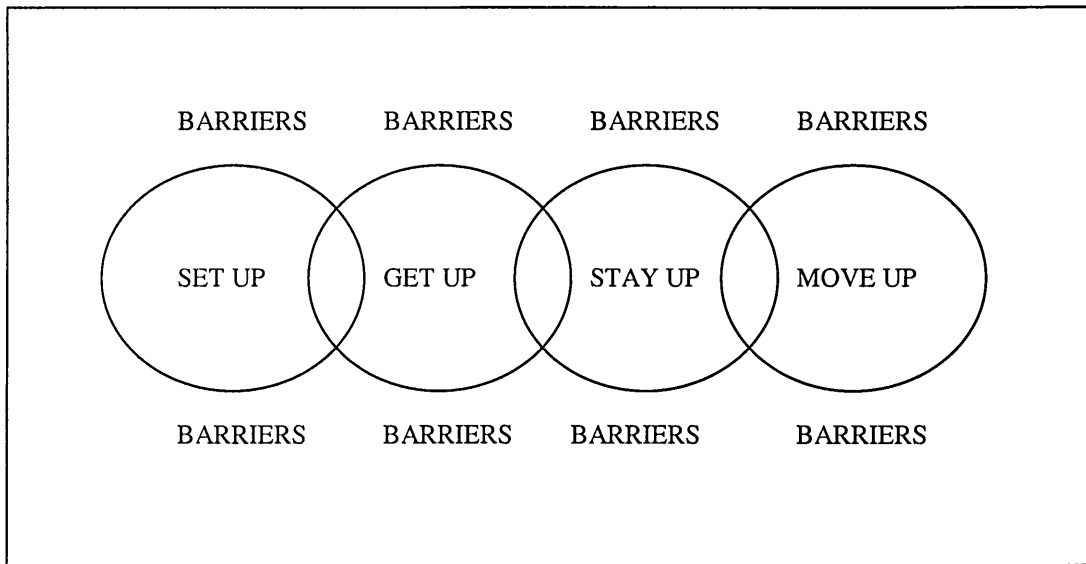
In addition, Macdonald (1996) listed ten principal barriers that could inhibit the implementation of TQM, these barriers are:

1. Lack of management commitment.
2. Lack of vision and planning.
3. Satisfaction with the quick fix.
4. The process became tool bound.
5. Quality too constraining.
6. Satisfaction with customer satisfaction.
7. Culture change versus project approach.
8. Quality management became institutionalised.
9. The people were not really involved.
10. Lack of real business measurables.

An empirical survey carried out by Wilkinson, A., Redman, T., and Snape, E. (1994) on the difficulties associated with TQM implementation, revealed that lack of resources, cost constraints, and emphasis on short-term goals were perceived as the most important difficulties to quality management implementation. Problems in measuring quality, in communications, and a lack of training also emerged as significant difficulties. Another survey by Nwabueze and Kanji (1997) revealed that such issues as poor communication, skills shortage, lack of resources, sectionalism, lack of customer awareness, lack of an effective information system, and constant shifting of resources, were found to be difficulties associated with TQM implementation in the United Kingdom's National Health Service.

The survey of TQM literature reveals that the barriers to TQM implementation differ from one stage to another stage of the implementation process. According to Morris and Haigh (1996 d), the barriers to the implementation of TQM differ depending upon which phase the implementation of TQM has reached. The phases of TQM implementation can be categorised as shown in Figure 7.1.1:

Figure 7.1.1: The Phases of TQM Implementation



Source: Morris and Haigh (1996 d).

The Set Up phase may be defined as the planning phase of TQM implementation in which an organisation set plans for TQM implementation, probably as a result of some internal or external pressures. At this phase, an organisation could be faced with problems such as which of the TQM approaches to follow or which framework to adopt, and how to convince and create awareness of the need for TQM implementation.

The Set Up phase may be defined as the preparation and execution phase in which the defined plans are executed and the resources for implementation are allocated. At this phase an organisation and its management may be faced with such problems as from where to start, who should be responsible for the implementation, how many resources are required, and how to generate and allocate the required resources.

The Stay Up phase may be defined as the sustaining phase of a TQM programme that has been implemented. At this phase an organisation could be faced with such issues as how to sustain the existing programme, how to identify the possible causes that may result in difficulty to sustain a programme and how to eliminate those possible causes.

The Move Up phase may be defined as moving up towards the advanced levels of TQM implementation such as making quality management an integral part of an organisation and its personnel's culture, and seeking advanced quality management methods for improving and sustaining the existing programmes and methods. At this phase the management of an organisation may be challenged with the issues such as how to attain this phase's objectives.

Since the barriers to TQM implementation differ from one phase to another, it is imperative to evaluate the process of implementation in order to identify the barriers related to each phase. This evaluation would enable the people responsible for TQM implementation to identify the barriers, their causes, and the necessary actions and resources required for eliminating or minimising the barriers and their causes. Each phase's barriers need to be eliminated before proceeding to the next phase so that the causes of barrier would not recur in further phases.

Munshi (1992) categorised the barriers to TQM implementation into three scenarios:

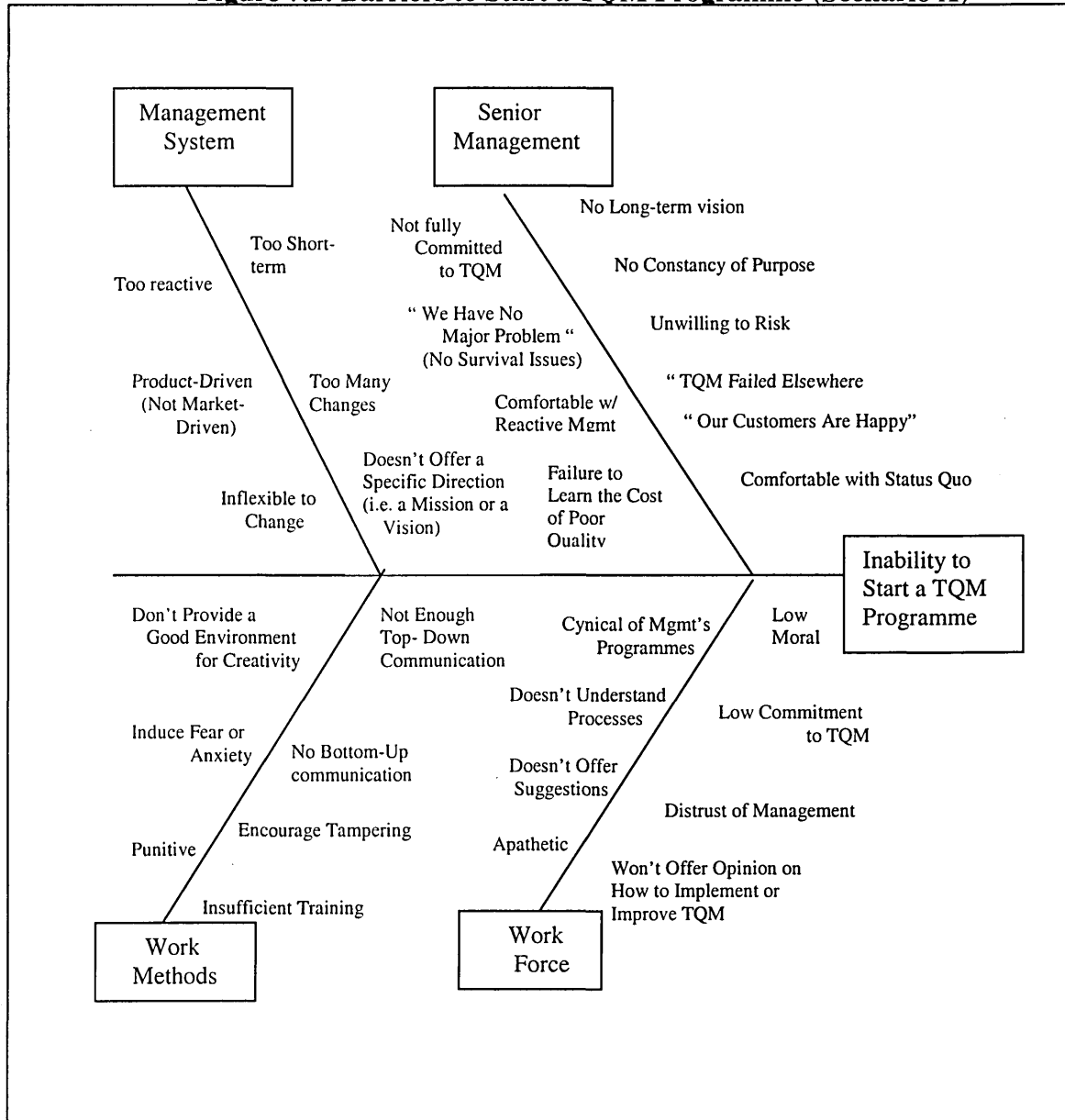
1. The Inability of an Organisation to Start a TQM Programme.
2. Dropping an Existing TQM Programme.
3. Dropping an Ongoing TQM Programme.

Munshi believed that the barriers related to each of the above scenarios are caused by an organisation's Senior Management, Management System, Work Methods, and Work Force. In relation to senior management, Munshi (1992) stated that no TQM programme will survive without top management's unflinching commitment to quality; therefore, a lack of management commitment to quality could be barrier to TQM implementation and sustainability, or dropping an ongoing quality programme. Munshi believed that an ineffective management system and work methods might prevent the necessary changes taking place or being sustained. The lack of an effective commitment from the work force to quality may also be a barrier to TQM implementation and result in a difficulty in sustaining an ongoing quality programme.

The following sections discuss in more detail the above three scenarios and the root causes of the barriers associated with each.

7.2. Scenario "A": Inability to Start A TQM Programme

Scenario "A", shown in Figure 7.2, represents a situation in which an organisation intending to implement TQM is faced with a number of barriers relating to its internal environment. This scenario could be referred to the Set Up and Get Up phases in Figure 7.1.1. The root causes of these barriers are due to its senior management, management system, work methods, and work force. These causes are depicted below in more details:

Figure 7.2: Barriers to Start a TQM Programme (Scenario A)

Source: Munshi (1992).

7.2.1. Senior Management

In discussing the barriers relating to senior management, the first barriers are "no long-term vision" and "no constancy of purpose". These two barriers are interrelated and affect each other. The lack of vision means that an organisation's top management does not have a long-term vision, which determines where the organisation intending to be in the coming years and expresses an organisation's future in terms of the services it intends to provide, how it intends to meet its customers' future demands or requirements, etc. No constancy of purpose means that an organisation and its management have no constant direction and

commitment to improve. Due to the lack of long-term vision and lack of the intention to improve, the management of an organisation would not make any effort to implement TQM, or it may not regard TQM as a useful management tool for improvement.

The other barrier is that senior management is “not committed to TQM”. This could be due to its involvement and concentration on other issues instead of quality management issues and, as a result, it is not prepared, or does not have enough time, to devote to quality management issues and understand the concepts and benefits of TQM. The other source of this barrier could be the fear of losing power and control over resources, information, etc. since TQM requires some delegation of power to the lower levels of an organisation, and the sharing of information with subordinates. Peters (1987:476) maintained that “Information hoarding rather than sharing (information is power, after all) and action-delaying tactics (not to act is not to risk failure) become the norm in fearful organisations”. In addition to management’s lack of commitment to TQM, there is also the “unwillingness of management to take risk” in implementing TQM due to the uncertain outcomes. Management might be uncertain whether or not TQM implementation would pay off because TQM might have been failed elsewhere, did not pay off or caused some other problems (i.e. high spending on TQM programs without gaining any results or achieving improvements).

The other barrier associated with starting a TQM programme is that management may believe or feel that an organisation’s “customers are happy” with the services or products rendered to them by the organisation. Also, the management may feel itself “comfortable with the status quo” and not recognise that there are problems that need to be tackled and improved; or it may realise the presence of problems but does not consider them as serious problems or survival issues that could affect an organisation’s situation and reputation in the marketplace. Accordingly, management sees no reason to improve and, in turn, sees no reason to implement TQM perhaps because of a lack of factual and accurate data and measurements relating to customer satisfaction and competitive threats. In addition, management might be “comfortable with a reactive style of management” rather than a transformational style of management, which results in allocating blame rather than preventing problems at source, taking action on them, and identifying future trends.

The final barrier relating to senior management is the “failure of management to learn and recognise the cost of poor quality”. Management may not recognise that doing things wrong and accepting errors in work will affect an organisation's financial situation. Also, it

may not recognise that doing things right the first time and preventing errors at source will cost less than rework and correction. Since the attitude of accepting errors in work becomes part of an organisation's culture, management would find no reason to improve and implement TQM.

Wilkinson et al (1998) noted that their research on the difficulties facing the introduction of TQM found that senior management came in for criticism from many of their respondents, particularly for its failure to demonstrate personal commitment to the management of quality. Senior management was variously accused of being sceptical, unenthusiastic, unwilling to commit resources, and of treating TQM from a 'short-termist' perspective.

7.2.2. Management System

An organisation's functional systems and management procedures play a critical role in implementing TQM. If the management systems of the organisation are not prepared and capable of meeting the requirements demanded by TQM, then it would be difficult to start a TQM programme.

The first difficulty or barrier associated with a management system is that the system could be "inflexible to change". In this regard, Brocka and Brocka (1992) stated that change is probably so difficult to accomplish because it is against our nature as a species to change. Handy (1993) added that once change begins, the structure of an organisation, the planning and control of its work and the making of many of its decisions will no be longer the same. As a result, organisations may oppose the change.

According to Laszlo (1998) the willingness of organisations to accept changes is an essential prerequisite for implementing TQM; their degree of eagerness to embrace change determines the speed of progress toward the goal of implementing TQM. But, unfortunately, this prerequisite seems to be regarded in the literature as a major barrier to TQM implementation. An empirical study by Knights and McCabe (1996), on the difficulties associated with TQM implementation, found that sixty-five per cent out of eighty per cent of respondents indicated that the greatest difficulty in introducing quality innovations in an organisation was the difficulty of culture change.

The second barrier is that there might be "too many changes" within an organisation's systems at one time; which may result in complexity, misallocation of resources and inadequate concentration on a particular change or improvement process. The people

involved in those changes may not find enough time to devote to additional changes, or an organisation's system itself could be unable to accept more than one change at the same time. As a result, TQM implementation would be regarded as a 'future plan' that might, or not, be implemented depending on the time needed for the current changes and their outcomes.

The other difficulty associated with a management system which is encountered when starting a TQM programme is that the system is "too reactive" and not prepared to accept transformation. This could result in seeing problems as matters of fact that could be tackled but not prevented, it could also result in not taking actions to anticipate future events. In addition, the system could be "product-driven rather than market-driven" seeking short-term profits instead of finding competitive advantages in the market. This would result in an organisation's lack of capability to deal with changes in the market, cope with the competitive threats, and meet its customers' changing demands. According to Kotler (1994:16-17) "The product concept leads to "marketing myopia," a focus on the product rather than on the customer's need". The product-driven system and TQM philosophy are not only fundamentally opposite, but they are mutually exclusive. The main concept of TQM is to seek competitive advantage and meet customers' requirements through improved products and services. This opposition between TQM and a product-driven system may result in a difficulty to embark upon a TQM programme.

In addition to the aforementioned barriers, the management system and plans of an organisation could be too "short-term" and not provide a clear picture of the future. The plans "do not offer a specific direction" as to where the organisation is intending to be and how it could operate in the marketplace at the future, or how it could meet its customers' needs. There is no clear mission and vision statements that direct an organisation's people towards achieving its future goals and objectives. Since there is no purpose statement and long-term plans and directions for improvement, then there would be no need for TQM implementation because the overall aim of TQM is to improve constantly and seek competitive advantages.

7.2.3. Work Methods

In addition to the barriers related to senior management and management systems, there are other barriers relating to work methods that may be encountered in starting a TQM programme. One of these barriers is the lack of sufficient and effective communications.

There may be no effective “top-down and upward communications” methods. The work methods might be designed in such a way that they would not allow an organisation’s management to effectively transfer the plans and objectives of an organisation, or their related information, to the lower levels of an organisation; or they could not allow personnel at the lower levels, or first-line operatives, to express their ideas, related to the problems they are facing, to the top management. Lack of an effective communication system could result in difficulties in identifying improvement areas. It may also result in people seeing no problems with their work. This, in turn, could result in TQM implementation being viewed as an unnecessary or useless initiative.

Another barrier related to work methods is that the work methods may “encourage tampering”, which results in people doing things carelessly and ineffectively without paying any attention to the regulations of work or specifications of products or services; because either the management does not care or the work is designed in such a way as to be open to abuse. This attitude is fundamentally different from a TQM philosophy, which emphasises doing things right the first time and every time. Such an attitude would make TQM implementation too difficult.

The third difficulty associated with work methods is “insufficient training” being imparted to personnel. The training methods and programmes of the organisation might be designed in such a way that they could not qualify the organisation’s personnel to improve and tackle problems, or to accept any new working methods. This would result in the unavailability of qualified personnel to carry out or apply TQM tools and techniques in the problem solving and improvement processes. There would be a gap between the requirements demanded by TQM and the available personnel, which makes TQM implementation inefficient and ineffective.

A final barrier is that work methods “do not provide a good environment for creativity”. Instead, they might be “punitive” and “induce fear or anxiety”. The way in which the work is conducted may not allow an organisation’s personnel to think about the problems and make suggestions about them, or create new ideas to improve the work. This type of environment would not be compatible with TQM implementation which requires an environment where people are encouraged to be participative, creative, and trained to find solutions for problems in their own ways.

7.2.4. Work Force

In discussing the barriers relating to a work force, the first barrier is that a work force “does not offer suggestions”. Due to the lack of environment encouraging creativity, a work force would not be prepared to participate in TQM implementation and decision-making and would not offer suggestions regarding whether or not TQM is needed or it could work in the organisation. Accordingly, management would be unclear about whether or not TQM implementation would be accepted at the lower levels of the organisation. Knowing the degree of TQM acceptance at the lower levels is critically important since most of TQM’s concepts, tools and techniques are applied and carried out at the lower levels of an organisation.

A further difficulty is that a work force may “distrust the management”. That is, because management may say one thing and do something else; meaning that management may voice support to TQM but not show visible commitment to it nor make a sustained effort to implement it. In this regard, Macdonald and Piggott (1992:38) stated that “Unless management wholly accept that improvement is their responsibility, nothing will change. It is not a matter of motivating or cajoling workers to take quality seriously. Whatever their attitude, the workers are powerless to make any significant change without prior management action.”

Davies (1989:263) listed four possible reasons as to why a work force may distrust its senior managers, these reasons are:

- It may, in fact, be true that they are not committed, but have somehow managed to delude themselves into thinking that they are.
- Many of the managers in the organisation may be committed, but the positive effects of their input is being smothered by the negative signals being sent out by those who are not.
- Many managers may be committed, but are unable to change completely overnight and will still give off ‘non-quality’ signals.
- Commitment does exist at senior levels, but is not being conveyed through layers of intermediate management.

The results of distrust could be “low morale” amongst employees towards TQM and conflict between the planned goals for TQM implementation and the necessary actions required for its implementation. Distrust of management’s commitment to TQM, may also

result in employees' low commitment to it. In this regard, Davies (1988: 8) stated that, "without a plan for how you are going to demonstrate your commitment to quality and your involvement in the process, how do you expect people to know? Are they supposed to guess?"

In addition, due to distrust, employees may show a "cynical" attitude to management's programmes. As a result, management's initiatives for improvement, such as TQM implementation, may be disregarded; resulting in a negative impact on the ability to start a TQM programme.

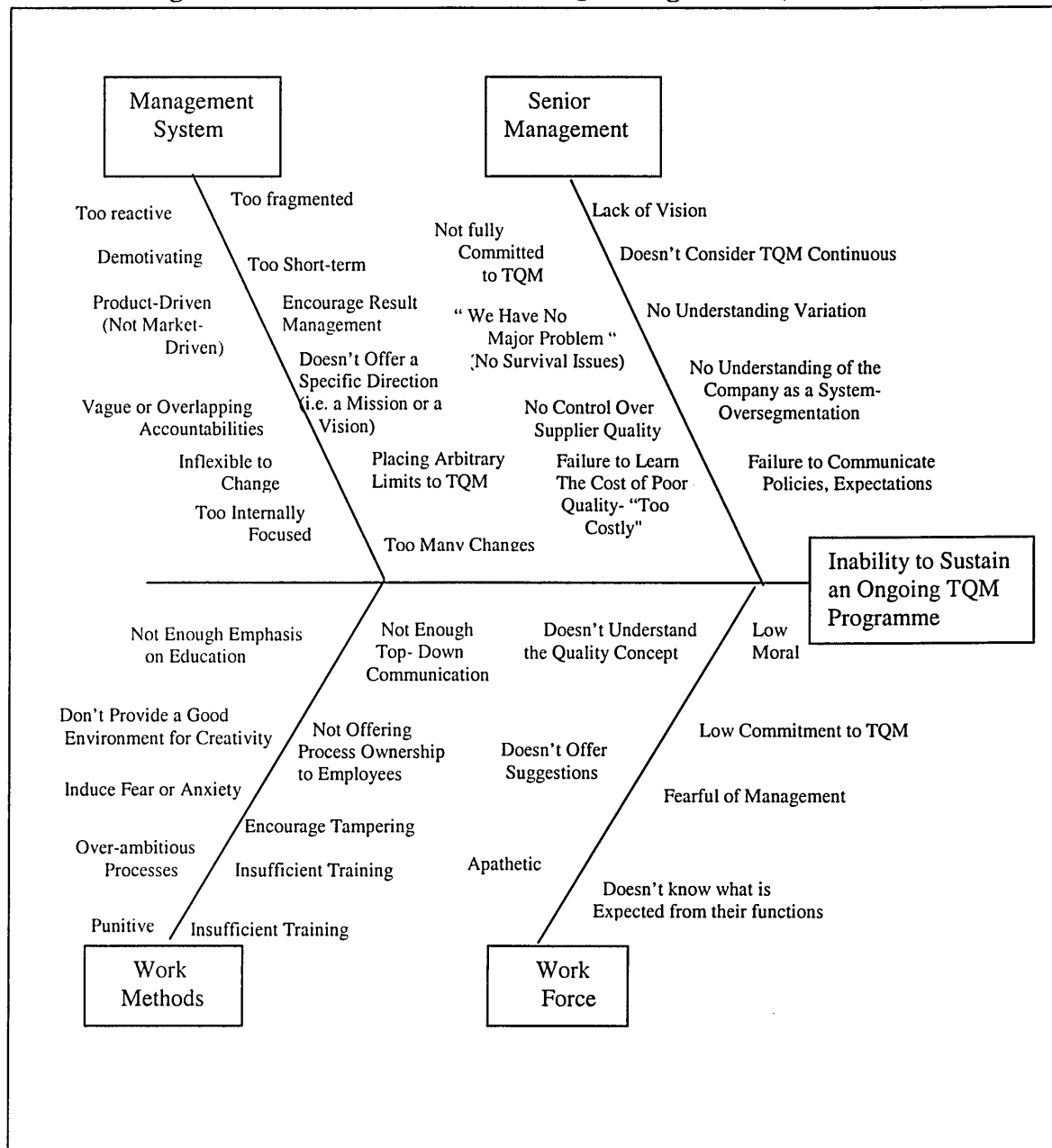
Another barrier relating to a work force is that the management may show seriousness and commitment to TQM, but the work force may exhibit an "apathetic" attitude towards it. This could be a result of the impact of a management system or work methods. However, it would result in a work force making no effort to improve, resisting any attempt to change its attitudes towards TQM and in refusing to participate effectively and seriously in the improvement process. The results, in turn, would be a lack of appropriate support for TQM from the lower levels of an organisation.

A final barrier is that a work force might be willing to take serious actions and co-operate with management to implement TQM, but might "not know or understand the processes". It might not know which processes need to be improved and how they could be improved. Also, it might not possess the necessary tools and techniques required for improvement. Hence, it becomes uncertain about the need for TQM implementation, and thus may regard TQM implementation as a useless initiative.

7.3. Scenario "B": Inability to Sustain an Ongoing TQM Programme

Scenario "B" (Figure 7.3) represents a situation where an organisation has already implemented a TQM programme, but it is unable to sustain this ongoing programme. This scenario may be identified with the Stay Up phase in Figure 7.1.1. It should be noted that some of the barriers discussed above may recur in this situation, and some others may disappear. Thus, the discussion here will be focused on those barriers that have not been discussed in Scenario "A". It should be also noted that the main causes of these barriers are again Senior Management, Management System, Work Methods, and Work Force.

Figure 7.3: Barriers to Sustain a TQM Programme (Scenario B)



Source: Munshi (1992).

7.3.1. Senior Management

In discussing the barriers relating to senior management in Scenario "B", it should be noted that such barriers as lack of a vision, management not being fully committed to TQM, the belief amongst senior managers that an organisation has no major problems, and failure to understand the cost of poor quality, which have existed in scenario "A", recur in Scenario "B".

In addition to those barriers, management may encounter the problem of “not considering TQM as continuous programme”; meaning that it might have taken TQM as a ‘quick fix’ and has ended by achieving some short term improvements instead of taking it as a continuous improvement programme. Either because management has not instituted a TQM programme as a regular activity requiring continuous evaluation and redesign, or because it has not set a never ending standard of continuous improvement for it, such as Crosby’s (1984) ‘Do it over again’ and ‘Zero-defects’, or Deming’s (1986) Plan-Do-Check-Act Cycle, the capacity to sustain a TQM initiative is absent.

The second barrier which may be encountered in sustaining a TQM programme is that management may “lack an understanding of variation”. It may not recognise the changes occurring in an organisation or the benefits to be gained as a result of a TQM implementation. Management may not recognise that areas for improvements have indeed been improved, that problems have been tackled, and that the costs of poor quality or rework and correction have been reduced. Misunderstanding of variations could be a result of lack of an appropriate measurement system. An empirical study carried out by Sinclair and Zairi (1995) found that inappropriate performance measurement is potentially a major cause of failure in TQM implementation. However, misunderstanding variation could result in seeing TQM as a useless tool that does not make any difference and, thus, discourages management from persevering with it.

The third barrier to sustaining a TQM programme is that management “does not understand the organisation as a system” and, thus, it implements TQM in some parts of an organisation and ignores it in some other parts. In this regard, Johnson and Chavala (1996) argued that TQM efforts fail because they are mounted as stand-alone programmes, unconnected to other programmes, rigidly and narrowly applied, and expected to produce a miraculous transformation of a company. When done right, TQM is a “way of life” as opposed to a programme. Peters (1987:79) added that “all parts of the company must be part of the programme- personnel, accounting and treasury, sales, order entry, shipping. Quality programmes limited to the factory or operations centres will fizzle”.

Another barrier to sustaining a TQM programme is senior management’s “failure to communicate quality improvement policies” throughout an organisation and its failure to transfer its expectations, or the objectives of its TQM programme, to the lower levels of the organisation. This failure could result in a misunderstanding of the goals and objectives of TQM implementation. It could also result in a misunderstanding of the outcomes, since the

goals and objectives are unclear. Consequently, since senior management is unclear about the objectives and outcomes of TQM programme, it could not sustain TQM.

In addition to these barriers, management may “not have a control over supplier quality”. Here, management would not be the direct cause of this barrier, which would reside with the supplier, but management would still be an indirect cause of the barrier because it has not chosen an appropriate supplier (s) due to its limited knowledge about that supplier and its capabilities as a result of an inadequate auditing system. The lack of control over a supplier could result in an inability to produce quality goods or services due to the poor quality of the materials supplied.

7.3.2 Management System

The first barrier relating to a management system is that an organisation's systems are “too fragmented”. Each part of an organisation works individually instead of as part of a whole system, and this may result in a lack of co-ordination and co-operation between departments, and in the creation of an improvement process where the focus is an individual department at the expense of the totality of departments. This, in turn, could result in a failure to understand the role that each department has to play in a TQM programme. It could also make the task of auditing the improvement areas and sustaining TQM programmes throughout an organisation too difficult and time consuming.

The second barrier is that the management system is designed in such a way that it “encourages seeing results” only. In this type of management system, people involved in TQM programmes must make calculations about the outcomes of TQM in order to gain recognition. They either make calculations about the outcomes according to their own preferences, or they do not make any calculation; they would not make calculations, as Handy (1993:43) stated, because “the calculus would say, ‘why expend energy to achieve higher results when the instrumentality (i.e. the likelihood of getting rewarded) is greater with lower results?’” The result would be concentrating on results rather than on performances, which would make it difficult for management to understand and recognise the actual outcomes of a TQM programme.

The third barrier relating to a management system is that it may be “placing arbitrary limits on TQM”. The management system may not allow a TQM programme to be implemented in all areas of an organisation, but would limit it to one or more specific areas. In turn, this could result in limited outcomes from TQM's implementation with

management not seeing TQM as offering what it supposed to offer and, in consequence, not sustaining it.

The other barrier associated with a management system is that the system might be “demotivating”. The system might not accept changes or new ideas; it might not encourage people to make suggestions regarding the work processes or make efforts to improve the processes that need to be improved. This could be a result of fear of change amongst the systems’ owners, or the systems’ inability to accept changes. However, this would result in discouraging an organisation’s people from providing suggestions on how it could sustain effectively the ongoing TQM programme.

In addition, an inability to sustain an ongoing TQM programme could be a result of “vague or overlapping accountabilities”. This would result in difficulty in identifying who is responsible for a TQM programme and who could be blamed for not achieving quality objectives.

Furthermore, a management system might be “too internally focused” rather than customer focused. The business and its objectives may be not designed around the goal of customer satisfaction and meeting his/her requirements. This orientation of the business would result in focusing more on the internal objectives (i.e. improving an organisation’s internal performances) instead of focusing equally on both internal and external objectives (i.e. customer satisfaction, learning from the market to gain competitive advantages) of an organisation. In this regard, Kotler (1994:17) stated that “These organisations too often are looking into a mirror when they should be looking out of the windows”. Consequently, the overall objective of TQM, which is customer satisfaction, would not be achieved. As a result, TQM would be seen as not providing its expected outcomes; thus, the management may think it would be better to abandon it.

In addition to these barriers relating to a management system, an organisation might be encountering some of the same barriers that it has encountered in its effort to start the TQM programme. These barriers include: too short-term and too reactive management system, product-driven not market-driven management system, inflexibility to change, too many changes within the system, and lack of specific direction.

7.3.3. Work Methods

The first barrier relating to work methods which could be encountered in sustaining a TQM programme, is that there could be “not enough emphasis on education”. This lack of

education could result in a shortage of skills required to sustain quality programmes. In order to sustain a quality programme, an organisation must have qualified and skilled personnel who employ the tools and techniques of TQM effectively. Lascelles and Dale (1994:325) stated that “Starting a quality improvement process with insufficient regard for the needs of the organisation’s skills base is likely to result in frustration and a lack of success because of the gap between awareness and capability”.

The other difficulty that could be encountered in sustaining a quality programme is that the process could be “over-ambitious”. The process could demand more than TQM can offer, and could demand the attainment of levels of improvement which an organisation’s work methods are incapable of achieving. The ensuing gap between what is desired and what is attainable could result in seeing TQM as an insufficient improvement tool.

Also, the work methods could be designed in such a way that they would not offer a sense of “ownership to employees”. Meaning that the work methods would not clarify whom is responsible for improving processes. In such a situation, the responsibilities for carrying out the tasks of improvements would be vague.

In addition, work methods could place “overlapping responsibilities” on the people responsible for improvement, which could result in inappropriate concentration on the processes, and in people having no control over the processes and the problems, and in finding insufficient time to devote to the actual problems. In the long term, this could affect people’s attitude toward TQM in terms of seeing the tasks of TQM as stressful. Peters (1987:79) stated that “Almost all quality improvement comes via simplification of design, manufacturing, layout, processes, and procedures.”

Furthermore, as in the Set Up stage of TQM implementation, work methods may not provide a good environment for creativity and encourage tampering. Also, they could be punitive and induce fear or anxiety, because of too little training and insufficient top-down communication.

7.3.4. Work Force

In discussing the barriers relating to the work force in sustaining a TQM programme, the first is that the work force “does not understand the quality concept”. In relation to the work methods, due to the lack of sufficient education and training, the work force may be unable to understand the concept of quality. The basic principles, the tools and techniques, and the costs of poor quality remain unknown to the work force. This lack of understanding

would result in an ineffective execution of TQM tasks. The consequences of this would be not enough improvements or no improvement at all. As a result, TQM would not be seen as offering what it has promised or was expected to deliver. Accordingly, there would be no reason to sustain it.

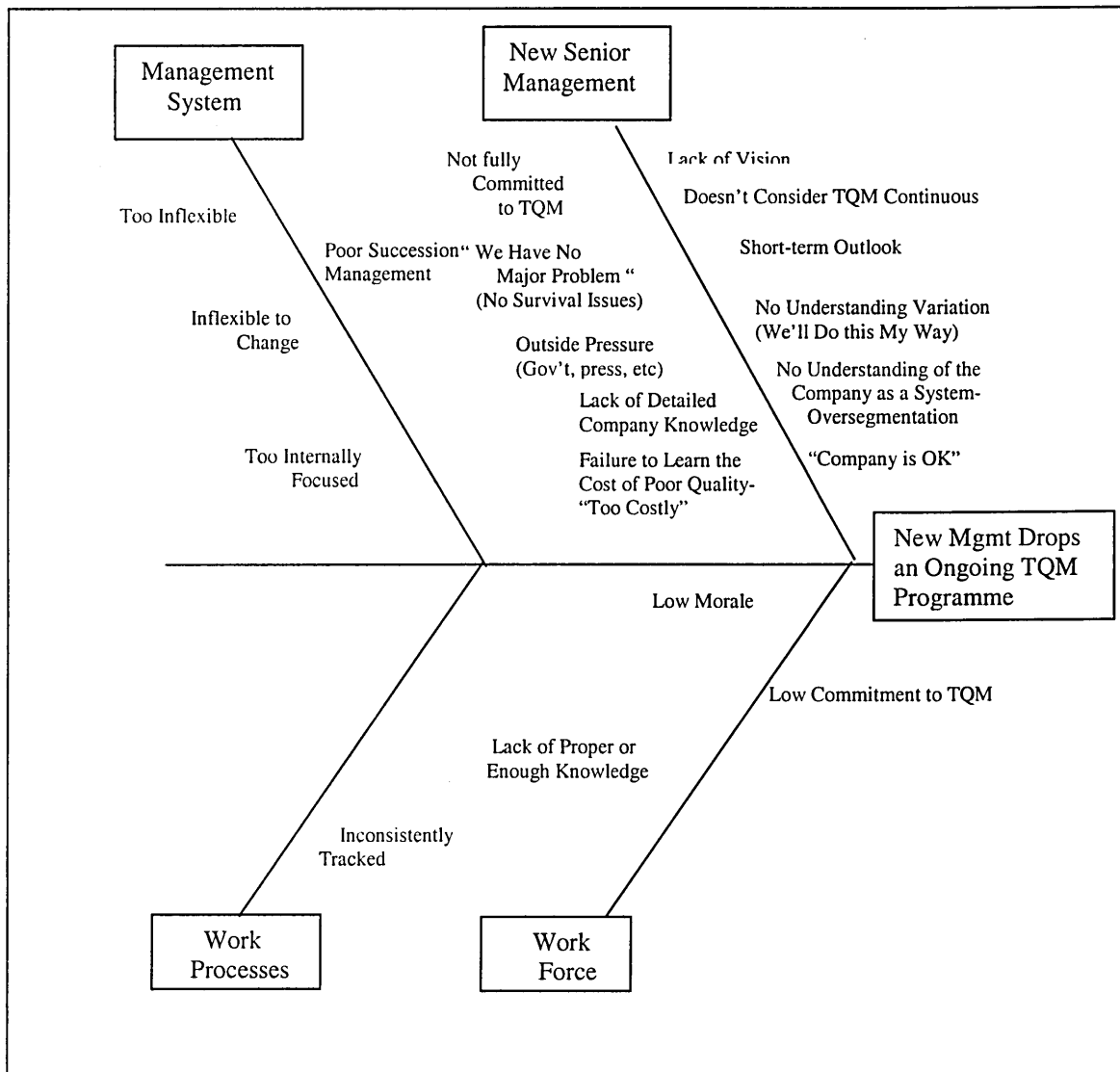
The second difficulty associated with a work force is that it “may not know what is expected from their functions”. Due to the lack of appropriate training and education, lack of top-down communication, and overlapping responsibilities relating to work methods, employees could be unclear as to what is required from it in a quality improvement process. Such ambiguity in a work force could lead it to work in its own way and make its own decisions and judgements regarding quality-related issues. This could result in employees doing unnecessary work and devoting time to other issues rather than those associated with quality improvement. Also, it could result in a conflict between management’s objectives in implementing TQM and the lower level of outcomes arising from a work force’s misunderstanding of its role in a TQM programme.

The other barrier relating to a work force is that it could be “fearful of management”. This barrier could be a result of a punitive style of management and work methods in an organisation. Fear of management may result in employees making no suggestions regarding an improvement process in which they are involved; and in management getting no feedback from employees. In such a situation, management could not know whether or not processes are performing well and, in turn, whether or not TQM is paying off. When management does not know the outcomes of a TQM initiative, it may make little or no effort to sustain it. In addition, the work force could be apathetic and show low morale and low commitment to TQM.

7.4. Scenario “C”: New Management Drops an Ongoing TQM Programme

Scenario “C” (Figure 7.4) represents a situation where an organisation has implemented a TQM programme and is now managed by a new senior management. Instead of moving up to the advanced stages of TQM implementation, the organisation’s new management may drop an ongoing TQM programme. This scenario may be related to the Move Up phase in Figure 7.1.1, but if an organisation could not sustain the existing programmes, it may drop this programme instead of seeking to move up to the advanced levels of TQM implementation. The reasons behind dropping a TQM programme are discussed below.

Figure 7.4: New Management Drops an Ongoing TQM Programme (Scenario C)



Source: Munshi (1992)

7.4.1. New Management

The first reason that could lead a new management to drop an ongoing TQM programme is that it "lacks detailed knowledge about the organisation". Since the management is new to the organisation, it may not have sufficient information about the organisation's systems, its situation in the marketplace, the reasons behind it implementing TQM. This lack of information may result in management finding no reason to sustain TQM and, as a result, it may drop it.

The second reason is that an “organisation may seem to be fine or OK” from the new management’s perspective since it does not understand the organisation’s status quo in the market, the competitive threats it may be encountering, and why the previous management has implemented TQM. The management could be unaware or unconvinced of the competitive advantages that TQM can offer to the organisation. The lack of appropriate understanding of the organisation’s status quo and the limited knowledge about TQM could result in management seeing no purposes for sustaining TQM.

Also, the management could have a “short-term outlook” towards the market. It may not be seeking competitive advantage nor intending to improve the organisation, it may have limited knowledge about the market and does not regard competition and constant improvement as matters of survival. This could result in management feeling itself comfortable with the status quo instead of taking further improvement actions.

In addition, the management might be faced with “outside pressures (i.e. government, press, etc)”, which would result in it finding not enough time to devote to TQM. The management could find itself too busy on the outside pressures instead of thinking about quality improvement issues.

In addition to these difficulties, the management may “lack a vision”, “does not consider TQM continuous”, “does not understand variation”, “does not understand the organisation as a system”, is not fully committed to TQM, does not recognise that it has major problems, and exhibits a failure to learn the cost of poor quality.

7.4.2. Management System

Due to a “poor succession management” system, which tends to launch too many improvement projects at the same time, it may be difficult to identify and select improvement projects. Since the improvement projects randomly selected, one after another, people involved in the improvement process may encounter the problem of not concentrating effectively on the most serious projects and of losing control over other projects. This could result in stress, confusion, and frustration for those involved in all projects. The projects themselves become time consuming and result in inappropriate outcomes. In this regard, Johnson and Chvala (1996:13) stated that “TQM programs fail when a company attempts to do too much too quickly. Quality efforts work best when companies start with a few highly focused practices and add more sophisticated ones later.”

In addition to this difficulty, the management system could be inflexible to change and too internally focused; factors which result in difficulty to sustaining and advancing a TQM programme.

7.4.3. Work Processes

The barrier relating to work processes is that the processes are “inconsistently tracked”. Continuous process improvement is vital in TQM. Ahire (1997:93) suggested that any firm adopting TQM strategy must recognise its implementation as a long-term project cutting across production stages (preproduction, production, and postproduction) and implementation phases (start-up, pilot implementation, full-scale implementation, and ongoing improvement). But, when the improvement processes are tracked inconsistently and the organisation’s people do not regard the improvement as continuous, the organisation is unlikely to secure appropriate outcomes from its TQM efforts. As a result, management may be frustrated with the results and disinclined to make any critical effort to sustain TQM.

7.4.4. Work Force

The major problem associated with a work force in sustaining a TQM programme is that the work force may “lack proper or enough knowledge about TQM”. Without appropriate knowledge the task of sustaining TQM would be too difficult. The work force would not know where TQM was falling down, what corrective actions were required to sustain it, not how to convince top management were TQM working effectively and paying off. In such a situation, TQM would fizzle out.

In addition, due to the work force’s limited knowledge, it may not show much interest in TQM; instead, it could exhibit all of the characteristics of low morale and offer little commitment toward TQM.

The three scenarios presented and discussed above reveal that the root causes of the barriers to TQM implementation are themselves the results of organisations’ internal factors such as unqualified management, particularly at the senior levels, inappropriate management systems and methods, and unqualified work force, which discourage or inhibit an organisation from starting a TQM programme and from sustaining it. Therefore, it is imperative, in order to implement TQM successfully, to have a qualified and proactive senior management that has a: long-term vision, willing to take risk, understanding of the

cost of poor quality, and seeks competitive advantages. It is also essential to redesign an organisation's management systems in such a way that they become flexible to change, market oriented, specify long-term objectives such as vision, mission, and strategy. In addition, it is imperative to have sound-working methods that enable an organisation's personnel to be creative, permit effective communication between the management and the personnel at the lower levels of the organisation, and offer effective training. It is also imperative to have a qualified and creative work force that can show commitment to quality management programmes, offer suggestions and opinion on the improvement processes and quality matters, and take responsibility for TQM programmes at the lower functional levels of the organisation. The contextual elements and operational concepts associated with the proposed TQM implementation framework, discussed in chapter five, are recommended to be implemented in order to attain such an environment, which would not only enable the organisation to start a TQM programme but also to sustain it and move up to the advanced stages of TQM implementation and practice.

Conclusion

The survey of TQM literature reveals that there are a number of barriers or pitfalls that may be encountered in the process of TQM implementation. This chapter presented and discussed some of the common barriers to TQM implementation. The chapter presented three scenarios representing three situations with a number of barriers relating to TQM implementation. The first scenario represented a situation where an organisation faces difficulty in starting a TQM programme. The second scenario represented a situation where an organisation could not sustain an existing TQM programme. The third scenario represented a situation in which an organisation drops an ongoing TQM programme due to a new management taking over an organisation.

The root causes of the barriers related to the first scenario were empirically tested within the context of OMANTEL to identify whether they result in ineffective implementation of TQM in OMANTEL. The results and findings of the empirical study that was conducted are presented and discussed in the chapter which follows.

Chapter Eight: Data Analysis

The Results of Rating the Barriers and Facilitating Factors

Introduction

The previous chapter presented and discussed a set of pitfalls or barriers to quality management implementation. The barriers discussed were related to three scenarios: “Inability to start a TQM programme”, “Inability to sustain an ongoing TQM programme”, and “New management drops an ongoing TQM programme” (see Munshi, 1992). The barriers found in the first scenario were empirically tested to identify the extent to which they could result in ineffective implementation of quality management in OMANTEL.

This chapter provides and discusses the results of the empirical study and how the respondents perceived those barriers. The chapter also discusses the results of rating the factors that were felt to facilitate the implementation of quality management in OMANTEL.

8.1. The Results of Rating the Barriers

For the purpose of identifying the possible barriers, the respondents were asked to rate the extent they felt the barriers offered would result in ineffective implementation of quality management in OMANTEL. It should be noted that the respondents accepted almost all of the barriers presented as to be possible barriers. In consequence, those barriers which were accepted by a majority of respondents (more than 50%) were considered to be “real” and were given a rating of “Yes” indicating their presence in OMANTEL.

The respondents were presented with a number of 31 barriers relating to the scenario of “inability to start a TQM programme”. The barriers found to be in the areas of: Senior Management, Management System, Work Methods, and Workforce. The sections below present the results of the empirical study and indicate the extent to which the respondents rated the barriers relating to each of the above areas.

8.1.1. Barriers Relating to Senior Management

In relation to the area of Senior Management, the respondents were presented with 10 barriers that could have a potentially negative influence upon the capability of

OMANTEL to introduce TQM. The results of rating these barriers are provided in Table 8.1.1:

Table 8.1.1: The Results of Rating the Barriers Relating to Senior Management

Barriers (Senior Management)		Occupation Level % (N=152)				% Total (N)
		% Top-Mgt. (N=6)	% Middle Mgt. (N=15)	% First-Line Mgt. (N=22)	% Employees (N=109)	
1. No long-term Vision	Yes	66.7% (4)	60.0% (9)	40.9% (9)	57.8% (63)	55.9% (85)
2. No constancy of Purpose	Yes	33.3% (2)	20.0% (3)	54.5% (12)	44.0% (48)	42.8% (65)
3. Unwilling to Take Risk	Yes	16.7% (1)	20.0% (3)	27.3% (6)	41.3% (45)	36.2% (55)
4. TQM Failed Elsewhere	Yes	33.3% (2)	20.0% (3)	4.5% (1)	10.1% (11)	11.2% (17)
5. Our Customers Are Happy	Yes	16.7% (1)	6.7% (1)	4.5% (1)	16.5% (18)	13.8% (21)
6. Comfortable with Status Quo	Yes	50.0% (3)	20.0% (3)	27.3% (6)	31.2% (34)	30.3% (46)
7. Comfortable with Reactive Management	Yes	0% (0)	13.3% (2)	27.3% (6)	35.8% (39)	30.9% (47)
8. Not Fully Committed to TQM	Yes	50.0% (3)	60.0% (9)	45.5% (10)	47.7% (52)	48.7% (74)
9. We Have No Major problem (No Survival Issues)	Yes	50.0% (3)	26.7% (4)	27.3% (6)	34.9% (38)	33.6% (51)
10. Failure to Learn the Cost of Poor Quality	Yes	50.0% (3)	33.3% (5)	45.5% (10)	45.0% (49)	44.1% (67)

and indicate that the respondents did not rate the barriers to a high extent, except the first barrier (No Long-term Vision). As a result, this barrier could be considered as the only possible barrier related to Senior Management that would lead to ineffective implementation of quality management in OMANTEL.

The results of rating the barrier show that the majority of respondents were of the opinion that the management of OMANTEL does not have a long-term vision, and that this would result into ineffective implementation of quality management in OMANTEL. The results indicate that the senior managers (top and middle managers) of OMANTEL rated the barrier to a higher extent than first-line managers and employees. The results indicate the senior managers themselves recognised that there is a lack of long-term

vision at the senior management level of OMANTEL. This lack of vision could be due to the lack of appropriate understanding of the organisation's long-term plans and objectives, i.e. vision, mission, strategy.

The results of rating the factor of "No Long-term Vision" are consistent with the results of Longo and Cox's (2000) survey, which revealed that the barrier of Short-term goals was perceived as a principal barrier to TQM implementation in the UK financial services.

It is noteworthy to find that the results of rating some barriers are inconsistent with the results of rating some statements related to the practice of the principles and elements of the proposed implementation model (discussed in Chapter 6). For instance, the results of rating the statements related to the Customer is King principle indicated that the principle is not being practised, which suggests that there is a lack appropriate attitudes towards the customers from the personnel of OMANTEL, but the results of rating the barriers show that the respondents did not consider the factor of "Our Customers are Happy" as a possible barrier.

The results of rating the barrier of "Not Fully Committed to TQM" indicate that the respondents did not regard this as a barrier, which is consistent with and supports the results of rating the statements related to the principle of Management Commitment which indicated that the senior managers of OMANTEL take proactive roles and show commitment to matters related to quality and customer satisfaction, and that they show personal and visible commitment in designing customer services and quality improvement processes.

There is some indication of a conflict between the results of rating the principles and the barriers. This could be due to the fact that either the respondents misunderstood the concepts related to the principles and barriers, or they did not make a link between them.

However, in addition to the no long-term vision barrier, some respondents suggested that a lack of financial resources would be an additional barrier to the quality management implementation in OMNATEL. These respondents were of the opinion that the management's unwillingness to invest in improvement programmes, such as TQM, would be an obstacle to the implementation of quality management in OMANTEL. This is consistent with the findings of Wilkinson et al's (1994) survey, which revealed that the cost constrains was one of the major difficulties faced by the organisations in the UK in their quality improvement initiatives.

8.1.2. Barriers Relating to Management System

In addition to barriers relating to Senior Management, the respondents were presented with 6 barriers relating to Management System that could significantly inhibit the implementation of TQM in OMANTEL. These barriers could be the result of ineffective management regulations or procedures. The results of rating these barriers are presented in Table 8.1.2:

Table 8.1.2: The Results of Rating the Barriers Relating to Management System

Barriers (Management System)		Occupation Level % (N=152)				% Total (N)
		% Top-Mgt. (N=6)	% Middle Mgt. (N=15)	% First-Line Mgt. (N=22)	% Employees (N=109)	
1. Too Short-term	Yes	33.3% (2)	20.0% (3)	31.8% (7)	41.3% (45)	37.5% (57)
2. Too Many Changes	Yes	33.3% (2)	20.0% (3)	18.2% (4)	40.4% (44)	34.9% (53)
3. Too Reactive	Yes	16.7% (1)	40.0% (6)	40.9% (9)	41.3% (45)	40.1% (61)
4. Product-driven (Not Market-driven)	Yes	83.3% (5)	33.3% (5)	45.5% (10)	44.0% (48)	44.7% (68)
5. Inflexible to Change	Yes	33.3% (2)	13.3% (2)	50.0% (11)	38.5% (42)	37.5% (57)
6. Doesn't Offer a Specific Direction (i.e. a Mission or a Vision)	Yes	50.0% (3)	53.3% (8)	40.9% (9)	49.5% (54)	48.7% (74)

and reveal that none of the provided barriers could be considered possible barriers that would inhibit the quality management implementation in OMANTEL, as all were rated to a low extent. As a result, it could be said that there are no major factors or barriers relating to Management System that would be encountered in implementing quality management in OMANTEL.

The results of rating the barriers relating to Management System are consistent with the results of rating the statements of some elements and principles. For instance, the results indicate that the respondents did not regard the barrier of "Too short-term" as a possible barrier, and this is consistent with the results of rating the statement related to the practice of the Vision element, which indicated that there is a vision in OMANTEL to be one of the best providers of the telecom services in the region and that OMANTEL benchmarks its services with those of the other providers' in the region to

catch up with the changes in the telecom industry. This would suggest that the objectives of OMANTEL are long-term objectives and not too short-term.

Also, the results indicate that the respondents did not consider “Product-driven not Market-driven” as a barrier. This would be consistent with the results of rating the statements of the Values and Customer Satisfaction elements, as a statement related to the Values element indicated that OMANTEL regards the concept of maintaining close and direct contact with its customers to understand their needs and expectation as a principal value. The results of rating the element of Customer Satisfaction revealed that OMANTEL anticipates its customers’ future needs and expectations and links these needs to the development of its services; which suggests that its systems and policies are market-driven not product driven.

The results of rating some barriers are inconsistent with the results of rating the statements related to the Customer is King and Continuous Improvement principles, as the respondents did not regard the barrier of “Product-driven not market-driven” as a barrier, but the majority of them disagreed with the statements that the management of OMANTEL gathers continuous feedback from the customers to identify their needs and that there is a comprehensive record for customer care in OMANTEL; the respondents also disagreed with the statement that OMANTEL selects its quality projects on the basis of customer evaluation of services and costs of poor quality. These statements would imply that OMANTEL’s systems are product-driven not market-driven, and the respondents did not regard this as a barrier.

The results indicate that the respondents did not consider the factor of “Doesn’t Offer a Specific Direction (i.e. a Vision or a Mission)” as a barrier, which is consistent with the results of rating some statements relating to the Vision and Mission elements, which revealed that there are vision and mission statements in OMANTEL.

In addition to the above selected barriers, a respondent reported that the lack of defined quality management systems and a department responsible for quality and measuring its progress and achievements in OMANTEL would result in difficulty in successfully implementing quality management.

8.1.3. Barriers Relating to Work Methods

In relation to Work Methods, the respondents were presented with 7 barriers. These barriers could inhibit the implementation of TQM in OAMNTEL by not providing a suitable environment for the workforce to conduct the work function effectively. The results of rating these barriers are shown in Table 8.1.3:

Table 8.1.3: The Results of Rating the Barriers Relating to Work Methods

Barriers (Work Methods)		Occupation Level % (N=152)				% Total (N)
		% Top-Mgt. (N=6)	% Middle Mgt. (N=15)	% First-Line Mgt. (N=22)	% Employees (N=109)	
1. Not Enough Top-down Communication	Yes	83.3% (5)	53.3% (8)	50.0% (11)	63.3% (69)	61.2% (93)
2. No Bottom-up Communication	Yes	33.3% (2)	40.0% (6)	45.5% (10)	56.0% (61)	52.0% (79)
3. Encourage Tampering	Yes	33.3% (2)	13.3% (2)	31.8% (7)	33.9% (37)	31.6% (48)
4. Insufficient Training	Yes	83.3% (5)	80.0% (12)	45.5% (10)	60.6% (66)	61.2% (93)
5. Don't provide a Good Environment for Creativity	Yes	33.3% (2)	40.0% (6)	63.6% (14)	51.4% (56)	51.3% (78)
6. Induce Fear or Anxiety	Yes	16.7% (1)	26.7% (4)	45.5% (10)	33.9% (37)	34.2% (52)
7. Punitive	Yes	50.0% (3)	20.0% (3)	36.4% (8)	30.6% (33)	31.1% (47)

and show that only four, out of seven, barriers relating to the Work Methods could be considered as possible inhibiting factors that would result in ineffective implementation of quality management in OMANTEL. The factors, according to their ratings, are “Not Enough Top-down Communication”, “Insufficient Training”, “No Bottom-up Communication”, and “Don't Provide a Good Environment for Creativity”.

The results reveal that the first barrier (Not Enough Top-down Communication) was selected by a large percentage of respondents as a possible barrier to the effective implementation of quality management in OMANTEL. The results show that the majority of the respondents who selected this barrier were top managers and employees, the other two occupational groups also rated it to a high extent, but to a lesser extent than former. The large percentage of top managers and employees rating the barrier as a possible inhibiting barrier would suggest that there is a lack of an effective communication method in OMANTEL between the management and employees, and that the respondents at these levels feel that this would result in ineffective implementation of quality management in OMANTEL.

The results of rating the second barrier (No Bottom-up Communication) reveal that more than half of respondents considered it as a possible barrier. The results show that the majority of the respondents who considered the factor as a possible barrier were

employees, as the other groups rated it to a low extent. This would suggest that there is a lack of bottom-up communication in the organisation, which in turn would inhibit the implementation of quality management.

The results of rating the fourth barrier (Insufficient Training) reveal that this barrier was rated by a large percentage of respondents as a possible barrier to quality management implementation. With all groups of respondents rating the barrier to a high extent. This would imply that the respondents from all groups recognised that the work methods do not provide sufficient training to the personnel at OMANTEL, and that this would inhibit the implementation of quality management.

The results of rating the fifth barrier (Don't Provide a Good Environment for Creativity) show that it was rated by more than half of respondents as a possible barrier. The results reveal that the first-line managers and employees rated the barrier to a greater extent than the other occupational groups. This suggests that the personnel at the lower levels of OMANTEL were of the opinion more, than those at the upper levels, that the work methods of OMANTEL do not provide a creative environment and that this could inhibit the effective implementation of quality management in OMANTEL.

The other three factors related to the Work Methods could not be considered as possible barriers to quality management implementation in OMNATEL, as they were all lowly rated.

The results suggest that there are some critical deficiencies in OMANTEL's Work Methods that need to be addressed in order to successfully implement quality management. The deficiencies are found to be in the areas of communications, training, and the general environment of the organisation.

The results of rating the barriers related to Work Methods are consistent with the results of the study carried out by Longo and Cox's (2000), which revealed that the most important barriers to the implementation of TQM in the UK financial services were internal environment, communication, and lack of training.

The results of rating the barriers are also consistent with and support the results of some statements related to the practice of the Aligned Corporate Systems principle and the Teamwork concept. The results of rating the principle of Aligned Corporate Systems revealed that there is a lack of upward communication in OMANTEL. The results of rating the statements of the Teamwork concept revealed that the training programmes of OMANTEL did not prepare and qualify its personnel to work in teams and use quality improvement tools and techniques. The results are also consistent with the results of the statements relating to the Everyone Participates principle and Management

Commitment concept. The results of the former principle indicated that the employees are not being encouraged to contribute new ideas regarding quality and customer service, and that the employees do not get a fair hearing from the management when raising issues related to quality. The results of the latter concept revealed that senior managers do not listen to employees when they raise issues relating to quality improvement.

8.1.4. Barriers Relating to the Work Force

In relation to the Work Force, the respondents were presented with 8 barriers, which could potentially influence the implementation of TQM in OMANTEL. These barriers are related to the Work Force's attitudes toward TQM, but they could be caused by either Senior Management or ineffective Management System and Work Methods. The results of rating these barriers are presented in Table 8.1.4:

Table 8.1.4: The Results of Rating the Barriers Relating to the Work Force

Barriers (Workforce)		Occupation Level % (N=152)				% Total (N)
		% Top-Mgt. (N=6)	% Middle Mgt. (N=15)	% First-Line Mgt. (N=22)	% Employees (N=109)	
1. Low Morale	Yes	50.0% (3)	53.3% (8)	45.5% (10)	55.0% (60)	53.3% (81)
2. Low Commitment to TQM	Yes	100.0% (6)	60.0% (9)	40.9% (9)	45.9% (50)	48.7% (74)
3. Distrust of Management	Yes	50.0% (3)	26.7% (4)	22.7% (5)	34.9% (38)	32.9% (50)
4. Won't Offer Opinion on How to implement or Improve TQM	Yes	33.3% (2)	33.3% (5)	31.8% (7)	37.6% (41)	36.2% (55)
5. Cynical of Management's programmes	Yes	66.7% (4)	33.3% (5)	27.3% (6)	29.4% (32)	30.9% (47)
6. Doesn't Understand Process	Yes	33.3% (2)	26.7% (4)	31.8% (7)	39.4% (43)	36.8% (56)
7. Doesn't Offer Suggestions	Yes	50.0% (3)	46.7% (7)	36.4% (8)	43.1% (47)	42.8% (65)
8. Apathetic	Yes	0% (0)	40.0% (6)	45.5% (10)	31.2% (34)	32.9% (50)

and reveal that only one barrier relating to the Work force (Low Morale) could be considered as a possible barrier that would be encountered in implementing quality management in OMANTEL. The results indicate that this barrier was rated by more than half of respondents as a possible barrier. The results indicate that top, middle

managers and employees rated the barrier to a higher extent than did the first-line managers. It could be due also to the lack of effective communication between the workforce and management, and/or due to the lack of a creative environment; as the results of rating the factors related to Work Methods indicated.

The results of rating the barrier of “Low Morale” are consistent with the finding of Nwabueze and Kanji’s (1997) study on the implementation of TQM in the NHS in the UK, which revealed that the barrier of poor employee morale was one of the major barriers to the implementation of TQM in Southforke Hospital. The results are also consistent with the results of rating some statements related to the practice of the elements, concepts and principles of the proposed model. For instance, the respondents did not regard the barrier of “Doesn’t understand process” as a possible barrier. This is consistent with the results of the statement related to the concept of “All Work is Process”, which revealed that the process of improvement in OMANTEL is regarded as a process that needs appropriate inputs to produce appropriate outputs. In addition, the results show that the respondents did not regard the barrier of “Doesn’t offer suggestions” as a possible barrier, which supports the finding relating to the Everyone Participates principle, which revealed that the employees in OMANTEL are given a prominent role in improving quality. The results are also consistent with the findings related to the concept of Quality Through People, which revealed that the employees in OMANTEL are encouraged to play an important role in improving the quality of services.

In relation to the barriers relating to the Work Force, one respondent to the survey noted that the major difficulty that could be faced in implementing quality management in OMANTEL, and which related to the Workforce, was the obstacle of changing the mentality of OMANTEL’s workforce. This respondent argued that it would be difficult to change the attitudes of OMANTEL’s employees towards the customers and issues related to the work and to accept and practice such principles and concepts as the Customer is King, Continuous Improvement, Teamwork, etc. This view is consistent with the findings of Djerdjour and Patel (2000). In their study on the implementation of quality programmes in developing countries, they noted that the major difficulty encountered in implementing TQM in Telecom Fiji a government utility later privatised, was defeating the civil service mentality of the staff. This would suggest that the implementation of TQM in OMANTEL may require a change in its personnel’s civil service mentality to a customer-focused attitude if TQM is to be successfully implemented.

The results show that the respondents rated the other barriers to low extent, which suggests that they did not consider these barriers as possible barriers that would inhibit effective implementation of quality management in OMANTEL.

The results seem to suggest that there are no major problems in OMANTEL related to the Workforce that would inhibit the implementation of quality management in OMANTEL.

8.2. The Results of Rating the Facilitating Factors

The last part of the questionnaire was intended to identify whether there were some facilitating factors that would progress the implementation of quality management in OMANTEL. In order to identify these factors, the respondents were presented with seven factors felt to facilitate the implementation of quality management. The results of rating these factors are provided in Table 8.2.1:

Table 8.2.1: The Results of Rating the Facilitating Factors

Factors		Occupation Level % (N=152)				% Total (N)
		% Top- Mgt. (N=6)	% Middle Mgt. (N=15)	% First-Line Mgt. (N=22)	% Employee es (N=109)	
1. Top management's willingness to change	Yes	83.3% (5)	53.3% (8)	81.8% (18)	56.9% (62)	61.2% (93)
2. There is a belief at senior management's level that there is a need for service improvement	Yes	100.0% (6)	73.3% (11)	63.6% (14)	61.5% (67)	64.5% (98)
3. There is a tendency in the country to improve the quality of public services	Yes	50.0% (3)	33.3% (5)	36.4% (8)	52.3% (57)	48.0% (73)
4. There is a policy for privatising public organisations	Yes	66.7% (4)	53.3% (8)	31.8% (7)	31.2% (34)	34.9% (53)
5. There is a pressure from customers for service quality improvement	Yes	16.7% (1)	33.3% (5)	31.8% (7)	34.9% (38)	33.6% (51)
6. There may emerge other providers	Yes	83.3% (5)	53.3% (8)	59.1% (13)	48.6% (53)	52.0% (79)
7. Telecommunication industry is becoming global	Yes	83.3% (5)	40.0% (6)	72.7% (16)	62.4% (68)	62.5% (95)

It is obvious from the results that all of the factors presented were rated, to some extent, as facilitating factors, but the degree of support differs from one factor to another according to the respondents' perceptions. As a result, the factors that were rated higher by "Yes", in terms of the percentages could be considered as the most significant facilitating factors.

The results indicate that the percentages of "Yes" of four factors; namely, factors 1, 2, 6 and 7 are higher than the other factors. Accordingly, these factors could be considered as the most significant facilitating factors. The respondents rated the factor of "There is a belief at senior management level that there is a need for service improvement" as the most possible facilitating factor that would facilitate the implementation of quality management in OMANTEL. The results show that top and middle managers rated the factor to a greater extent than the other two groups. This belief amongst the top managers would facilitate the implementation of quality management in OMANTEL, as this would result in their support for the implementation initiative.

Since the percentage of those who rated the factor as a possible factor is higher than the percentage of those who rated it as not being so, and since the rating percentage of this factor is higher than the rating accorded to the other facilitating factors, it could be considered as being the greatest influence.

The factor of "Telecommunication industry is becoming global" was rated by a high percentage of respondents as the second most important facilitating factor. The results indicate that the top and first-line managers rated this factor to a greater extent than middle managers and employees; possibly due to their greater awareness of the changes in the world telecommunications industry. The respondents may feel that the changes in the telecom industry would entail changes in the OMANTEL, in terms of management and service improvements. This raises the possibility of the enhancement and implementation of quality management in OMANTEL as a vehicle for change and a way for service improvement in order to gain competitive advantages.

The factor of "Top management's willingness to change" was also rated by a high percentage of respondents as a possible facilitating factor. The majority of the respondents who rated the factor as a possible facilitating factor were top and first-line managers. The percentage of the top managers, in particular, would suggest that there is a willingness at the highest managerial levels within OMANTEL for change. This willingness would facilitate and support the implementation of quality management in

OMANTEL. Top management's willingness to change and to improve is a *sine qua non* of quality implementation.

The fourth factor that has been rated as to be a possible facilitating factor is that of "There may emerge other providers in the market". This factor was rated by a large percentage of respondents as a possible factor. The results show that the respondents at the top management level rated the factor more highly than the other groups. The high rating given by the top managers implies that there is awareness amongst this group of respondents that the telecommunication sector in the country is becoming competitive as part of the government's policies, such as the opening up the economy for foreign investment and competition. However, the results indicate that the respondents were of the opinion that the factor would enhance the feasibility of implementing TQM in OMANTEL.

In addition to the above driving forces, some respondents were of the opinion that the current changes at the top level of OMANTEL would facilitate and enhance the possibility of implementing TQM. They further contended that the newly proposed organisational chart of OMANTEL, with the possibility of creating a quality department and the changes in the management, would require the establishment of systemic quality measurement and improvement standards and qualified personnel to conduct these tasks which, in turn, would enhance the demand for the implementation of quality management concepts and tools.

The factor stating that "there is a tendency in the country to improve the quality of public services" was rated lowly by all groups of respondents as a possible facilitating factor. This would suggest that the tendency for improving the quality of public services could not be considered as a possible facilitating factor for implementing quality management in OMANTEL.

The factor of "there is a policy for privatising public organisations" was rated by a low percentage of respondents as a possible factor. The results indicate that the majority of the respondents did not regard this as a possible facilitating factor, which suggests that the privatisation policies adopted by the government in the country could not be considered as the sole driving force for implementing quality management in OMANTEL.

The factor of "there is a pressure from customers for service quality improvement" was rated by a low percentage of respondents, thus suggesting its lack of importance as a possible facilitating factor that would motivate the implementation of quality management in OMANTEL.

The results indicate that last three factors were rated to a low extent; thus, these factors could not be considered as important possible facilitating factors.

It is noteworthy to mention here that some results and findings of this research on identifying the facilitating factors are consistent and some others are inconsistent with other researchers' findings. For instance, a survey on identifying the problems associated with the quality management programmes carried out by Wilkinson et al. (1994) revealed that a lack of top management commitment was perceived as a major difficulty in the implementation of quality management. The results of this current research indicate that the factors of "Top management's willingness to change" and "There is a belief at senior management level that there is a need for service improvement", which suggest top management's willingness to show commitment to quality management, were rated as the most important driving forces towards the implementation of quality management in OMANTEL. This would be inconsistent with the findings of Wilkinson et al.

Another empirical study in Norway on diffusion and contribution of TQM, conducted by Sun (1999), found that the factors such as Customer Requirement and Increased Competition were the major driving forces leading to the implementation of TQM in Norwegian companies. In addition, a survey on TQM in the UK financial services, carried out by Longro and Cox (2000), mentioned earlier, found that the sample surveyed perceived such factors as competitive pressures, customers' demand for quality and desire to reduce the costs of poor quality to be the major reasons for applying TQM in that sector of the UK economy. Furthermore, a survey by Mathews and Ueno (1999) on Training for Quality in the UK found that factors such as attempt to improve competitiveness and pressure from customers were the major motivation or factors for implementing a quality system. In contrast, the results of this research indicate that the factor of "There is a pressure from customers for service quality improvement" was not regarded as a possible driving force towards implementing quality management in OMANTEL.

The results of this research indicate that factors such as "there may emerge other providers" and "the telecommunication industry is becoming global", which are mainly related to and caused by competition, were regarded by the respondents as being major driving forces that would lead to the implementation of quality management in OMANTEL. This would be consistent with the findings of Sun (1999) and Mathews and Ueno (1999).

In addition, a study conducted by Nwabueze and Kanji (1997), mentioned earlier in this chapter, revealed that the TQM initiatives were led by external pressure and not by the need to resolve intra-organisational problems arising from poor quality. The results of this research are inconsistent with this finding, as two of the selected factors are internal driving forces (Top management's willingness to change, and There is a belief at senior management level that there is a need for service improvement), whilst the other two factors (There may emerge other providers, and Telecommunication industry is becoming global) could be regarded as external driving forces.

The driving forces suggested by the respondents, changes at top management level are consistent with the findings of a survey carried out by Wilkinson et al (1995) which found that the factor of "New senior management" was one of the most important driving forces towards the implementation of quality management in the UK financial services.

However, the consistency and inconsistency between the current findings and those of the other researchers are probably due to the differences in business and management styles of the organisations studied. They could also owe something to the cultural and social differences, as the demand and willingness for change and the driving forces to implement quality management in Western societies or institutions is not be the same in Middle Eastern countries such as Oman; where customers and their needs are perceived differently and the process of change requires sustained inputs to overcome the inertia caused by a bureaucratic management style.

Conclusion

The overall results of rating the barriers discussed above indicate that there are six barriers to quality management implementation in OMANTEL. The results indicated that most of these barriers are related to the Work Methods, which suggests that this area of OMANTEL should to be considered as the key area that needs to be improved and enhanced in order to implement quality management effectively.

The results indicated that there are some barriers that would inhibit the implementation of quality management in OMANTEL; nevertheless, there are some facilitating or motivating factors that would further the implementation of quality management, and possibly lead to the elimination of those barriers.

The results provided in Tables 8.3.1 and 8.3.2 illustrate the extent to which the respondents' Occupational Level affected the way the respondents rated the barriers and facilitating factors.

Table 8.3.1: Chi-square Analysis: The Significance of the Occupational Level Variable in Rating the Barriers

Barriers	Chi-Square	Asymp. Sig.
Senior Management		
No long-term vision	2.533	.469
No constancy of purpose	4.682	.197
Unwilling to take risk	4.645	.200
Quality efforts failed elsewhere	5.209	.157
Our customers are happy	2.920	.404
Comfortable with the status quo	1.981	.576
Comfortable with reactive management	6.159	.104
Not fully committed to quality management	.901	.825
There are no major problems or survival issues	1.510	.680
Failure to learn the cost of poor quality	.833	.842
Management System		
Too short-term	2.954	.399
Too many changes	5.578	.134
Too reactive	1.431	.698
Product-driven not market driven	4.401	.221
Inflexible to change	5.264	.153
Doesn't offer a specific direction	.694	.875
Work Methods		
Not enough top-down communication	2.974	.396
No bottom-up communication	2.748	.432
Encourage tampering	2.586	.460
Insufficient training	5.748	.125
Don't provide environment for creativity	2.863	.413
Induce fear of anxiety	2.423	.489
Punitive	2.147	.543
Workforce		
Low morale	.699	.873
Low commitment to quality management	7.918	.048
Distrust of management	2.265	.519
Won't offer opinion on implementing TQM	.350	.950
Cynical of management's programmes	3.866	.276
Doesn't understand process	1.248	.742
Doesn't offer suggestions	.592	.898
Apathetic		

Note: Significant Chi-square values are shown at $p < 0.05$

Table 8.3.2: Chi-square Analysis: The Significance of the Occupational Level Variable in Rating the Facilitating Factors

Facilitating Factors	Chi-Square	Asymp. Sig.
Top management's willingness to change.	6.380	.094
There is a belief at senior management's level that there is a need for service improvement.	4.229	.238
There is a tendency in the country to improve the quality of public services.	3.279	.351
There is a policy for privatising public organisations.	5.625	.131
There is a pressure from customers for service quality improvement.	.875	.831
There may emerge other providers.	3.290	.349
Telecommunication industry is becoming global.	5.298	.151

Note: Significant Chi-square values are shown at $p < 0.05$

In relation to the respondents' Occupational Level, the Chi-square results provided in Tables 8.3.1 and 8.3.2 reveals that this independent variable did not report a significant effect on rating the dependent variables (barriers and facilitating factors), which provides a statistical evidence that the respondents' level of occupation did not affect the way the respondents rated the dependent variables, which indicates the all groups of respondents perceived the variables to the same extent. This conclusion can be assumed valid and reliable since the response rate to the questionnaire was high (80.47%).

CHAPTER NINE:
FINDINGS AND RECOMMENDATIONS

Chapter Nine: Findings and Recommendations

The objective of this research was to test the feasibility of introducing Total Quality Management (TQM) into Oman Telecommunications Company (OMANTEL), formerly General Telecommunications Organisation (GTO). The research programme encompassed a number of stages to fulfil that objective. A background to OMANTEL was provided (Chapter Three) to manifest the growth of the Omani telecommunications sector and the achievements gained in this sector, the organisation structure and the human resource aspects of OMANTEL, the telecom services provided by OMANTEL, and the future challenges that would face the management of OMANTEL due to the privatisation policy adopted by the Omani Government in the telecommunications sector and some other emerging trends in this sector (a background to Oman itself and its development plans are provided in Appendix I).

A review of TQM literature was carried out to manifest the definition of quality, the evolution of TQM and its principles, the approaches of the quality management practitioners (Chapter Four), a model for quality management implementation in OMANTEL was proposed (Chapter Five) and, finally, the issues and barriers relating to quality management implementation (Chapter Seven).

An empirical study was conducted by means of a survey, using a questionnaire and a number of face-to-face interviews with the personnel of OMANTEL, to empirically ascertain: the extent to which there was a need in OMANTEL for quality management implementation; the extent to which OMANTEL's environment was compatible with the implementation of quality management; and to identify the possible facilitating and inhibiting factors that might be encountered in a quality management implementation process in OMANTEL. The survey was also intended to enable the testing of hypotheses formulated at an early stage of the research programme.

In this chapter, a number of findings and conclusions will now be drawn. Firstly, the chapter presents the findings gained by means of secondary data analysis, which include the findings relating to OMANTEL's background and the TQM literature. Secondly, the chapter presents the findings emanated from the primary data analysis concerning TQM understanding and implementation in OMANTEL, findings relating to the proposed implementation framework, and findings relating to the barriers and facilitating factors. Based on these findings, specifically those relating to the empirical survey, a number of

recommendations will be advanced. The chapter concludes with a number of suggestions as to the areas requiring further research.

9.1. Main Findings of the Secondary Data Analysis

The survey on the Omani telecom sector reveals that the sector has witnessed, during the last three decades, a rapid development in which OMANTEL has played a critical role in terms of creating the infrastructure and offering sophisticated services. The survey also reveals that despite this development and the state-of-the-art technologies in the telecom sector, limited attention has been given to the management improvement aspects of this sector, as the major developments emphasised technological aspects. This resulted in a monopolistic orientation of the telecom services, which in turn resulted, as the Omani policy-makers believed, in high telecommunications service charges whilst hampering the future capacity to benefit from the rapid changes in the telecommunications field. In response to these deficiencies, a privatisation policy was adopted to liberalise the telecom sector. The policy-makers believed that the liberalisation of the telecom sector would benefit from telecom technology, expanding and upgrading the existing telecom infrastructure in order to provide a variety of high quality services, and enabling the Government to provide access to the private sector to participate in the provision of telecom services. As part of the privatisation policy, the decision-makers in OMANTEL liberalised some of the telecom services, and re-considering the organisation structure by proposing a new organisation chart and considering the sale of part of its stock to the public and foreign investors.

The survey of TQM literature reveals that there is no a precise or agreed definition of quality, as it means different things to different people. As a result, most of quality management practitioners suggest that the end user of a product or a beneficiary of a service must judge the quality of a product or service. The survey also reveals that the roots of quality management concepts can be traced to the dawn of the history, as these concepts have been evolved throughout recorded time. In addition, the survey reveals that some individual quality practitioners (e.g. Deming, Juran, and Crosby) made a significant contribution to the development of quality management methods and concepts. Although these quality experts did not agree on specific approaches and methods to manage quality, they emphasised a set of principles (Customer Satisfaction, Continuous Improvement, Employee Participation, and Management Commitment) as

the basic principles for managing quality and improving an organisation's processes and services. Despite their great contributions to the development of quality management concepts, the quality experts or "Gurus" did not provide a specific framework or model for implementing and practising their methods and approaches to quality management. This lack of agreement amongst the quality gurus resulted in many organisations struggle to find a definitive way by which to implement quality management and eliminating the barriers that arise during the implementation process.

9.2. Main Findings of the Primary Data Analysis

This section presents the main findings of the data gained through the empirical survey. More specifically it considers the findings relating to TQM implementation and understanding, the findings concerning the proposed implementation model's elements, concepts and principles, and the findings relating to the barriers and facilitating factors to TQM implementation.

9.2.1. Findings Relating to TQM Implementation and Understanding

In order to achieve the objective of the research, a number of variables were empirically tested. The first two variables tested the extent to which there was awareness amongst the personnel of OMANTEL and whether the concepts or methods of TQM had been implemented in OMANTEL. The results of the research, gained through the empirical study, provide a number of findings in this regard.

In relation to the extent to which there was awareness of TQM and its concepts amongst the personnel of OMANTEL, the data analysis reveal that a very small percentage of respondents, from both the management and employees' levels, were of the opinion that they have a full knowledge and understanding of TQM. This finding suggests that the majority of OMANTEL's personnel do not know much about TQM and its methods. This finding supports the hypothesis that there is a lack of an appropriate understanding of TQM philosophy and principles amongst OMANTEL's personnel.

In relation to the implementation of TQM concepts and methods, the findings of the research reveal that no attempt has been made by OMANTEL's management to implement TQM concepts and methods, as both the managers and employees were strongly of the opinion that TQM concepts have never been implemented in OMANTEL. This suggests that the quality factors have never been concern to OMANTEL's management and that the proposed TQM implementation model, if

implemented, would be the first step towards the promotion of TQM concepts and methods in OMANTEL, and possibly towards its further implementation in other organisations in Oman.

9.2.2. The Main Findings Relating to the Model

The empirical survey tested a number of variables, which included the proposed implementational model's contextual elements, operational concepts, and principles. The survey tested the extent to which these elements, concepts and principles were perceived as being sufficiently significant to be implemented in OMANTEL in order to improve its management processes and the quality of its services; the survey also tested the extent to which those elements, concepts and principles are being practised in OMANTEL.

In relation to the significance and practice of the proposed implementation model's macro or contextual elements (Vision, Mission, Strategy, Values, and Key Issues), the data analysis revealed the following findings:

1. In relation to the Vision element, the results revealed that both the managers and employees rated this element as significant. In terms of its practice, the data revealed that there is a vision statement in OMANTEL (to be one of the best provider of the telecom services in the region, in terms of prompt service delivery, high quality services and up-to-date technology with low costs) and that OMANTEL benchmarks the quality of its services with those of other providers' in the region to ensure itself of a foremost position in the telecom industry.
2. In relation to the Mission element, the results revealed that all groups of respondents rated this element as a significant element to be implemented in OMANTEL. In relation to its practice, the results revealed that there is a Mission statement in OMANTEL that focuses on customer service and satisfaction, but this statement does not offer a complete index of services and is not based on customers' requirements and expectations. This suggests that the Mission statement of OMANTEL needs to be enhanced so that it can be based on the customers' requirements and expectations and also made compatible with the requirements demanded by the proposed model and TQM's philosophy.
3. The results of rating the element of Strategy revealed that this element also was rated as significant to a high extent, indicating that the respondents were of the opinion that there is a need for its implementation in OMANTEL. The results also

revealed that there is a long-term strategic plan in OMANTEL, revealing where the company intends to be in the future, how it could serve its customers, and enhances its capabilities to operate in the marketplace and meet its customers' future needs, but this strategy is unclear and not based on information about its customers' requirements. This finding suggests that there is a need for making the strategic plans of OMANTEL clear to its personnel.

4. In relation to the Values element, the results revealed that the element was rated as significant, which suggests that both the managers and employees recognised its significance and the need for its implementation. In terms of its practice, the data analysis reveals that OMANTEL regards providing customers with access to the information related to its services, maintaining close and direct contact with the customers, and providing on time, reliable, and risk/doubt-free services with politeness and friendliness as basic values; but the values such as offering guidance to customers in a language they can understand and enhancing employees' quality knowledge are not regarded as values in OMANTEL. This finding suggests that although there are some basic values in OMANTEL, there is a gap in the area of offering guidance to customers and enhancing employees' quality knowledge. This gap entails the need for improvement and enhancement in these areas of weakness.
5. The results of rating the element of Key Issues revealed that the respondents were of the opinion that the personnel and systems of OMANTEL must have a full understanding of the Key Issues raised by customers and must be able to deal with those issues. In relation to the element's practice, the data analysis revealed that OMANTEL's systems and employees are prepared to deal with unexpected issues raised by the customers, but they do not deal with these issues effectively and seriously. This finding leads to the conclusion that the personnel of OMANTEL could be careless about the Key Issues raised by the customers and currently do not pay enough attention to these issues although they are not averse to doing so. Hence, there is a need to convince the personnel of OMANTEL that it is imperative to deal with the Key Issues raised by the customers and to take these issues seriously in order to provide improved services and attain customer satisfaction.

Overall, the data analysis relating to the above contextual elements revealed that deficiencies and weaknesses were found to be in the areas of Mission, Strategy, Values, and Key Issues. As a result, it is imperative to enhance and improve these areas in order

to enable OMANTEL to attain continuous improvement in its internal management processes and in its ability to deliver high quality services to its customers.

According to the proposed implementation model, the above contextual elements are the responsibility of top management. The findings relating to these elements revealed that the top managers of OMANTEL agreed to a higher extent than the other groups with most of the statements relating to these elements, particularly with those which are being practised.

In relation to the micro elements or operational concepts of the model (Internal and External Customers, Teamwork, Quality Through People, Quality on all Agendas, All Work is Process, Management Commitment, Prevention, Customer Satisfaction, Continuous Improvement Cycle, Measurement), the data analysis reveals the following findings, namely, that:

1. The concept of Internal and External Customers was rated as a significant concept by both the managers and employees, indicating the significant need for its implementation in OMANTEL. In terms of its practice, the data revealed that the concept is not being practised in OMANTEL, as its personnel are unaware of such a concept and do not treat each other as being customers. This leads to the conclusion that the employees of OMANTEL are not being treated as internal customers and that there is a lack of the notion of internal customer satisfaction in OMANTEL. Hence, there is a need to promote and enhance this concept in OMANTEL.
2. The concept of Teamwork was rated as significant by both groups of respondents. In relation to its practice, the data revealed that OMANTEL believes in Teamwork as a critical factor for improvement, identifies the gaps between its training and TQM training needs, and encourages its personnel to work in teams, but its training sessions do not fully or adequately prepare the personnel to work in teams. This would suggest a need to improve and enhance the training sessions of OMANTEL in order to enable its personnel to work in teams and to promote the Teamwork method in OMANTEL.
3. The Quality Through People concept was rated by both groups of respondents as significant and should be implemented in OMANTEL as means of improving the quality of its services and management processes. The data also revealed that the concept is being practised in OMANTEL, as there is a belief in OMANTEL that the quality is achieved through people, and that the employees are encouraged to play an important role in improving the quality of services.

4. The Quality on all Agendas concept was rated by both groups of respondents as significant to be implemented in OMANTEL. In terms of its practice, the data showed that issues relating to quality and customer service and satisfaction are on the agendas of OMANTEL's management, as the data revealed that OMANTEL's management takes into the consideration quality factors when appraising and promoting employees and when designing the marketing and sales strategies of the organisation. Nevertheless, the management of OMANTEL does not include these factors in every employee's job description. This finding suggests that there is a need for enhancing this area of weakness.
5. The All Work is Process concept was rated by both groups of respondents as significant; thus, suggesting the need for its implementation in OMANTEL. The data also revealed that the methods relating to the concept are being practised in OMANTEL as all work is being regarded as a process that needs appropriate inputs to produce appropriate outputs. In addition, each improvement project is regarded as a process.
6. The Management Commitment concept was rated as significant by both managers and employees. In terms of its practice, the data showed that the management of OMANTEL adopts proactive roles, shows visible commitment to quality matters, and takes ownership of the quality improvement process, but it does not show commitment to quality in terms of reviewing the progress of quality and listening to the employees' suggestions in these regards. Based on this finding, it is essential that the management should address these deficiencies in current practice .
7. The Prevention concept was highly rated by both groups of respondents as being significant in OMANTEL. The data also revealed that the personnel of OMANTEL are aware of the prevention concept, and that there is a belief in OMANTEL that producing quality services right the first would reduce the costs of rework and corrections. Prevention methods are being practised in OMANTEL.
8. The Customer Satisfaction concept was rated by both groups of respondents as significant to be implemented in OMANTEL. The rating of the statements relating to the concept revealed that OMANTEL links customers' requirements to the development of its services and it anticipates customers' future needs and expectations, which indicates that the methods of the concept are being practised in OMANTEL, but there is still a need to enhance this concept in OMANTEL, as these

methods are not being based on a strategic objective derived from customer satisfaction and generated through improved services.

9. The concept of Continuous Improvement Cycle was rated as significant to a high extent by both groups of respondents, which clearly suggests the need for its implementation in OMANTEL. The data relating to the concept's practice revealed that OMANTEL effectively and consistently evaluates and improves its services in line with customers' changing needs. This indicates that the concept of Continuous Improvement Cycle is being practised in OMANTEL.
10. The concept of Measurement revealed that both groups of respondents were strongly of the opinion that the concept should be implemented in OMANTEL. The results relating to the concept's practice revealed that although OMANTEL measures the quality of its services and operational levels relative to those in the telecom sector in the region, internally, it does not measure or audit its own quality improvement activities. This leads to the conclusion that the concept of the Measurement is being partially practised in OMANTEL.

Overall, the data analysis relating to the above operational concepts reveals that there is a need for improvement and enhancement in the areas of Internal and External Customers, Teamwork, Quality on All Agendas, Management Commitment, Customer Satisfaction, and Measurement, as these areas in which OMANTEL was found to be weak. They also constitute areas in which weaknesses need to be eliminated to further the effective implementation of TQM.

In addition, the results of rating the operational concepts, which are the responsibility of the first line operatives, revealed that six out of the above ten concepts were more highly rated as being practised by the first-line operatives than by the top and middle managers.

In relation to the model's principles (Customer is King, Everyone Participates, Aligned Corporate Systems, Continuous Improvement, and Quality Measurement), the data analysis revealed the following findings:

1. The Customer is King principle revealed that both the managers and employees rated the principle as significant to a high extent, which suggests the critical need for its implementation in OMANTEL. In terms of its practice, the data analysis revealed that the concepts associated with the principle are not being practised within OMANTEL's departments, as the majority of respondents were of the opinion that the customers are not being regarded as kings and as always being right. This is due

to the lack of continuous feedback gathered from the customers and a failure to maintain a comprehensive record of customer care. This finding obviously suggests that there is a need for implementing and enhancing the principle and its concepts in OMANTEL.

2. The Everyone Participates principle revealed that it was also rated as significant to a high extent to be implemented in OMANTEL. In relation to its practice, the results revealed there is a lack of evidence for the presence of the Everyone Participates principle in OMANTEL and that the employees are given a limited role in the improvement process; in addition to the limited role is being given to the departments in setting up the organisation's goals and objectives. The results also revealed that employees are not being encouraged to contribute new ideas regarding quality and they do not get a fair hearing from the management. Also, the results revealed that the affected people are not being included in planning change and setting up the policies of the organisation. The findings relating to this principle indicate that there is a significant need in OMANTEL for enhancing and practising the concepts of the principle in order to attain improved processes and high quality services.
3. The Aligned Corporate Systems principle was rated as significant to a high extent by both groups of respondents indicating the need for its implementation in OMANTEL. Where practice was concerned, respondents noted the lack of utilisation of the principle in OMANTEL because of the lack of co-ordination between the departments and ineffective upward communication in the company. The data analysis also revealed that the general climate is not supportive of staff and that there is a lack of understanding amongst the departments about how to improve quality and customer service. This finding entails the need for the principle's implementation and enhancement in OMANTEL.
4. The Continuous Improvement principle revealed that both groups of respondents were of the opinion that there is a need in OMANTEL for the principle's implementation. In terms of practice, the data analysis revealed that the improvement processes in OMANTEL are being carried out on a continuous basis, but the improvement processes and project are not based on the customers' evaluation of services and nor upon the costs of poor quality. The data also revealed that the improvement data do not relate to all activities in the organisation and lack specificity. This finding suggests that although the principle is being practised in

OMANTEL to some extent, it is practised without rigour. Thus, the concepts relating to the continuous improvement process need to be enhanced in order to effectively support further improvement.

5. The Quality Measurement principle was rated as significant by all groups of respondents. The data analysis relating to the statements of the principle's practice revealed that there is a critical lack of Quality Measurement in OMANTEL. The data revealed that the progress against quality goals is not being measured and reviewed regularly to permit the taking of corrective actions. In addition, the data revealed that there is a lack of an updated and reliable information system in OMANTEL to assess the progress of quality improvement processes and there is no recognition for achievements in quality.

Overall, the data analysis relating to the proposed TQM implementation model revealed that most of the methods relating to the contextual elements and operational concepts of the model are being actively addressed in OMANTEL, but there is a lack understanding of the need to make the model's principles manifest in OMANTEL. These findings suggest that the personnel of OMANTEL are able to practice the contextual elements and operational concepts of the model, but they are unable or lacking an effective way to sustain its principles. Consequently, there is a need for enabling the personnel of OMANTEL to enhance their capabilities to conduct the contextual elements and operational concepts of the model, whilst adhering to the principles which sustain a TQM initiative.

The results of rating the variables relating to the model indicate that the environment of OMANTEL is compatible for implementing the proposed model. The finding also answers the research's questions, which stated: Will the concepts of TQM work in Oman as they have been seen to work in some countries in the region and some developed countries? Will TQM work in a monopolistic organisation? The results of rating model's variables, particularly the contextual elements and operational concepts, provide positive answers to these questions.

9.2.3. Findings Relating to the Barriers and Facilitating Factors

In addition to testing the feasibility of implementing the proposed TQM model, a number of factors were empirically tested to discover whether they act as inhibiting barriers or facilitating factors to quality management implementation in OMANTEL.

In relation to the barriers, the results of the empirical study revealed that there are six barriers, out of thirty-one, that could inhibit an effective implementation of quality management in OMANTEL.

In relation to Senior Management, the key barrier was found to be “No Long-term Vision”. The analysis revealed that this barrier could inhibit an effective implementation of TQM in OMANTEL. As a result, this barrier needs to be eliminated in order to implement TQM effectively.

In relation to the Management System, there were found to be no barriers in this area at OMANTEL that could lead to the ineffective implementation of TQM in OMANTEL. This suggests that the Management Systems of OMANTEL could contribute to an effective implementation of TQM.

In relation to Work Methods, there were found to be four barriers in this area, which could result in ineffective implementation of TQM at OMANTEL. These barriers were found to be Not Enough Top-down Communication, No Bottom-up Communication, Insufficient Training, and Don't Provide a Good Environment for Creativity. These four barriers were rated by the majority of respondents as being significant inhibiting barriers to an effective TQM implementation in OMANTEL. This finding suggests that the implementation of quality management in OMANTEL could be mainly faced with four barriers as a result of OMANTEL's ineffective Work Methods. As a result, in order to implement TQM effectively in OMANTEL, it is essential to improve and enhance its work methods so that its personnel can conduct and practice the elements, concepts, and principles of the proposed implementation model to attain improved processes and services.

In the area of the Work Force, there was found to be only one barrier to an effective implementation of TQM in OMANTEL. This barrier was Low Morale. The data analysis revealed that the respondents rated this barrier as a possible barrier to an effective implementation of TQM. As a result, in order to implement TQM effectively, it is essential that this be eliminated.

In relation with the driving forces or factors, the results of the empirical study revealed that there are four facilitating factors that would motivate the implementation of quality management in OMANTEL. These factors are:

1. Top management's willingness to change.
2. There is a belief at the senior management level that there is a need for service improvement.

3. There may emerge other providers in the market due to the Government's policy of opening up the national economy and its encouragement of open competition.
4. The telecommunication industry is increasingly becoming global.

The rating of the above factors suggests that there are internal and external factors that enhance the feasibility of implementing the proposed implementation model in OMANTEL. It should be noted that all of the selected factors are related and are due to the emerging trends in the Omani telecom sector. This finding also supports the research's overall objective, which is the introduction of TQM in OMANTEL as a management philosophy for meeting and responding to the challenges of the emerging trends in the Omani telecom sector.

9.3. Recommendations

The previous sections presented the main findings of the research. In this section, a number of recommendations are provided to enhance the weaknesses found in the previous sections.

9.3.1. Recommendations for Creating TQM Awareness

For the purpose of enhancing the feasibility of implementing TQM in OMANTEL, through the proposed implementation model, the researcher provides a number of recommendations for each area that found to limit the successful implementation of TQM in OMANTEL.

In order to enhance OMANTEL's personnel's awareness and understanding of TQM, the following recommendations are offered:

1. The staff of OMANTEL's Training Centre, particularly those who are involved in providing management courses, should be made aware of TQM and its concepts and methods. This could be achieved through providing them with quality management courses either within OMANTEL's Training Centre by inviting quality professionals on open-ended contracts basis, or by providing the training staff with the opportunity to travel abroad to attend quality management courses in such institutions that are expert in the field.
2. Once the training staff have been qualified, the decision-maker in the Training Centre should include the quality management courses in Training Centre's curriculum and training courses. The courses should include such subjects as what TQM stands for, how its concepts and methods can be implemented in practice,

what are the benefits of implementing its concepts (e.g. to employees, organisation, and customers), and how to deal with customers and serve them effectively.

3. Once the above objectives have been achieved, OMANTEL's personnel, from all functional levels, particularly those who have never attended quality management courses and those who are in direct contact with customers, should attend the quality management courses as part of their training scheme.
4. The quality management courses should have long-term objectives that emphasise on creating continuous awareness of TQM amongst the personnel of OMANTEL. The management must use its influence to ensure that this is seen as a regular part of the training programmes.
5. The design of the training courses should not only enable the trainees to understand the theory and concepts of TQM, but also should enable them to apply the theory and its concepts under real life conditions within their work.

9.3.2. Recommendations for Enhancing the Model's Variables

In relation to the macro or contextual elements of the proposed implementation model, the following recommendations would enhance these elements' practice in OMANTEL and its employees' understanding of these elements:

1. The data revealed that there is a Vision in OMANTEL to be one of the best providers of high quality and low cost telecom services in region. This Vision should be a shared vision, fully communicated to all personnel at all levels, and enforced in the daily work and procedures of OMANTEL. It also should address such issues as how to become the best provider, with whom to compare (e.g. within or outside the telecom sector), resources and tools or methods required for comparison or benchmark. The vision also should clearly manifest the necessary policies required for meeting the requirements demanded by the emerging trends in the sector.
2. The data revealed that there is a Mission in OMANTEL that focuses on customer service and satisfaction. This Mission should further specify and elaborate the goals and objectives OMANTEL within the framework of the Vision. The Mission statement of OMANTEL may be "Providing the customers with high quality and prompt services with low costs". This Mission statement should be reflected in the daily work conduction and part of the organisation culture.

3. The data revealed that there is a long-term strategic plan in OMANTEL that manifest where OMANTEL is intending to be, how it could serve the customers in the future, and enhances its capabilities to operate in the marketplace. This strategy should be made clear to all personnel, based on information about customers' needs and expectations, and tied to the above Vision and Mission statements.
4. The above Vision, Mission, and Strategy should be further elaborated in a set of core Values of ethics by which OMANTEL's personnel are guided, reflect the organisation's culture, and serve as a source of unity between the personnel of OMANTEL. The core Values should include such beliefs as providing the customers with high quality, reliable, tangible, and risk/doubt free services with politeness, friendliness, and in a language the customers can understand. The values should determine OMANTEL's public responsibilities such as respect of the social values and business ethics.
5. The personnel of OMANTEL should be made aware of the importance of the Key Issues raised by the customers. The personnel and systems of OMANTEL also should be prepared to deal effectively with these issues. Training the staff on quality management tools and techniques are recommended for achieving this objective.

In relation to the operational concepts of the model, the following recommendations are offered:

1. The management should realise the importance of Internal and External Customers concept. It should realise that the employees (internal customers) must be satisfied in order to satisfy the external customers. The management should identify and meet employees' needs and requirements by means of questioning and surveying the employees regularly. The management should encourage the employees to make suggestion regarding the work they are conducting to eliminate the dissatisfaction issues related to the work. The management should create a feeling amongst the employees that they are regarded as internal customers and that the overall external customers' satisfaction depends on their satisfaction. In addition, employees' satisfaction can be attained by meeting their functional needs such as availability of tools on time for conducting the work, effective upward communication system, clear work procedures and systems, fair and indiscriminate mechanisms and schemes, and financial and non-financial incentives and rewards.
2. The training sessions of OMANTEL should be adapted in such a way that they prepare and enable the personnel, particularly at the lower levels, to work in teams

and use quality management tools and techniques on the job so that the quality issues can be tackled in teams instead of individually and the employees can learn from each other how to solve problems. The training programmes should address the knowledge and skills that employees need to meet the objectives of quality improvement programmes.

3. The quality factors should be included in every employee's job description so that every employee feel that the quality is a routine matter of his/her job and that OMANTEL and its management are serious about quality. Employees' performance should be based on achievements gained in quality improvement programmes so that they recognise the importance of quality.
4. The senior managers of OMANTEL should show personal and visible commitment to quality matters by means of reviewing the progress of quality improvement, taking corrective actions when necessary, and listening to the voice of employees in matters related to quality improvement. Direct communication between management and employees at the lower levels and regular evaluation of processes are essential to show commitment to quality improvement matters.

The data analysis revealed that the core principles of the model (Customer is King, Everyone Participates, Aligned Corporate Systems, Continuous Improvement, Quality Measurement) are not being practised in OMANTEL. For enhancing the implementation of these principles, the researcher offers the following recommendations:

1. The management of OMANTEL should realise the importance of that the Customer is King, always being right, and must judge the quality of OMANTEL's services. The management should make the employees aware of this principle. To make the principle practical, the management of OMANTEL should create a comprehensive record for customer care that provides the organisation with continuous feedback from the customers to identify customers' level of satisfaction, needs, and expectations. It should also set up a system that can deal with the customers' complaints and issues effectively. The employees should be made aware that the organisation is in the privatisation process, which requires them to change their public-oriented attitudes to business-oriented attitudes towards the customers. Information relating to the services need to be offered to customers so that the customers can be able to find assistance on the services and make comments and suggestions. A unit for customer care need to be established within the Marketing

Department of Customer Service Directorate. Its aims should be forecasting customers future needs and dealing with their comments and complains. The employees proposed to work in this unit should be well trained on customer services and handle customers' comments effectively. The reports produced by this unit need to be taken seriously and given priority when designing or launching new services so that previous dissatisfactory issues will not recur in new services.

2. The management of OMANTEL should realise that the principle of Customer is King could not be achieved without implementing the principle of Everyone Participates. The management of OMANTEL should realise that to improve quality and to satisfy the customer, in such a way that the customer feels as a king, everyone, including senior managers, employees, all departments, and customers, must be involved in designing and improving the services, planing change, and setting up the policies. The management also should devote time to the employees and customers' suggestions related to quality and customer service. The responsibilities of each department and unit and of people working within these departments and units need to described and assigned clearly to increase their responsibilities and involvement in the improvement processes.
3. The management of OMANTEL should take into the consideration the fact that the service quality improvement process must be set up in a systematic way that incorporates all parts of the organisation. Every part, unit, department, personnel, systems should be aligned in such a way that they work to improve quality and making this goal as the responsibility of every part and every one in the organisation. The departments and their personnel should be made clear about what to achieve, how to achieve, and what are the responsibilities of each department and employee in the improvement process. There should be an effective upward and top-down communications system so that the information related to quality improvement can be transferred effectively and co-ordination between the management and employees and between departments can be utilised to reduce conflict and the ultimate goals of quality improvement can be achieved.
4. The management and employees of OMANTEL should be aware that service and process improvements should be carried out on the continuous basis. To achieve this objective, OMANTEL's management should gather constant feedback from the customers and the personnel who are involved in the improvement processes. The improvement processes should be based on these individuals' constant evaluation of

services and cost of poor quality. There should be an information system that provides and enable the management to manifest the areas that need to be improved and select improvement processes and projects.

5. The management of OMANTEL should realise that the service quality improvement process must be measured and evaluated if it is to achieve its goals and objectives. There should be a reliable and updated system in OMANTEL that enable its personnel to assess, review and evaluate regularly the progress of quality and to take corrective actions. There should be also a frequent recognition for achievements in quality that motivate the personnel to measure and evaluate the process of quality improvement.

9.3.3. Recommendations Relating to Barriers and Facilitating Factors

For minimising the barriers to TQM implementation in OMANTEL, particularly those relating to Work Methods, the following recommendations are offered:

1. For minimising the barriers of “No Long-term Vision”, it is essential that OMANTEL’s Senior Management create long-term objectives for improving the quality of services in response to the changes in the Omani telecom sector. The need for creating the long-term vision and objectives can be discovered by identifying and determining OMANTEL’s weaknesses, which may result in its incapability to meet the requirements demanded by those changes. Once these weaknesses have been identified the need for improvement, as a result for TQM implementation, can be manifested. The recommendations offered for enhancing the element of Vision should help in minimising this barrier.
2. For minimising the barriers of “Not Enough Top-down communication” and “No Bottom-up Communication”, an open top-down and bottom-up communication system need to be in place so that the management can transmit the need for TQM implementation to the lower levels and comments from these levels can be gained on the policy of TQM implementation. Minimising restrictive work procedures, rules and regulations can enhance the effectiveness of communication system. The recommendations offered for enhancing the area of Aligned Corporate Systems should support the elimination of communications barriers.
3. For minimising the barrier of “Insufficient Training”, the management of OMANTEL should identify and know the skills and qualifications required for practising and implementing TQM. It should also know the weaknesses of its

training sessions and find a way on how to update the training programmes so that the personnel can be qualified to conduct their tasks in line with the requirements demanded by TQM. The recommendations offered relating to the creation of TQM awareness can aid to improve the training programmes and minimise the barrier of “Insufficient Training”.

4. For minimising the barrier of “Don’t Provide a Good Environment for Creativity, the employees need to be given enough authority to do their job, encouraged to make suggestions and recommendations on the work, understand the importance of their role in the organisation. There should be a motivational environment and culture, particularly at the lower levels, that encourages creativity.
5. For minimising the barrier of “Low Morale”, there should be flexibility, opportunities to express new ideas, and respect of humanity in the workplace. There should be some Non-work-related services and facilities offered to employees such as health and educational services.

For the purpose of enhancing the facilitating factors, these factors need to be promoted in the organisation and the employees need to be made aware of these factors so that they understand and recognise the importance of the factors and the need for improvement.

9.3.4. Some General Recommendations

The management of OMANTEL should take into the consideration the following points:

1. There are some internal and external forces that may require OMANTEL to adapt its management processes and improve the quality of services.
2. The implementation of TQM takes time and it is a long-term process.
3. The implementation of TQM requires change in people’s mindsets and resources in terms of both human and financial resources.
4. The proposed implementation model offers a set of contextual elements, operational concepts, and principles that provide the holism demanded by the word total (in TQM). As a result, the principles and elements should not be dealt separately, instead the model should be perceived as a framework, which is principles and elements are all tied together to manifest how TQM can be implemented.

9.4. Areas for Further Research

This research intended to investigate the feasibility of introducing TQM in a developing country, namely, in the Oman Telecommunications Company (OMANTEL). Therefore, the investigation of this feasibility was limited within this particular company, in terms of providing the background to this company and the data gathered by the empirical study. The study did not make an effort to investigate to what extent there is a need for service and management improvement in OMANTEL from OMANTEL's customers' point of view.

Accordingly, further studies on TQM implementation within the context of the developing countries are highly recommended to manifest the status of quality management in these countries and to test to what extent quality management concepts can be applied in the developing countries, particularly in the Middle East.

Within Oman, this research has found that the environment of OMANTEL is compatible for TQM implementation, which seems to suggest that the concepts and principles provided in this research could be applied in other organisations with similar management and business values of OMANTEL; but to further investigate this finding, further studies on the subject in different areas of the Omani economy are recommended.

In relation with OMANTEL, further studies are recommended in order to assess to what extent OMANTEL's customers are satisfied with the services provided by OMANTEL, and to what extent the customers feel that there is a need for service improvement in OMATEL, and to what extent the customers believe in TQM as a vehicle for improving the quality of OMANTEL's services and its employees' attitudes towards the customers.

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APPENDIX ONE:
A BACKGROUND TO OMAN

A Background to Oman

Introduction

This Appendix aims to provide, briefly, a background to Oman. The chapter comprises four sections, which discuss the geographical aspects of the country, the population, the government system, the development planning process and the economic issues.

Geography

The Sultanate of Oman is an Arabic and Islamic country occupying the southeastern corner of the Arabian Peninsula in the southwestern part of the Asian Continent. The total land area of Oman is 309,500 square kilometres which makes it the third largest country in the Arabian Peninsula, after the Kingdom of Saudi Arabia and the Republic of Yemen. Its coastline extends 1,700 kilometres from the Strait of Hormuz in the north to the borders of the Republic of Yemen in the south, and overlooks three seas, the Arabian (Persian) Gulf, Gulf of Oman, and the Arabian Sea. It borders Saudi Arabia and the United Arab Emirates (UAE) in the west; Yemen in the south; the Strait of Hormuz in the north; and the Arabian Sea in the east (Ministry of Information, 1998:25).

Administratively, Oman is divided into the following governorates and regions:

1. The Governorate of Muscat (the capital area).
2. The Governorate of Musandam (the northern region).
3. The Governorate of Dhofar (the southern region).
4. Al-Sharqiya (the eastern region).
5. Al-Wusta (the central region).
6. Al-Dhakilia (the interior region).
7. Al-Batinah (the area between the sea and the mountains running from the boarder of UAE to Muscat).
8. Al-Dhahirah (meaning the 'back' located as opposed to the Batinah).

Each of these governorates and regions are sub-divided into Wilayats (districts). A Wali (governor), who is responsible to the Ministry of Interior, governs each Wilayate. The Walis and their offices form an important link between tribal Sheikhs and past traditions and modern government administration. The Walis have the task of co-ordinating government activities in their areas.

Population

According to the Oman's first general census of population carried out in 1993 by the Ministry of Development, the total population of Oman is 2,017,591 of which 1,480, 531 are Omanis, representing 74% of the total population, and 534,060 are expatriates, representing 26% of the total population (see Table 6.1). The census revealed that 52% of the population is aged 15 or under, while those over the age of 64 constitute only 3% of the population. This indicates a high birth rate of around 3.5%. Illiteracy among Omanis of the older generation is about 41%, while in the younger generation it has fallen to around 4.5% for males and 21% for females (Ministry of Information, 1996:82-83) because the older generation had fewer opportunities for education in the country before 1970.

Table 1: Total Population of Oman in Different Areas According to 1993 Census (Omanis and Non-Omanis)

Region	Population Figures				Percentages	
	No. Of Families	Omanis	Non-Omanis	Total	Omanis	Non-Omanis
Muscat	92,928	329,842	293,664	622,506	53%	47%
Batinah	68,373	458,084	80679	538,763	85%	15%
Musandam	4,027	21,997	5,672	27,667	80%	20%
Dhahirah	21,170	129,743	39,967	169,710	77%	23%
Dhakilia	27,311	194,002	26,401	220,403	88%	12%
Sharqiya	35,943	213,508	34,043	247,551	86%	14%
Wusta	2,384	13,204	2,897	16,101	82%	18%
Dhofar	22,851	120,151	54,737	174,888	69%	31%
Total	274,357	1,480,531	537,060	2,017,591	74%	26%

Source: The Central Bank of Oman (1994).

The census showed that most of the Omani work force is employed in the public sector and amounted to 75% of the overall employment in this sector. In contrast, the employment of non-Omanis is concentrated in the private sector and amounted to 85% of the overall

employment in this sector (Ministry of Development, 1995:25). The tendency to work in the public sector rather than the private sector is influenced by several social and economic reasons. The Omani public sector, as in all Arab Gulf countries, provides lifetime employment, lucrative fringe benefits and generous retirement schemes. For women, the public sector better accommodates their needs for flexible hours and provides them with protection shielding them from being accountable to a single businessperson (see Al-Qudsi, 1998). However, Table 2 below shows the estimates of the total labour force (Omani and Expatriate) in both public and private sectors.

Table 2: Growth of Omani and Expatriate Labour in Public and Private Sectors

Actual 1990	Detail	Actual Years Plan									Change %
		1991	1992	1993	1994	1995	Plan -ned	Actual	Plan -ned	Actual	
473.7	1.Total workers	533.0	602.8	670.3	696.8	766.2	5.5	10.1	161.0	292.5	81.7
201.4	1.1 Omani workers	213.8	227.4	240.0	254.3	270.0	8.3	6.0	101.0	68.6	-32.1
272.3	1.2 Expatriate workers	319.2	375.4	430.3	442.5	496.2	3.5	12.8	60.0	223.9	273.2
200.0	2 workers in public sector	210.3	221.3	232.2	237.1	247.8		4.4		47.8	
150.5	2.1 Omani workers	158.5	167.2	174.5	183.5	193.5		5.2		43.0	
49.5	2.2 Expatriate workers	51.8	54.1	57.7	53.6	54.3		1.9		4.8	
273.7	3. workers in private sector	322.7	381.5	438.1	459.7	518.4		13.6		244.7	
50.9	3.1 Omani workers	55.3	60.2	65.5	70.8	76.5		8.5		25.6	
222.8	3.2 Expatriate workers	267.4	321.3	372.6	388.9	441.9		14.7		219.1	

Source: Ministry of Development (1997).

The Government System

The government system of Oman is Sultani (Royal) headed by His Majesty the Sultan. Laws and decrees are authorised by the Sultan. International treaties, agreements, and charters signed or approved by the Sultan become law from the date of their publication in the Official Gazette (Ministry of Information, 1992:42).

The Council of Ministers is the highest executive authority in Oman, deriving its power from the Sultan to whom it is collectively responsible. According to Article (44) of the Basic Statute of the State, issued by the Royal Decree No. 101/96 on 6 November 1996, the

Council of Ministers is the body entrusted with the implementation of the State's general policies and in particular undertakes the following (Oman Daily Newspaper, 1996:6):

1. Submitting recommendations to the Sultan on economic, political, social, executive, and administrative matters of concern to the government including proposing draft laws and decrees.
2. Protecting the interests of the citizens and ensuring the availability of the necessary services to them, and enhancing their economic, social, health, and cultural standards.
3. Determining the objectives and the general policies for economic, social, and administrative development and proposing the necessary means and measures for their implementation which ensure the best utilisation of financial, economic, and human resources.
4. Discussing development plans prepared by the competent authorities, submitting them to the Sultan for approval, and following up their implementation.
5. Discussing proposals of ministers relevant to their respective jurisdiction and making appropriate recommendations and decisions in this regard.
6. Supervising the functioning of the state's administrative body, following up the performance of its duties and co-ordinating among its units.
7. Supervising generally the implementation of the laws, decrees, regulations, decisions, treaties, agreements and courts' judgements in a manner that ensures adherence thereto.
8. Discharging any other competence delegated by the Sultan or vested by the provisions of the law.

In accordance with the Basic Statute of the State, the Council of Oman was established in December 1997 by the Royal Decree No. 86/97 (Ministry of Information, 1998). The Council consists of two chambers:

1. **The Council of State (Majlis Al-Dawla):** the members of the council are appointed by the Sultan. The Council offers experienced advice to the Sultan and works closely in co-ordination with the Consultative Council to examine legal, social, and economic issues, and strengthening Oman's consultative process and widening participation in the public life of Oman.
2. **The Consultative Council (Majlis Al-Shura):** the Consultative Council is a state advisory council and wholly composed of representatives of the people nominated by

governorates and districts (Wilayates) throughout the country. The Council has the following powers (Ministry of Information, 93:46-47):

1. Reviewing draft legislation on economic and social matters, which is prepared by the ministries being issued.
2. Presenting its proposals on what it regards as necessary as to the development of economic and social laws that are executed in the Sultanate.
3. Providing opinion and proposals on general policies presented to it by the government.
4. Participation in the preparation of the country's development plans, the following up of their implementation in the context of the state's general strategy and according to its available potentialities.
5. Participation in reinforcing the citizens' awareness of the development objectives, priorities and the efforts that are exerted to carry them out. This will reinforce the link between the citizens and the government.
6. Participation in the efforts for the conservation of the environment and its protection from pollution.
7. The study of matters related to public services and utilities and presentation of suggestion on how to develop them.
8. The Council has the right to call any of the public service ministers to discuss matters related to the duties of their ministries whenever this is required.
9. Studying obstacles that face the economic sector and the presentation of appropriate suggestions aimed at overcoming those obstacles.
10. Giving opinions on other subjects which His Majesty thinks should be presented to the council.

In addition to the above councils, there are some other specialised councils and boards; amongst these are (Ministry of Information, 1991):

1. **The Civil Service Council** which draws up general policies relating to the civil service. Among its other responsibilities is examination of civil service problems and finding solutions to them, taking into consideration public interests.
2. **Tender Board** which is responsible for all government tenders, whether these involve assignments, purchases of items or project implementation, with the exception of contracts and projects related to defence installations or those covered by a special stipulation in the law or regulations for tenders. In addition, the Board follows up

developments in the implementation of projects from their inception until their completion.

3. **The Financial Affairs Council** which applies the financial policy of the state and draws up the national budget. Among other matters it studies the financial allocations for economic development projects.

The role of government in Oman goes beyond the traditional functions of providing public goods, developing public institutions, promoting efficient resource allocation, stabilising the economy and promoting an equitable distribution of national income. Its involvement in the economy includes: the direct provision of a range of commercial goods and services; guidance and subsidies to private sector activity; controls over the labour market and investment; targeted and subsidised Omanisation (localisation of workforce); the provision of medium-term financing to private sector; overinvestment (by normal developing country standards) in urban infrastructure and public buildings; and the supply of extensive municipal services (the World Bank, 1994:V). However, the Government's role in the country's economy can be noted clearly in evaluating the planning process of the country in the next section.

The Development Process

Prior to 1970, Oman's economy was based mainly on subsistence agriculture and fishing, with only three schools, two hospitals, ten kilometres tarmaced road, and 500 telephone lines serving the Capital Area (Ministry of Development, 1997). Modern development in Oman began with the accession to power of His Majesty Sultan Qaboos in 1970, utilising the income from oil. Thereafter, Oman has witnessed a sizeable infrastructure and massive development programmes in all sectors of the economy.

Developmental strategies adopted during the early years of the development period can be viewed as an attempt to lay the foundations which would provide the conditions and climate for rapid development within the country. Efforts were concentrated on the identification of areas of most urgent need and the provision of the infrastructure necessary for economic growth (Ministry of Development, 1997). Major objectives included the establishment of a modern government, starting with the creation of the basic structure, and of the public utilities essential to the development of the national economy. Other objectives were to make available basic education and health services; to raise the standard of living of the population; to facilitates the return of home of Omani nationals who had been compelled to leave their country during the previous years; to maintain stability and to

promote the spirit of fruitful co-operation between different population groups (Development Council, 1976).

Starting in 1976, the development plans were organised on the basis of a series of consecutive Five-Year Plans. The First Five-Year Plan was started in 1976 and lasted in 1980. The Plan coincided with the oil boom and the beginning of the utilisation of the natural gas resources in the country. This plan was the preparatory stage for the country's entry into new stages of development within the context of comprehensive socio-economic planning (Ministry of Development, 1997). However, the aims and objectives of the Plan may be summarised as follows (Development Council, 1976:13-14):

- (a) to develop new sources of income to supplement and eventually to replace oil revenues;
- (b) to increase the proportion of capital investment expended on income-generating projects, particularly in the sectors of manufacturing, mining, agriculture and fisheries;
- (c) to effect a wider geographical distribution of investment in order that the benefits may be shared by different regions of the country, and to narrow the gap in the standards of living in different regions with special emphasis on the least developed regions;
- (d) to maintain and develop the existing areas of population and protect them against the dangers of mass immigration to these already densely populated areas and to protect the environment;
- (e) to pay more attention to the development of water resources, which are of vital importance to economic progress;
- (f) to develop local human resources in order that they may be able to play a more active role in the national economy;
- (g) to continue the development of basic infrastructure;
- (h) to encourage trading activities by removing the obstacles which hinder their progress; these obstacles include problems of transportation, storage and limitations on competition with a view to encouraging competitive practices and keeping prices at reasonable levels;
- (i) to work to achieve the basic requirements of a free economy which the private sector plays a leading role on the basis of competition in a market clear of monopolistic practices. This end the introduction of incentives including reasonable exemptions, loans with easy payment terms to finance productive projects and government participation in capital of important projects are suggested;
- (j) to improve the efficiency of the government administration.

Gross domestic products (GDP) grew substantially during the five years of the first plan; recording an average annual growth rate of 20.3%. Non-oil sectors achieved an average annual growth rate of 19.7%. Employment grew substantially. The number of persons employed in the government civil service increased from about 19,000 in 1975 to 38,000 in 1980, i.e. by 101.9%. Employment in the private sector also increased and the number of expatriate labour in that sector increased from about 65,000 persons in 1975 to about 130,000 persons in 1980, i.e. by 100%. The financial position of the country has also improved during the five years. A reasonable balance between the resources and uses of government funds was achieved and a reduction in public debt was realised. Money supply registered an average annual growth rate of 17.3% and commercial banks credit grew by 14.9% on average throughout the five years (Development Council, 1981:3-4).

The Second Five-Year Plan (1981-1985) aimed at the completion of the infrastructure needed to transform the economy into a modern one and to raise the standards of living. The scope of building infrastructure was broadened to include projects to develop natural water resources and to include regional development (Ministry of Information, 1997). However, the main objectives of the Plan were the followings (Development Council, 1981:32-34):

1. To continue to maintain a sound financial position.
2. To establish a State General Reserve Fund to be capitalised from a percentage of oil revenues.
3. To restrain potential inflationary pressures.
4. To accelerate the rate of economic growth to the extent that does not over-strain the manpower situation.
5. To increase crude oil production to 330000 barrels per day and to maintain this level of production throughout the five years.
6. To attain a gross capital formation ratio to GDP amounting to 23% as an average for the five years. About two thirds of the investments (65%) are envisaged to be carried out by the government, and the remaining 35% by the private sector.
7. To give a strong and simulating push to the private sector engaged in productive activities in agriculture, fisheries, manufacturing, mining and handicrafts.
8. To expand the program of constructing low-cost housing particularly in the Interior (rural areas).

9. To expand, substantially, the network of vocational training centres as an essential base for developing local manpower. The plan envisages the creation of a number of those centres in regions other than the Capital area and to orient their training programmes to suit traditional productive activities in those areas.
10. To give top priority to water resources projects, particularly for irrigation and agricultural purposes.
11. To achieve an average annual growth rate in GDP amounting to 13.1%.

The salient main features that characterised the second Plan may be summarised as follows (Development Council, 1991:17-18):

1. Crude oil production rose from 283, 000 barrels per day in 1980 to 498, 000 barrels per day in 1985, an increase of 76%.
2. Actual average annual rate of growth of the GDP was about 10.8% during the Plan.
3. Confirmed oil reserve rose from 2489.0 million barrels in 1980 to about 4016.0 million barrels in 1985, as a result of massive investments directed to this sector.
4. Continued provision of the required support for the private sector by various means which included soft finance for agriculture, fisheries, industry, mining, quarrying and traditional craft industries; and providing the required incentives to confirm its role in development, such as exemption from income tax and from customs duties on raw materials and equipment, establishment of basic infrastructure required for industrial development and to improve and develop ports and airports.
5. For further development of education, a university was established, and the domains of education have been varied to include secondary education in agriculture, industry and commerce, teacher training institutes and vocational training institutes.
6. Continued increase in the work force in both the private and government sectors. Employment in the government sector rose from 38 thousand employees in 1980 to 66.6 thousand employees in 1985. Expatriate workers in the private sector rose from 130 thousand workers in 1980 to about 275 thousand in 1985.

The Third Five-Year Plan (1986-1990) was a test of the extent of the strength of the national economic base of the country and the soundness of the foundations on which the development was based. It should be noted that this plan coincided with the sharp fall in the oil prices, a continuation of the decreasing trend of these prices since the beginning of the

1980s (Ministry of Development, 1997). However, the main targets of the plan were as follows (Development Council, 1986:48-49):

1. To achieve an average growth rate of 4% in the national income in expected prices. Economic growth should exceed the population growth rate, and it should guarantee continuity of commercial and economic activities in the country at a satisfactory level.
2. To pursue a balanced policy which takes into consideration the international oil market situation, as well as the need to prolong the life of oil fields, new exploration, and the requirements of economic and social development in the Sultanate.
3. To increase the daily crude oil production to 550 thousand barrel in 1986 and 1997, and to 575 thousand barrel per day during the next 3 years (1988-1990).
4. To achieve equilibrium between resources and uses of the state by applying suitable and necessary steps which will reduce the government expenditure and redistribute the available resources accordingly.
5. To continue the policy of building general reserves.
6. To give priority to the development of natural water resources and to the income-generating projects in such sectors as those of agriculture, fisheries, manufacturing, mining and natural gas.
7. To expand the regional development in the field of social services such as education, health, vocational training and social housing.
8. To fix an amount of R.O. 1483 million as total development expenditure for the civil ministries of which R.O. 753 million for the on going projects and R.O. 730 million for the new projects.
9. The sanction all amounts required for the investment in the oil sector. these amounts represent R.O. 695 million as government share in PDO and R.O. 33 million for gas exploration.
10. The plan allocates R.O. 121 million to encourage the private sector and to create suitable atmosphere for contribution in the development of the country's economic activities. This amount is directed to targeted projects of the private sector through the three banks specialised in funding this sector and distributed as follows: - R.O. 50 million for industrial projects and R.O. 71 million for social housing, agriculture, fisheries and other development projects.
11. To set R.O. 299 million as a ceiling for borrowing.

12. To give due attention towards the completion of public infrastructure within the available resources and to attach high priority to sanitary drainage projects, drinking water services, electricity, means of communication and establishment of local markets.
13. To take a great care in maintaining the huge accomplished infrastructure.

The steep decline in oil prices and revenues necessitated a review of the constituent targets of the Plan through measures meant for adapting to the new circumstances. The measures taken at time included the reduction of government expenditures without affecting those concerned with the provision of basic services for citizens, and rescheduling the implementation of some projects and amendment of their timetables (Development Council, 1991). In addition, the government depended on borrowing, the sale of assets and on the State General Reserve Fund. In 1986, the Omani government initiated 10% devaluation in the value of the Omani Rial for the purpose of increasing economic activities and maintaining the provision of basic services (Ministry of Information, 1996).

In pursuance of the policy of supporting the role of the private sector and widening the base of investors, the Omani Fisheries Company and Muscat Securities Market were established, and laws organising accountancy and auditing professions and brokerage operations were issued. The years of the Plan also witnessed the completion of a number of important projects such Sultan Qaboos University, the Royal Hospital and the teaching hospital of the Sultan Qaboos University (Development Council, 1991).

The Fourth Five-Year Plan (1991-1995) was conceived after most of the developmental infrastructure was completed. The Plan hoped to address the negative aspects that had appeared during the years of the previous plans, particularly the Third Plan, and to sustain economic growth. Thus, the Plan concentrated primarily on broadening and diversifying the production base of the economy and private sector development. However, the Plan's main targets were the followings (Development Council, 1991: C):

1. To accomplish a growth rate in GDP which will increase the people's standard of living and will be in harmony with the national economy's potentialities and capacities.
2. To continue to diversify the sources of income, through expansion of the production base and the achievement of higher growth rates in non-oil sectors.
3. To emphasise the regional dimension of development by directing the greatest part of investments away from Muscat, in order to boost the development, integration and economic interaction between all the regions of the Sultanate.

4. To develop Oman's human resources, in order to promote the citizens' participation in the national economy.
5. To strengthen the government's financial position and its ability to accommodate any international or domestic economic changes that may take place during the period of the Plan.
6. To support the free market economy based on competition and equal opportunities.

The real GDP estimates for 1995 suggested that Oman's growth over the period of the Plan was good, amounting to 3.4%, but the target of 6.3% average growth in GDP was not met. The non-oil economic sector's contribution to GDP rose during the years of the Plan from 53.% in 1990 to 65% in 1995. Non-oil revenues exceeded the target of 20% GDP contribution set in the Plan, amounting to 26% by 1995 (Ministry of Information, 1996).

The share of the private sector in the Gross National Product (GNP) increased from about R.O. 1,217 million in 1988 to about R.O. 2,076 million in 1995, a total increase of 70.6%. The volume of domestic savings of the private sector increased from R.O. 3,897 million in the Second Five-Year Plan to R.O. 4,956 million in the Fourth Plan. The capital formation contribution of the private sector investments in GDP reached 6.1% during the period of the Plan. The volume of labour in the private sector increased from 87,000 workers in 1976 to 518,000 workers in 1995. The private sector employed about 67.7% of the total labour force in the country (Omanis represented 36% of the total work force), with the exception of the Defence and National Security Units (Ministry of Development, 1995).

Tables 3 and 4 illustrate the most important social and economic indicators of the development process in Oman during the period from 1970 to 1995.

Table 6: The Most Important Social Indicators (1970-1995)

Detail	1970	1980	1990	1995
1. Private Final Consumption				
Per capita share of private final consumption in Omani Rials	N/A	878	1144	1205
2. Education				
- Number of schools (government and private)	3	395	843	1041
- Number of students in government education schools (gov. & pvt.) (1000 students)	0.909	108.1	363.1	501.3
- Percentage of students in secondary schools to total number students (%)	0	1.7	7.4	14.0
- Percentage of female students to total number of students (%)	0	32.8	46.3	48.0
- Net enrolment in elementary schools (%)	N/A	N/A	80.4	83.5
- Total enrolment of Omanis in elementary schools (%)	N/A	N/A	95.4	92.3
- Total enrolment of Omanis in preparatory schools (%)	N/A	N/A	59.1	83.0
- Total enrolment of Omanis in secondary schools (%)	N/A	N/A	26.1	57.6
- Per capita share of expenditure on educational services in Omani Rials	2	42	105	119
3. Health				
- Number of population/bed	54833	569	439	485
- Number of population/doctor	N/A	1975	1105	844
- Number of population/nurse	N/A	926	384	346
- Annual natural rate of increase for Omanis	N/A	3.7	3.7	3.7
- Infant mortality rate/1000 live births	N/A	64	29	20
- Life expectancy at births (year)	49.3	57.5	66.5	67.4
- Per capita share of annual expenditure on health services in Omani Rials	4	28	46	58
4. Water				
Number of water connections (1000 connections)	0.456	20.2	60.8	88.1
5. Electricity				
Number of electrical connections (1000 connections)	1.0	52.7	241.1	335.1
6. Transport & Communications				
One private vehicle for each 1000 number of citizens	1	41	68	77
One telephone for each 1000 number of citizens	1	14	66	83
7. Houses				
Percentage of families who own private houses (%)	N/A	N/A	N/A	80

Source: Ministry of Development (1997).

Table 4: The Most Important Economic Indicators

Detail	1970	1980	1990	1995
1. Gross Domestic Product:	104	2185	4493	5288
- The relative share of oil sectors to the GDP (%)	69	61	48	38
- The relative share of non-oil sectors to the GDP (%)	31	39	52	62
2. Average per capita share in the GDP (R.O)	158	2075	2762	2477
3. Final Consumption	34	1236	3056	4035
- The relative share of final consumption to the GDP (%)	33	57	68	76
- The relative share of public consumption to the GDP (%)	N/A	14	27	27
- The relative share of private consumption to the GDP (%)	N/A	42	41	49
4. Capital Formation	15	442	555	795
- The relative share of capital formation to the GDP (%)	14	20	12	15
- The relative share of public capital formation to the GDP (%)	N/A	14	6.8	9.4
- The relative share of private capital formation to the GDP (%)	N/A	6	5.2	5.6
5. Foreign Trade				
- Merchandise exports	N/A	1294	2118	2332
- Merchandise imports	N/A	678	1076	1684
- Balance of trade (+) / (-)	N/A	616	1042	648
- Current balance (+) / (-)	N/A	293	475	-342
6. National Saving				
- The relative share of public saving to the GDP (%)	46	34	23	9
- The relative share of domestic saving to the GDP (%)	66	43	32	24
7. Public finance				
(a) Net Revenue	50	924	1876	1852
- The relative share of net oil revenue to the revenues (%)	100	90	82	74
(b) Public expenditure	46	950	1887	2331
- The relative share of public expenditure to GDP (%)	44	44	42	44
- The relative share of current expenditure to public expenditure (%)	57	70	83	80
(c) Surplus (+) Deficit (-)	4	-26	-11	-497

Source: Ministry of Development (1997).

The current Fifth Five-Year Plan (1996-2000) is regarded as the beginning of a new era of development planning in Oman. This Plan differs from the previous plans since it calls for wider public and private sector participation, the use of sophisticated computerised macro-economic modelling techniques and for planning Oman's development within a regional and global context. The Plan prepares for the next century and puts in place measures to maintain a prudent fiscal policy, such as strict adherence to the framework of the Plan in the preparation of the annual state budget, limiting public debt and reaching a

balanced budget by the year 2000 (Ministry of Information, 1998). However, the Plan's main objectives are the followings (Ministry of Development, 1997:275-276):

1. Working towards achieving a balance between government revenues and uses to realise full balance between them by the end of the plan.
2. Increasing the average production rate of crude oil to 880,000 barrels per day throughout the period of the plan.
3. Achieving an average annual GDP growth rate 4.6% at current prices in order to maintain the current level of per capita income as a minimum.
4. Diversifying the sources of national income through an increase in the GDP share of non-oil sectors to 68.8% by the end of the year 2000.
5. Encouraging domestic and foreign private investment and increasing the private sector's share of total investment in the plan to 53.3% to enhance the possibilities of private sector based development strategy.
6. Taking the necessary steps for the development and promotion of natural-gas-based projects.
7. Implementing privatisation programmes in the service sectors in accordance with the policies and regulations established for this purpose.
8. Controlling inflationary pressure during the period of the plan so that the average annual rates does not exceed 1%.
9. According special importance to human resources development through the provision of the necessary resources required for the implementation of the strategies and programmes approved for this purpose.
10. Raising the participation rate of national labour force in the labour market.

The major social and economic indicators for the current Five-Year Plan are provided in Tables 5 and 6.

Table 5: The Social Indicators of the Fifth Five-Year Development Plan

	Unit	1996	1997	1998	Changes (98/97)
-Total population estimate (mid year)	No. (000)	2,214	2,255	2,287	1.4
Omani	No. (000)	1,602	1,642	1,685	2.6
Expatriate	No.(000)	612	613	602	-1.8
- Crude birth rate	Per 1000 population	30	29	29	-
- infant mortality rate	Per 1000 Live births	18.3	18.0	18.0	-
- Hospitals	No.	54	54	54	-
- Health centres (with beds)	No.	57	57	53	-7.0
- Health centres (without beds)	No.	57	51	57	11.8
- Extended health centres	No.	5	6	7	16.7
- Bed/1000 persons	No.	2.17	2.22	2.22	-
- Doctor/1000 persons	No.	1.17	1.25	1.34	7.2
- Nurse/1000 person	No.	2.95	3.02	3.26	7.9
- Schools	No.	1,105	1,098	1,117	1.7
- Students	No.	542,318	557,884	574,933	3.1
- Teachers	No.	25,019	25,744	26,885	4.4
- Civil government employees	No.	102,064	103,575	105,709	2.1
- Expatriate employees in the private sector	No.	483,856	493,847	482,527	-2.3
- Asphalted roads	No.	6,591	7,407	7,686	3.8
- Fixed telephone lines	No.	190,555	200,757	214,358	6.8
- Rooms in hotels	No.	3,017	3,476	3,525	1.4
- Electricity production	Mn.Kwh	6,802	7,304	8,172	11.9
- Electricity consumption	Mn.Kwh	6,487	6,950	7,784	12.0
-Water production from desalination plants & wells	M.n Gallons	17,563	18,181	19,203	5.6
- Water consumption	Mn. Gallons	17,506	18,105	19,122	5.6

Source: Ministry of National Economy (1999).

Table 6: The Major Economic Indicators of the Fifth Five-Year Development Plan

	Unit	1996	1997	1998	Changes (98/97)
-Gross domestic product at current prices	Mn. R.O	5,874.3	6,075.0	5,457.1	-10.2
-Gross national income (GNI)	Mn. R.O	5,691.3	5,910.0	5,218.1	-11.7
-GNI per capita	R.O	2,570	2620.6	2281.6	-12.9
-% of domestic saving to GDP	%	27.8	29.6	17.2	-41.9
-% of private capital formation to GDP	%	5.7	6.6	N/A	-
-% of private capital formation to – total gross capital formation	%	41.3	36.7	N/A	-
-Total government revenue	Mn. R.O	1,990.2	2,267.2	1,839.8	-18.9
-Oil & gas revenue as a % of total government revenue	%	76.8	79.6	70.5	-11.4
-Total government expenditure	Mn. R.O	2,253.7	2,307.3	2,215.1	-4.0
-Average daily production of oil	(000) BBL	885	904	899	-0.6
-Average oil price	US \$	19.42	18.62	11,92	-36.0
-Total merchandise exports of which non-oil exports (Omani origin)	Mn. R.O	2,824.5	2,934.1	2,122.0	-27.7
	Mn. R.O	173.3	203.3	199.3	-2.0
- Total merchandise imports	Mn.R.O	1,818.0	1,995.8	2,240.0	12.2

Source: Ministry of National Economy (1999).

The Economy

Oman's economy, like that of other oil producing countries in the region, is mainly dependent on the oil revenues as major sources of income. Oman's oil production in 1997 averaged under 900,000 barrels a day. By the mid of 1998 the decision was taken to cut oil production to 30,000 and by April 1999 the production rate was reduced to about 26,000 barrels a day in the interests of the oil producing states and to help stabilise the oil price on world markets. Its reserves are estimated at around 5.4 billion barrels, additional reserves could be recovered but at higher costs. At present production rates, Oman's reserves, according to the Middle East (1997), are not expected to last for more than 20 years. As a result of the steep fall in oil prices in the world markets, the natural gas became the alternative source of income in Oman. The natural gas proven reserves are estimated at 28.5 trillion cubic feet (tcf) (Ministry of Information, 1998). Oman's natural gas production

reached 22,694.9 million cubic feet by the end of March 1999, compared with 18,460.0 by the end of March 1998 (Ministry of National Economy, 1999).

Due to its dependence on the oil as the main source of income, the economic and financial policies of the country are generally linked to its oil revenues, which is the major spur for public expenditure and the key source of funding general budgets and economic programmes and plans. Thus, a fall in oil prices and revenues would have a heavy impact on development activities and the economy in general. Oil prices fell substantially during 1998 by \$6.70 per barrel or 36% as it averaged at \$11.92 per barrel as compared to the average price of \$18.62 per barrel in 1997 and \$19.42 per barrel in 1996. As a result of the decline in oil prices, net oil revenues fell by over 29% in 1998 and projected to fall further by over 27% during 1999. Current expenditures of the civil ministries, according to the 1999 state budget, are less by 3.2% than that in 1997. The general public sector is to receive a cut of 12.7% in expenditure. The other sectors are to receive significant cuts of 7.7% in public order and safety, 11.6% in social security and welfare, 25.7% in housing, 10.4% in cultural and religious affairs, 14.5% in agriculture, 12.3% in transport and communication, and 8.9% in other economic affairs. The defence and national security are to receive the largest cut of 19.3 (see Al-Shidhani, 1999).

In evaluating the performance of Oman's economy, a study released by the World Bank in May 1994 warned that there are several critical problems facing Oman's economy. The Bank identified that the troubling features of Oman's economy include the following (The World Bank, 1994):

1. The government has made a partial expenditure adjustment to the stagnation in its oil revenues. In consequence, its financial position has seriously deteriorated and continues to do so. This apparent in declining contribution to the State General Reserve Fund (SGRF), a substantial rise in external debt, increased recourse of borrowing from the domestic private sector, and the virtual disappearance of government financial reserves.
2. Unavailability of funds to deal with genuine emergencies due to the planned allocation of most of the money flowing into the SGRF to the financing of planned public sector deficits.
3. Overall decline in saving and investment, especially public saving and investment, over the past decade and a half and the overall shift in the structure of output towards the services instead of production.
4. Economic diversification into non-oil tradable goods production remains limited.

5. Oman, like most neighbouring oil and gas producers, is currently spending an excessive proportion of the proceeds of extraction on current consumption.
6. A persistent heavy government role in the economy. The result is that the government's financial performance has major ramification for the entire economy.
7. The public sector typically dominates the development process as a consequence of public ownership of the resource and the accrual of the net proceeds of extraction to the public sector.
8. The dominance of public spending has been the major factor inhibiting the development of an independent and dynamic private sector.
9. A continuance of recent expenditure trends would quickly lead to a huge public financial deficit, a massive deterioration in the current accounts of the balance of payments, a huge expansion of external public debt, and relatively low levels private consumption.

The study recommended a number of remedies for tackling these problems (this is not an area for discussing those remedies since this goes beyond the scope of this research). However, the Omani government recognised the troubling features of its economy. According to the Omani authorities, the most important challenges facing Oman's economy are (Ministry of Development, 1997:165-166):

1. The increasing deficit in the general budget; a decline in financial reserves; levels of public debt that must not be exceeded; and instituting a mechanism for achieving equilibrium in the public finance.
2. The dependence of the national economy on a single depletable source (oil), which is affected mainly by external economic and political factors.
3. The expected gradual decline in the oil reserve in the coming twenty-five years.
4. The prominence of the government role in the goods and services production fields, which limits the opportunities available for the private sector in these fields.
5. The lack of certain laws and systems for the provision of a suitable environment for the growth of and diversity of private sector activities.
6. The weak integration between the oil sector and other production and services sectors. All production and services sectors are characterised by low efficiency and poor quality, which reduces their ability to compete at international level.

7. The poor production efficiency in government systems and the inefficient utilisation of available resources.
8. The low levels of private saving and investment rates and the increasing consumption tendencies.
9. The existing disequilibrium and the expansion in the employment of expatriate labour.
10. The poor productivity of human resources, the low status of some professions and handicrafts, in addition to their insignificant participation in the national economy.
11. The incapability of national labour to cope with the rapid developments in the technological fields.

To deal with these challenges and enhancing the performance of the economy, Oman announced a long-term development plan called “Vision 2020”. Vision 2020 is not merely a development plan, but a blueprint that would take Oman, according to the Omani authorities, two decades into the new millennium. It aims, as planned, to work towards the achievement of a diversified, dynamic and globalised economy aided by the operation of an efficient and competitive private sector. However, the Vision’s main objectives can be summarised in the following points (Ministry of Development, 1995: 33-36):

- A. Creation of a state macroeconomic framework through the establishment of a balance between public revenue and expenditure; increasing savings rates and accumulating financial reserves; continued adherence to the current monetary policies pertaining to the interest rate; preserving the value of Omani Rial, and balancing the current account; enhancing relationships, systems and institutions that foster free competition; and encouraging competition to achieve an optimum level of efficiency.
- B. Developing government’s role in providing basic services through the enhancement of government’s role in the provision and improvement of the level and quality of basic services, such as defence, security, political affairs, basic health and education services, and social security; enhancing government’s role as a strategic guide for achieving sustainable development; diminishing government involvement in the provision and public services, e.g. power.
- C. Human resources development through upgrading the levels of education systems; promotion of educational and vocational training; enhancement of women’s participation in the labour market; provision of high quality health care for Omani

citizens; and development of labour market mechanisms aimed at increasing the level of the workforce's participation in the economy.

- D. Enhancing economic diversification through the achievement of an optimum utilisation of available natural resources; promotion of Oman's export industries and services; adoption of high value-added strategies; and utilisation of advanced technologies.
- E. Development of the private sector through continued adherence to private sector development and the privatisation policies of services enterprises according to clear and specific rules; elimination of procedural and administrative barriers obstructing private capital entry to the various production and service sectors; development of trade and investment laws; and encouragement of foreign investment.
- F. Enhancing Oman's standard of living through lessening of differences in living standards among different regions and groups; extending the scope of social security; and encouraging self-reliance and enhancing community development.
- G. Enhancing the integration of the Omani economy with the global economy through strengthening Oman's economic relations with GCC (Gulf Co-operation Council) countries; encouragement of the free flow of goods and factors of production; upgrading advanced technology skills of the national workforce; assimilating modern technologies; joining the World Trade Organisation; and strengthening Oman's international economic relations with friends, and with economic blocks in a way that serves the Sultanate's interest.

Conclusion

Oman is a developing country that has witnessed a rapid development in all sectors of the economy during the last three decades as a consequence of the rise in the oil prices, which is the main source of the country's income. The government plays a positive role in the economy and the public sector dominates the development process and provides most of the services; which results in limited opportunities being available to the private sector. Due to its dependence on the oil as a major source of public income and expenditure and as a result of the steep decline in the oil prices in the 1980s and 1990s, Oman has faced some critical economic issues and its financial position has seriously deteriorated. To continue the development of the country and infrastructure, with maintaining a high standard of living, has led the Omani Government to formulate a long-term economic strategy (Vision 2020).

APPENDIX TWO:
ENGLISH QUESTIONNAIRE

Dear Sir,

I am currently conducting a research for a Ph.D. degree in Total Quality Management at Sheffield Hallam University in the United Kingdom. The overall aim of the research is to manifest:

The Feasibility of Introducing Total Quality Management into the
Oman Telecommunications Company (OMANTEL)

As you are aware, this is a field that has not been given sufficient attention by the researchers in Oman; thus, the overall aim of this project is not simply academic but, more importantly, it is intended to shed light on the concept of TQM, its basic tenets and the degree of its acceptance and the difficulties it may face in OMANTEL, in particular, and in Oman in general.

The overall aim of the research depends on your responses; so please, provide as much information as you know about the subject, where it is applicable, and try to respond to all of the questionnaire. Any information you provide will be strictly confidential and will be used solely for the purpose of the research and will have a significant value in terms of the completion of the research and the achievements of its objectives.

Please return the completed questionnaire to the secretary of your department, or alternatively send it the address provided below.

Thank you for your help and co-operation

Yours Sincerely,

Abdullah M. Al-Raisi
P.O. Box 1923,
Postal Code 111,
Muscat,
Sultanate of Oman

Dear Sir,

May we respectfully remind you that we have handed a questionnaire for the purpose of obtaining data for a Ph.D. research. We are still waiting for your response on the questionnaire since the overall aim and objectives of the research depend on your respond and participation in this study.

Please kindly participate in this study and try to spend some time on the questionnaire and provide your response. We trust you will find the matter as important and look forward to hearing from you.

Thank you very much for your help, time and co-operation

Yours truly,

Abdullah Al-Raisi
P.O. Box 1923,
Postal Code 111,
Muscat,
Sultanate of Oman

Section A: General Information				
Occupation:	Administrative	<input type="checkbox"/>	Technician	<input type="checkbox"/>
Gender:	Male	<input type="checkbox"/>	Female	<input type="checkbox"/>
Nationality:	Omani	<input type="checkbox"/>	Expatriate	<input type="checkbox"/>
Level of education:				
Preparatory & Less	Secondary	College	University and above	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Section B: In your opinion, to what extent the following, elements, concepts and principles are significant for improving the quality of OMANTEL's services (Please tick [✓] only one response)				
	Most Significant 1	Significant 2	Less Significant 3	Not Significant 4

1. There must be a vision in OMANTEL that focuses on providing the customers with the latest technology and services in the telecom industry at prices which the customers consider to be reasonable.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. OMANTEL must set up a clear mission statement that emphasises that the purpose of its existence is to serve the customers and satisfy them. This statement must be made clear to all employees.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. OMANTEL must set up a long-term strategy, which should focus on how to meet and exceed the current and future needs of its customers.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. OMANTEL must set up a set of values that focuses on customer service and satisfaction; and must promote these values amongst senior managers and employees.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. OMANTEL's staff at all levels must be prepared to deal with the key issues that might be raised by customers.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. The overall aim of OMANTEL's customer satisfaction strategy must focus on satisfying both the external and internal (employees) customers.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

	Most Significant 1	Significant 2	Less Significant 3	Not Significant 4
7. OMANTEL must give a great attention to team spirit; and must encourage and prepare its employees to work in teams.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. There must be a basic belief in OMANTEL that quality can be achieved through people, and that people make quality, not equipment or systems.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. The quality issues must be on all of OMANTEL's top management's agendas.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. The process of quality improvement must be regarded as a process rather than a project.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11. Quality improvement requires senior managers' participation and commitment. OMANTEL's senior managers must play a guiding role and must show visible involvement in quality improvement initiatives.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12. The causes of errors and problems need to identified from the sources, and prevented or tackled as soon as they are identified in order to reduce their costs.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13. The overall aim of the business must be customer satisfaction and profitability through increased productivity.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14. The quality improvement process must be carried out on the continuous basis and must not be ended by achieving short-term success. The process of improvement in OMANTEL must be regarded accordingly.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15. The quality improvement process must be measured and evaluated periodically in order to achieve improved services.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
16. The customers must judge the quality of OMANTEL's services; and OMANTEL must regard the customer as a king and meet his/her requirements.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
17. To improve service quality, OMANTEL must involve everyone, including senior managers, employees at all functional levels, and customers, in designing and improving the services.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
18. The service quality improvement process needs to be set up in a systematic way and must incorporate all parts of the organisation.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
19. The service quality improvement process needs to be taken on a continuous basis, and must not be regarded as a "quick fix" that ends by achieving some short-term improvements.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
20. The service quality improvement must be measured and evaluated if it is to achieve its goals and objectives.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Section C:

**Please indicate your degree of agreement/disagreement with the following statements
(Please Tick [✓] One Appropriate Response)**

	Strongly Agree 1	Agree 2	Neutral 3	Disagree 4	Strongly Disagree 5
1. Most employees in OMANTEL have a full knowledge and understanding of the concept of TQM.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Some TQM concepts have been implemented within OMANTEL's departments.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. An organisation's vision is a general statement that depicts the kind of organisation the company intends to become in the market, or to be seen by others.					
3.1. In OMANTEL, there is a vision to be one of the best providers of telecom services in the region, in terms of prompt service delivery, service quality and up-to-date technology.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.2. OMANTEL's vision is to provide high quality services with low costs.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.3. OMANTEL benchmarks the quality of its services with those of the other telecom service providers' in the region to learn how they are operating, and to catch up with changes in the telecom industry.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. An organisation's mission represents a series of statements of discrete objectives, allied to its vision, the attainment of all of which will ensure the attainment of the future desired state (the strategy).					
4.1. In OMANTEL, there is a clear mission statement that focuses on customer service and satisfaction.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4.2. OMANTEL boasts a complete updated index of services that it offers.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4.3. OMANTEL's main concept of service is based on its knowledge of its customers' requirements and expectations.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. A quality strategy is based on the vision, information on what is important to customers, and how customers view quality. A quality strategy is usually expressed as part of the strategic plan for the overall business.					
5.1. OMANTEL has a clear and written strategy for quality based on information about the customers' needs and requirements.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5.2. OMANTEL regards the concepts of high quality services and customer satisfaction as strategic objectives.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

	Strongly Agree 1	Agree 2	Neutral 3	Disagree 4	Strongly Disagree 5
5.3. In OMANTEL, there is a long-term strategic plan answers such questions as where OMANTEL wants to be during the next coming years, who are its future customers, and how it could serve them.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5.4. In OMANTEL, there is a strategy that enhances its capabilities to operate in the marketplace and meet its customers' future demands.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. An organisation's values are its basic beliefs, specific cultural attributes, and priorities that characterise the organisation.					
6.1. OMANTEL regards the concept of providing the customers an access to the information related to the services as a principal value.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6.2. OMANTEL offers guidance to customers in any new services in a language they can understand, and believes in this as a basic value.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6.3. OMANTEL regards the concept of maintaining close and direct contact with the customers, to understand their needs and expectations, as a principal value.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6.4. OMANTEL consistently follows up that its services are delivered on time with politeness and friendliness.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6.5. OMANTEL audits its employees' quality knowledge-levels in order to ensure that they provide quality services.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6.6. OMANTEL's management and employees are always concerned to provide the customers with reliable, tangible, and risk/doubt-free services.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. In TQM, the organisation must accept and be prepared to respond to the key issues raised by customers in pursuit of quality. A key issue could be an important issue to the customer, creating substantial cost arising from poor quality, creating substantial delay in the delivery of a service, etc.					
7.1. OMANTEL's systems and employees are prepared to deal with the issues raised by its customers.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7.2. OMANTEL respects the issues raised by its customers and deals with them effectively and seriously.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. In TQM, the organisation's employees are regarded as internal customers, and they must be satisfied in order to produce quality service and to satisfy the external customers.					
8.1. Employees at different levels and departments of OMANTEL are aware of such an attitude.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8.2. Each employee in OMANTEL treats his/her colleagues as customers and tries to satisfy them.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

	Strongly Agree 1	Agree 2	Neutral 3	Disagree 4	Strongly Disagree 5
9. Teamwork is a critical principle of TQM meaning that the people involved in the improvement process should work as a team; and should be trained on how to support each other, solve problems, and be creative.					
9.1. Top management of OMANTEL regards team spirit as an important factor for improvement and encourages the employees to work in teams.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9.2. In OMANTEL, there are many cross-functional teams solving quality problems and planning the quality of services.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9.3. The training sessions of OMANTEL prepare its personnel to work in teams and use quality improvement tools and techniques on the job.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9.4. OMANTEL identifies gaps between its training and TQM training needs.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9.5. OMANTEL trains its qualified personnel to be team facilitators.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9.6. OMANTEL encourages its senior managers to work in teams to create and set up its long-term strategies.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9.7. OMANTEL trains the senior managers to become team facilitators and educated in TQM.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. TQM emphasises that quality improvement could be achieved through people instead of systems or equipment. Meaning that the organisation's people who make quality, rather than its systems.					
10.1. Within OMANTEL, the employees are encouraged to play an important role in improving the quality of services.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11. In terms of TQM, the quality factors need to be on all management agendas; meaning that considerations of quality need to be part of the organisation's culture and included in every process.					
11.1. The issues related to quality, customer service and satisfaction are on the agendas of OMANTEL's management all the time.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11.2. The management of OMANTEL encourages the employees to produce quality services and includes quality factors in every employee's job description.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11.3. The management of OMANTEL takes into the consideration the quality factors when appraising and promoting the employees.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11.4. The management of OMANTEL takes into the consideration the quality factors in designing and setting up its marketing and sales strategies.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

	Strongly Agree 1	Agree 2	Neutral 3	Disagree 4	Strongly Disagree 5
12. In terms of TQM, the process of improvement must be regarded as a process (that has inputs and outputs), rather than a project or a "quick fix".					
12.1. In OMANTEL, the process of improvement is regarded as a process that needs appropriate inputs in order to produce appropriate outputs.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12.2. OMANTEL's senior managers regard each project of improvement as a process.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13. TQM requires that the top management of an organisation must participate in, and be committed to, the quality improvement process, and must play a leading role.					
13.1. The senior managers of OMANTEL take proactive roles and show commitment to the matters related to quality and customer service and satisfaction.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13.2. The senior managers of OMANTEL show personal and visible commitment in designing customer services and quality improvement processes and projects.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13.3. The contribution of employees in quality improvement is recognised and rewarded by the senior managers of OMANTEL.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13.4. The senior managers of OMANTEL review the progress of quality improvement and take prompt corrective actions when necessary.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13.5. The senior managers of OMANTEL listen to the voice of employees they raise matters related to quality improvement.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13.6. The senior managers of OMANTEL show visible commitment and take ownership of improvement processes.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14. TQM emphasises that preventing the causes of the problems from the sources costs less than rework and correction.					
14.1. OMANTEL's senior managers and employees are aware of the Prevention concept.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14.2. There is a basic belief amongst OMANTEL's employees to produce quality services right from the first time and every time in order to reduce the costs of rework and corrections.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15. The overall aim of the business must be customer satisfaction and profitability through increased productivity.					
15.1. OMANTEL's business strategy is based on the concept of customer satisfaction through high quality and improved services.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15.2. OMANTEL links customers' requirements to the development and improvement of the services.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15.3. OMANTEL anticipates its customers' future needs and expectations.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

	Strongly Agree 1	Agree 2	Neutral 3	Disagree 4	Strongly Disagree 5
16. The quality process must be carried out on the continuous basis and must not be ended by achieving short-term success. The process of improvement in OMANTEL must be regarded accordingly.					
16.1. OMANTEL effectively and consistently evaluates and improves its service quality in line with its customers' changing needs.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
17. The quality improvement process must be measured and evaluated periodically in order to achieve improved services.					
17.1. OMANTEL's top management periodically conducts a comprehensive audit, at least annually, of critical quality improvement activities.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
17.2. OMANTEL measures its quality and operational levels relative to those in the telecommunication sector in the region.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
18. TQM considers the customer as a king, meaning that the quality of a service is judged by the customer, or the end beneficial of the service.					
18.1. The management and employees of OMANTEL regard the customer as king and always being right.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
18.2. The management of OMANTEL gathers continuous feedback from the customers in order to identify their needs and expectations.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
18.3. In OMANTEL, there is a comprehensive record of customer care.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
18.4. Customer complaints received by OMANTEL are taken seriously and examined carefully.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
19. In TQM, everyone must participate in quality improvement process.					
19.1. In OMANTEL, everyone participates in quality improvement process.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
19.2. As part of participating everyone, the employees in OMANTEL are given a prominent role in improving quality by top management.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
19.3. As part of everyone participates, all departments of OMANTEL are involved in setting up its goals and objectives.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
19.4. In OMANTEL, employees get a fair hearing from management when they raise issues related to quality and customer service.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
19.5. In OMANTEL, employees are encouraged to contribute new ideas regarding quality and customer service.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
19.6. OMANTEL's top management includes all affected people in planning change, improving quality, and setting up its policies.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

	Strongly Agree 1	Agree 2	Neutral 3	Disagree 4	Strongly Disagree 5
20. In terms of TQM, aligned corporate systems means that all departments within an organisation should work together, corporate, and co-ordinate with each other to achieve quality and organisation's objectives.					
20.1. This principle of Aligned Corporate Systems is highly utilised within OMANTEL's departments.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
20.2. Co-ordination is effectively used to reduce conflict within OMANTEL's departments.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
20.3. Upward communication is highly utilised within OMANTEL.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
20.4. Most OMANTEL's departments understand how they could contribute to improve quality and customer service.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
20.5. The general climate of all departments is supportive of staff working together to improve quality and customer service.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
21. Continuous improvement is one of the critical principles of TQM. This principle is based on the idea that the process of improvement is an on-going process that never ends.					
21.1. OMANTEL regards the process of improvement as a continuous process.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
21.2. OMANTEL selects its quality projects on the basis of customer evaluation of services and costs of poor quality.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
21.3. The improvement data relate to all activities in the organisation and have sufficient information to be the basis for selecting quality improvement processes and projects.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
22. The service quality improvement must be measured and evaluated if it is to achieve its goals and objectives.					
22.1. In OMANTEL, the progress against quality goals is measured and reviewed regularly to take corrective actions.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
22.2. In OMANTEL, there is an updated and reliable information system to assess the progress of quality improvement activities.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
22.3. In OMANTEL, there is a frequent recognition for achievements in quality.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Section D:

In your opinion, do you think that the following barriers would inhibit the implementation of quality management in OMANTEL?
(Please Tick [✓] An Appropriate Answer)

Barriers		
1. Barriers Relating to Senior Management:	Yes	No
1. No long-term vision.	<input type="checkbox"/>	<input type="checkbox"/>
2. No constancy of purpose.	<input type="checkbox"/>	<input type="checkbox"/>
3. Unwilling to take risk.	<input type="checkbox"/>	<input type="checkbox"/>
4. Quality management efforts failed elsewhere.	<input type="checkbox"/>	<input type="checkbox"/>
5. Our customers are happy.	<input type="checkbox"/>	<input type="checkbox"/>
6. Comfortable with the status quo.	<input type="checkbox"/>	<input type="checkbox"/>
7. Comfortable with reactive management.	<input type="checkbox"/>	<input type="checkbox"/>
8. Not fully committed to quality management.	<input type="checkbox"/>	<input type="checkbox"/>
9. There are No major problems or survival issues.	<input type="checkbox"/>	<input type="checkbox"/>
10. Failure to learn the cost of poor quality.	<input type="checkbox"/>	<input type="checkbox"/>
2. Barriers Relating to Management System:	Yes	No
1. Too short-term.	<input type="checkbox"/>	<input type="checkbox"/>
2. Too many changes.	<input type="checkbox"/>	<input type="checkbox"/>
3. Too reactive.	<input type="checkbox"/>	<input type="checkbox"/>
4. Product-driven not market-driven.	<input type="checkbox"/>	<input type="checkbox"/>
5. Inflexible to change.	<input type="checkbox"/>	<input type="checkbox"/>
6. Doesn't offer a specific direction (i.e. mission or vision).	<input type="checkbox"/>	<input type="checkbox"/>
3. Barriers Relating to Work Methods:	Yes	No
1. Not enough top-down communication.	<input type="checkbox"/>	<input type="checkbox"/>
2. No bottom-up communication.	<input type="checkbox"/>	<input type="checkbox"/>
3. Encourage tampering.	<input type="checkbox"/>	<input type="checkbox"/>
4. Insufficient training.	<input type="checkbox"/>	<input type="checkbox"/>
5. Don't provide a good environment for creativity.	<input type="checkbox"/>	<input type="checkbox"/>
6. Induce fear of anxiety.	<input type="checkbox"/>	<input type="checkbox"/>
7. Punitive.	<input type="checkbox"/>	<input type="checkbox"/>

Section E:

In your opinion, do you think that the following factors that could contribute to the development of an effective implementation of quality management in OMANTEL?

(Please Tick [✓] An Appropriate Answer)

Factors	Yes	No
1. Top management's willingness to change.	<input type="checkbox"/>	<input type="checkbox"/>
2. There is a belief amongst senior managers' levels that there is a need for service improvement	<input type="checkbox"/>	<input type="checkbox"/>
3. There is a tendency in the country supported by the government to improve the quality of public services.	<input type="checkbox"/>	<input type="checkbox"/>
4. There is a government policy for privatising the public organisations to reduce the operational costs of these organisations.	<input type="checkbox"/>	<input type="checkbox"/>
5. There is a pressure from the customers for service quality improvement.	<input type="checkbox"/>	<input type="checkbox"/>
6. There may emerge other providers in the market due to the government's policy of opening up the national economy and encouragement of open competition.	<input type="checkbox"/>	<input type="checkbox"/>
7. The telecommunication industry is increasingly becoming global.	<input type="checkbox"/>	<input type="checkbox"/>

- Others (please specify).

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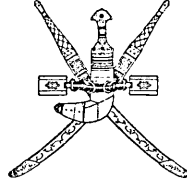
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APPENDIX THREE:
ARABIC QUESTIONNAIRE



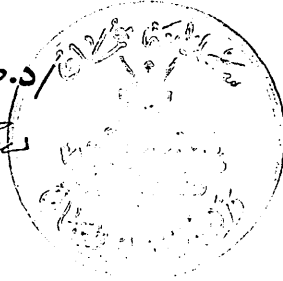
الرقم: د.د.ع. / ١٧٦٧ / ٩٨
التاريخ: د (المرافق) ١٢ / ١٤٠٨

شهادة لمن يهمله الأمر

تشهد دائرة الدراسات العليا بوزارة التعليم العالي أن الفاضل / عبدالله بن ميران بن زمان الرئيسي الموظف بالهيئة العامة للمواصلات السلوكية واللاسلكية مبعوث لدراسة الدكتوراه في مجال إدارة الموارد البشرية بجامعة شيفلد هالام بالمملكة المتحدة و ذلك اعتباراً من ١٩٩٧/٨/١م ويقوم حالياً بإعداد بحث في مجال تخصصه. نرجو التكرم مساعدة المذكور في الحصول على المعلومات والبيانات المطلوبة قدر الإمكان.

شاكرين ومقدرين كل جهد ومساعدته تقدم للمذكور لتسهيل مهمته.

د. طالب بن عيسى السالمي
١٤/١٢
٩٨
مدير الدراسات العليا



الفاضل:

المحترم

السلام عليكم ورحمة الله وبركاته

أقوم حالياً بإجراء دراسة لنيل درجة الدكتوراه في مجال إدارة الجودة الشاملة (TQM) بجامعة شفيلد هالام في المملكة المتحدة . هذا البحث يهدف إلى دراسة مدى إمكانية تطبيق إدارة الجودة الشاملة في الشركة العمانية للاتصالات.

إضافة إلى الهدف الأكاديمي لهذا البحث، فإن أهميته تعود إلى محاولة إلقاء الضوء على مفهوم إدارة الجودة الشاملة كمنهج حديث في علم الإدارة حيث لم يسبق بحثه في سلطنة عمان . هذا المنهج له مبادئ ومتطلبات لا بد من توفرها عند الرغبة في تحسين وتطوير الأداء في المؤسسة بصفة مستمرة . وقد ثبت نجاح هذا المنهج في كثير من الدول المتقدمة عند تطبيقه بالشكل الصحيح .

في هذه الدراسة سيتم التعرف على إمكانية نجاح تطبيق هذا المنهج في الشركة العمانية للاتصالات بشكل خاص وفي عمان بشكل عام . تحقيق أهداف هذا البحث يعتمد على مدى اهتمامكم بالإجابة على جميع أسئلة الاستبيان . كما أن إجاباتكم ستستخدم لأغراض هذا البحث فقط .

يرجى إعادة الاستبيان بعد إكماله إلى مكتب مدير دائرتكم . أو إرساله إلى العنوان الموضح أدناه .

شاكراً لكم تعاونكم وتفصلكم بالإجابة .

الباحث

عبدالله بن ميران الرئيسي

ص.ب: ١٩٢٣ مسقط

الرمز البريدي: ١١١

الفاضل:

المحترم

السلام عليكم ورحمة الله وبركاته

أود تذكيركم بأنه سبق تسليمكم استبيان لموضوع بحث دكتوراه في مجال إدارة الجودة الشاملة . وكما تعلمون فإن الغرض من هذا البحث يعتمد تحقيقه على تعاونكم واهتمامكم بالإجابة على أسئلة الاستبيان .
وحيث أنه لم تصلنا إجاباتكم ، لذا آمل التفضل بالمشاركة في قضاء بعض الوقت في الإجابة على أسئلة الاستبيان وإعادته بعد إكماله إلى مكتب مدير دائرتكم . أو إرساله إلى العنوان الموضح أدناه .

شاكرأ لكم كريم تعاونكم .

الباحث

عبدالله بن ميران الرئيسي

ص.ب: ١٩٢٣ مسقط

الرمز البريدي: ١١١

معلومات عامة			
الوظيفة :	<input type="checkbox"/> إداري	<input type="checkbox"/> فني	<input type="checkbox"/>
الجنس :	<input type="checkbox"/> ذكر	<input type="checkbox"/> أنثى	<input type="checkbox"/>
الجنسية :	<input type="checkbox"/> عماني	<input type="checkbox"/> غير عماني	<input type="checkbox"/>
المستوى التعليمي :			
<input type="checkbox"/> إحصائي أو أقل	<input type="checkbox"/> ثانوي	<input type="checkbox"/> دبلوم عالي	<input type="checkbox"/> جامعي فما فوق

من وجهة نظرك، ما مدى أهمية المبادئ التالية من أجل تطوير خدمات عمان تل (فضلاً ضع علامة [✓] أمام إجابة واحدة فقط)				
مهم جداً	مهم	غير مهم	غير مهم إطلاقاً	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	١. في عمان تل، لابد أن تكون هناك رؤية واضحة تركز على تقديم خدمات متطورة بأسعار مرضية للمشاركين .
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	٢. عمان تل لابد أن تحدد لها واجبات مبنية على أن الهدف من البقاء في السوق هو تلبية احتياجات المشاركين ، هذه الواجبات لابد من توضيحها لجميع العاملين في الشركة.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	٣. عمان تل لابد أن تضع لنفسها إستراتيجية بعيدة المدى تركز على تلبية احتياجات المشاركين الحالية والمستقبلية .
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	٤. عمان تل لابد أن تحدد لها مبادئ قائمة على إرضاء المشاركين وتلبية احتياجاتهم ، هذه المبادئ يجب أن تؤخذ بعين الاعتبار من قبل المسؤولين والموظفين .
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	٥. العاملون في عمان تل بجميع مستوياتهم لابد أن يكونوا قادرين على التعامل مع كل المسائل والاقتراحات التي يثيرها المشاركون من أجل تطوير الخدمات .
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	٦. الهدف الرئيسي من إستراتيجية عمان تل لإرضاء العملاء لابد أن يركز على إرضاء الزبون الخارجي (المشارك) ، والزبون الداخلي (الموظف) .
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	٧. عمان تل لابد أن تعطي مسألة العمل كفريق أهمية كبرى وأن تشجع الموظفين وتدريبهم على العمل كفريق .
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	٨. عمان تل لابد أن تؤمن (تعتقد) بمبدأ " الناس هم الذين يصنعون أو يحققون الجودة ، وليست النظم أو الأجهزة " .
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	٩. المسائل المتعلقة بتطوير الجودة لابد أن تكون مطروحة على جميع اجتماعات وأنشطة المسؤولين بعمان تل .
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	١٠. عملية التطوير لابد من اتخاذها كعملية مستمرة وليس كمشروع ينتهي بتحقيق بعض النجاحات .
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	١١. مسألة تطوير الجودة تتطلب مشاركة والتزام الإدارة العليا بالتطوير . الإدارة العليا بعمان تل لابد أن تشارك عملياً وتلعب دوراً قيادياً في عملية التطوير .

غير مهم إطلاق	غير مهم	مهم	مهم جداً	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	١٢. الأسباب المؤدية إلى الخطأ ومشاكل الجودة لابد أن تعالج من مصادرها إذ أن ذلك سيؤدي إلى التقليل من المصاريف والجهد المبذول على التصحيح بعد وقوع الخطأ أو المشكلة .
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	١٣. الهدف الرئيسي من البقاء في السوق لابد أن يكون كسب رضى الزبون مع زيادة الإنتاج.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	١٤. عملية التطوير لابد من اعتبارها عملية مستمرة من قبل المسؤولين في عمان تل ، ولا يمكن تحقيقها إلا من خلال النظر إليها من جانب الاستمرارية .
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	١٥. عملية التطوير في عمان تل لابد أن تراجع وتقيم حتى تحقق أهدافها .
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	١٦. مستوى جودة خدمات عمان تل لابد أن تحدد من قبل المشترك وعمان تل لابد أن تعامل المشترك كحكم أو مقيم للجودة وأن تسعى لإرضاء رغباته ومتطلباته .
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	١٧. من أجل تطوير الخدمة لابد من مشاركة الجميع في عمان تل، من مسئولين وموظفين ومتعاملين مع عمان تل ، في تصميم وتطوير خدماتها .
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	١٨. عملية تطوير الخدمات لابد أن تكون عملية منظمة وتتطلب التنسيق من الجميع في عمان تل .
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	١٩. عملية تطوير الخدمات لابد أن تؤخذ على أنها عملية مستمرة لا تتوقف عند تحقيق نجاحات قصيرة المدى أو مؤقتة ، بل لابد من الاستمرار في عملية التطوير إلى ما لا نهاية .
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	٢٠. عملية تطوير الخدمات لابد أن تخضع للتقييم المستمر إذا أريد تحقيق أهدافها .

في ما يلي بعض العبارات المتعلقة بإدارة الجودة الشاملة ، فضلاً عن علامة (✓) أمام عبارة واحدة فقط لتوضيح مدى اتفاقكم أو عدم اتفاقكم معها
(يرجى التأكيد من الإجابة على كل عبارة)

لا أوافق بشدة	لا أوافق	غير متأكد	موافق	أوافق بشدة
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
١. معظم العاملين في عمان تل لديهم معلومات كاملة عن إدارة الجودة الشاملة .				
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
٢. بعض نظريات أو مبادئ إدارة الجودة الشاملة مطبقة حالياً في بعض إدارات عمان تل .				
٣. من مبادئ إدارة الجودة الشاملة أن تضع المؤسسة لنفسها رؤية مستقبلية تعطي للمؤسسة تصوراً عن وضعها المستقبلي في السوق وكيف ينظر إليها الغير .				
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
٣,١ عمان تل لديها رؤية مستقبلية لتكون أحد أفضل مقدمي خدمات الاتصالات في منطقة الخليج ، من ناحية الجودة والوقت والتقنية الحديثة .				
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
٣,٢ الرؤية المستقبلية لعمان تل مبنية على أساس تقديم خدمات ذات جودة عالية بتكلفة أقل .				
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
٣,٣ عمان تل تقارن خدماتها مع خدمات مؤسسات الاتصالات الأخرى بمنطقة الخليج للاستفادة من خبراتهم والالحاق بآخر المستجدات في مجال الاتصالات .				
٤. من مبادئ إدارة الجودة الشاملة أنه لا بد من إيجاد واجبات محددة للمؤسسة. هذه الواجبات مرتبطة بالاستراتيجية العامة للمؤسسة ورؤيتها المستقبلية .				
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
٤,١ في عمان تل، هناك واجبات محددة قائمة على مبدأ إرضاء المشترك أو الزبون وخدمته .				
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
٤,٢ يتم إطلاع المشتركين بالمهام والواجبات التي تقوم عمان تل بأدائها .				
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
٤,٣ المفهوم الأساسي لخدمات عمان تل مبني على معرفتها بتوقعات المشتركين .				
٥. من مبادئ إدارة الجودة الشاملة أن تكون هناك إستراتيجية واضحة وبعيدة المدى مبنية على إدراك ووعي باحتياجات الزبون الحالية وتوقعاته المستقبلية والكيفية التي يحكم بها على الجودة (أي ماذا تعني الجودة بالنسبة للزبون) .				
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
٥,١ عمان تل لديها إستراتيجية واضحة ومكتوبة مبنية على أسس علمية لتحقيق ما يرضي المشتركين .				
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
٥,٢ عمان تل تعتبر مفهوم جودة الخدمات ورضا المشترك هدفاً إستراتيجياً .				

لا أوافق بشدة	لا أوافق	غير متأكد	موافق	أوافق بشدة	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	٥,٣ في عمان تل، هناك إستراتيجية بعيدة المدى تبين الخطط المستقبلية لعمان تل وكيف يمكنها أن تخدم المشترين في السنوات القادمة .
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	٥,٤ إستراتيجية عمان تل تعمل على تعزيز مقدرتها على الاستمرار في قطاع الاتصالات وتلبية رغبات وتوقعات المشترين المستقبلية .
٦ من مبادئ إدارة الجودة الشاملة أن يكون للمؤسسة بعض القيم والمبادئ التي تميزها عن غيرها من المؤسسات . نعتي بالقيم هنا ، المعتقدات الأساسية والسمات الثقافية التي تشكل الإطار العام للمؤسسة .					
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	٦,١ المشتركون بعمان تل يستطيعون الحصول على المعلومات المتعلقة بخدمات عمان تل بيسر وسهولة .
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	٦,٢ هناك علاقات جيدة بين عمان تل والمشتركين من خلال إطلاعهم على أي خدمات جديدة والتعرف على آرائهم عند الرغبة في التغيير .
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	٦,٣ عمان تل تحرص على التواصل مع المشترين بشكل مباشر للتعرف على احتياجاتهم وتوقعاتهم .
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	٦,٤ عمان تل بشكل متواصل تتابع وتتأكد من أن خدماتها تُقدّم في الوقت المحدد لها وبأسلوب مهذب .
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	٦,٥ عمان تل تُتابع مهارات العاملين الحالية ومستوى معرفتهم للجودة للتأكد من مقدرتهم على تقديم الخدمات بجودة عالية .
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	٦,٦ إدارة عمان تل وموظفوها يهتمون دائماً بتقديم خدمات يعتمد عليها وبدون أي صعوبات.
٧ من مبادئ إدارة الجودة الشاملة أن المؤسسة لابد أن تكون مهيأة للتعامل وتقبل كل ما يثيره الزبون من مقترحات لتطوير جودة الخدمات .					
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	٧,١ أنظمة عمان تل وموظفوها مهيتون للتعامل مع كل ما يثيره المشتركون .
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	٧,٢ عمان تل تتقبل وتتعامل بجدية مع مقترحات المشترين .
٨ من مبادئ إدارة الجودة الشاملة أن الموظف لابد أن يُعامل كزبون داخلي للمؤسسة يجب أولاً إرضائه حتى يمكن تقديم خدمات جيدة وتحقيق رضى الزبون الخارجي .					
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	٨,١ العاملون في عمان تل على جميع مستوياتهم يدركون أهمية مبدأ معاملة الموظف كزبون داخلي .
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	٨,٢ جميع العاملين في عمان تل يتعاملون مع بعضهم على أساس أنهم زملائهم لبعضهم ويجب إرضاء بعضهم البعض .

لا أوافق بشدة	لا أوافق	غير متأكد	موافق	أوافق بشدة	
<p>٩ من مبادئ إدارة الجودة الشاملة أن جميع العاملين في المؤسسة يجب أن يعملوا كفريق واحد وأن يكونوا مدربين على الابتكار وإيجاد الحلول المناسبة للمشاكل التي يواجهونها .</p>					
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<p>٩,١ الإدارة العليا لعمان تل تعتبر العمل كفريق مسألة مهمة لأداء العمل وتؤكد على تطبيق هذا المبدأ بين العاملين .</p>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<p>٩,٢ في عمان تل هناك فرق عمل تقوم بمعالجة المشاكل المتعلقة بالجودة والتخطيط لتطوير جودة الخدمات .</p>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<p>٩,٣ يتم تدريب العاملين بعمان تل على العمل كفريق منظم مع استخدام أدوات تطوير الجودة والتقنيات الحديثة لتحسين أداء العمل .</p>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<p>٩,٤ عمان تل تحاول دائماً تطوير برامج التدريب لديها مع ما يتوافق واحتياجات إدارة الجودة الشاملة .</p>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<p>٩,٥ تقوم عمان تل باختيار أفضل الموظفين لتدريبهم على كيفية قيادة فرق العمل للتطوير بعمان تل .</p>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<p>٩,٦ نظام العمل بعمان تل يحث المسؤولين على العمل بروح الفريق عند تحديد السياسات العامة ووضع خططها المستقبلية .</p>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<p>٩,٧ تقيم عمان تل دورات تدريبية للمستولين لتعريفهم بكيفية العمل كفريق وتوعيتهم بأحدث وسائل تحسين أداء العمل .</p>
<p>١٠ إدارة الجودة الشاملة تؤكد على مبدأ أن العاملين هم الذين يصنعون الجودة وليست الأجهزة أو المعدات .</p>					
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<p>١٠,١ عمان تل تحث العاملين على أن يقوموا بدور مهم في عملية تطوير جودة الخدمات وتحسين الأداء .</p>
<p>١١ إدارة الجودة الشاملة تعتبر أن قضايا الجودة لا بد أن تكون موضع اهتمام جميع المسؤولين ، بمعنى أن قضايا الجودة لا بد أن تكون جزءاً من ثقافة المؤسسة وتؤخذ في الاعتبار في جميع اجتماعاتها .</p>					
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<p>١١,١ في عمان تل إرضاء المشترك وتقديم خدمات ذات جودة عالية يعتبر موضع اهتمام جميع المسؤولين في جميع الأوقات .</p>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<p>١١,٢ الإدارة بعمان تل تحث العاملين على تقديم خدمات بجودة عالية و تراعي عوامل الجودة في جميع وظائف عمان تل .</p>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<p>١١,٣ الإدارة بعمان تل تراعي مسائل الجودة عند تقييم أو ترقية الموظفين .</p>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<p>١١,٤ الإدارة بعمان تل تراعي مسائل الجودة عند تصميم إستراتيجية التسويق .</p>

لا أوافق بشدة	لا أوافق	غير متأكد	موافق	أوافق بشدة
١٢ في إدارة الجودة الشاملة عملية تحسين الأداء لابد أن تؤخذ على أنها عملية مستمرة بدون توقف لها مدخلات ومخرجات .				
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
١٢,١ عمان تل تعتبر تحسين الأداء عملية لها مدخلات ومخرجات وأنه للحصول على نتائج إيجابية (مخرجات) لابد من توفر المدخلات المناسبة .				
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
١٢,٢ الإدارة العليا بعمان تل تعتبر عملية التطوير عملية لها مدخلات ومخرجات وليست مشروعاً ينتهي عند إنجازه .				
١٣ إدارة الجودة الشاملة تتطلب من الإدارة العليا للمؤسسة الالتزام والمشاركة الفعلية وأن يكون لها دوراً قيادياً في عملية التطوير .				
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
١٣,١ الإدارة العليا بعمان تل تشارك عملياً في المسائل المتعلقة بالجودة وإرضاء المشترك .				
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
١٣,٢ الإدارة العليا بعمان تل ملتزمة وبشكل محسوس في جهود تطوير جودة الخدمات وتحسين الأداء .				
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
١٣,٣ يتم مكافئة العاملين بشكل مستمر على إسهامهم في مجال تطوير جودة الخدمات وتحسين الأداء .				
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
١٣,٤ تقوم الإدارة العليا بعمان تل باستمرار بمراجعة مستوى جودة خدمات عمان تل ، وتتخذ خطوات إيجابية تجاه ذلك .				
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
١٣,٥ الإدارة العليا بعمان تل تستمع إلى مقترحات الموظفين حول الأمور التي تتعلق بتطوير جودة الخدمات .				
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
١٣,٦ الإدارة العليا بعمان تل تتعامل مع تطوير جودة الخدمات وتحسين الأداء كجزء من عملها اليومي .				
١٤ إدارة الجودة الشاملة تؤكد على أن منع حدوث المشاكل من أساسها يكلف أقل من معالجتها بعد وقوعها .				
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
١٤,١ الإدارة العليا بعمان تل وموظفوها يدركون أهمية هذا المبدأ .				
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
١٤,٢ الموظفون في عمان تل لديهم قناعة كاملة بأن تقديم خدمة ذات جودة عالية من المرة الأولى ودائماً يؤدي إلى خفض التكاليف وتوفير ثمن إعادة العمل مرة أخرى .				
١٥ الهدف الأساسي من البقاء في السوق لابد أن يكون معتمداً على كسب رضى الزبون وزيادة الإنتاج .				
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
١٥,١ استراتيجية عمان تل تعتمد على مفهوم كسب رضى الزبون من خلال تطوير جودة الخدمات المقدمة له .				
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
١٥,٢ عمان تل دائماً تربط متطلبات المشرّكين مع عمليات تطوير جودة الخدمات .				
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
١٥,٣ عمان تل تهتم بمعرفة احتياجات وتوقعات المشرّكين المستقبلية .				

لا أوافق بشدة	لا أوافق	غير متأكد	موافق	أوافق بشدة
١٦ الاستمرار في التطوير من المبادئ الأساسية في إدارة الجودة الشاملة . يقوم هذا المبدأ على أن عملية التطوير عملية مستمرة لا نهاية لها ، أي أنها لا تتوقف عند تحقيق أهداف قصيرة المدى .				
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
١٦,١ تقوم عمان تل بشكل فعال ومستمر بمراجعة ومتابعة تطوير خدماتها من أجل تلبية رغبات المشترين .				
١٧ إيجاد معيار أو مقياس للجودة يعتبر من المبادئ الأساسية لإدارة الجودة الشاملة . بمعنى أنه لابد وباستمرار قياس مدى جودة العمل المؤدى ومدى تحقيق ذلك العمل للأهداف المرجوة .				
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
١٧,١ عمان تل تقوم وبشكل معتاد بتقييم جودة العمل المؤدى ومقارنته مع الأهداف الموضوعية ويتم استعراض النتائج واتخاذ الإجراءات التصحيحية اللازمة .				
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
١٧,٢ عمان تل تُقيم جودة خدماتها وتقارنها مع مؤسسات الاتصالات الأخرى بمنطقة الخليج .				
١٨ من مبادئ إدارة الجودة الشاملة أن الزبون يعتبر هو الحكم أي أنه هو الذي يحدد مستوى جودة الخدمة .				
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
١٨,١ جميع موظفي عمان تل والمستولون يعتبرون الزبون (المشرك) هو الحكم في تحديد جودة الخدمة وأنه على حق دائماً .				
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
١٨,٢ إدارة عمان تل دائماً وبشكل مستمر تقوم بجمع مقترحات المشترين للتعرف على احتياجاتهم وتوقعاتهم .				
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
١٨,٣ عمان تل لديها سجلات متكاملة للمشترين لمتابعتهم والتأكد من تحقيق متطلباتهم				
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
١٨,٤ شكاوى المشترين يتم التعامل معها بشكل جدي .				
١٩ من مبادئ إدارة الجودة الشاملة أن الجميع يجب أن يشارك ويساهم في عمليات تطوير الجودة .				
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
١٩,١ جميع العاملين في عمان تل يشاركون في تطوير جودة خدماتها .				
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
١٩,٢ المستولون في عمان تل يؤكدون على أهمية دور الموظفين في تطوير الجودة .				
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
١٩,٣ جميع إدارات عمان تل تشارك في وضع أهداف عمان تل وتطوير خدماتها .				
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
١٩,٤ العاملون في عمان تل يجدون قبول واستجابة من قبل المستولين عند تقديم اقتراحاتهم بخصوص تطوير جودة الخدمات .				
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
١٩,٥ المستولون في عمان تل يحثون العاملين على تقديم مقترحات تتعلق بتطوير الجودة .				
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
١٩,٦ المستولون في عمان تل يقومون بشكل معتاد بإشراك العاملين في التخطيط لتطوير جودة الخدمات وصياغة سياساتها .				
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

لا أوافق بشدة	لا أوافق	غير متأكد	موافق	أوافق بشدة
٢٠ من مبادئ إدارة الجودة الشاملة أن جميع الدوائر في المؤسسة لابد أن تقوم بالتنسيق والتفاهم في ما بينها لتحقيق أهداف المؤسسة وتقديم خدمات ذات جودة عالية .				
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
٢٠,١ هذا المبدأ مطبق بين إدارات عمان تل .				
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
٢٠,٢ الخلافات التي تنشأ بين إدارات عمان تل يتم معالجتها عن طريق التنسيق المنظم فيما بين هذه الإدارات .				
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
٢٠,٣ قنوات الاتصال داخل عمان تل تسمح للموظفين بعرض وجهات نظرهم على المسؤولين بدون عوائق .				
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
٢٠,٤ معظم إدارات عمان تل تدرك دورها في مسئولية تطوير الجودة .				
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
٢٠,٥ بيئة العمل بعمان تل تساعد على العمل الجماعي بين الموظفين من أجل تحقيق الجودة .				
٢١ التطوير المستمر من أهم مبادئ إدارة الجودة هذا المبدأ يقوم على فكرة أن عملية التطوير عملية ليس لها نهاية فلا تتوقف مهما كان النجاح المتحقق .				
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
٢١,١ تعتبر عملية تطوير جودة الخدمات في عمان تل عملية مستمرة .				
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
٢١,٢ عمان تل تعتمد على تقييم المشركون خدماتها عند تحديد الخطط المستقبلية للتطوير .				
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
٢١,٣ عمان تل لديها قاعدة معلومات متكاملة لجميع الأنشطة التي تمارسها للاستفادة منها في اختيار العمليات المناسبة للتطوير .				
٢٢ تطوير جودة الخدمات يجب أن تقيم وتقاس بشكل دوري لمعرفة مدى تحقيقها للأهداف المرجوة .				
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
٢٢,١ في عمان تل يتم قياس وتقييم نشاطات تطوير الجودة بشكل دوري لاتخاذ الإجراءات المناسبة للتغيير .				
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
٢٢,٢ في عمان تل هناك نضام معلومات حديث يتم الاعتماد عليه في عملية تقييم وقياس نشاطات تطوير جودة الخدمات .				
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
٢٢,٣ في عمان تل هناك إدراك دائم لأهمية تقييم وقياس جودة الخدمات .				
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

حدد العتبات التي قد تحول دون تطبيق منهم إدارة الجودة الشاملة في عمان تل
(فضلاً ضع علامة [✓] في المربع المناسب)

أ- عتبات متعلقة بالإدارة العليا :		نعم	لا
١	عدم وجود رؤية بعيدة المدى .	<input type="checkbox"/>	<input type="checkbox"/>
٢	عدم وجود أهداف ثابتة .	<input type="checkbox"/>	<input type="checkbox"/>
٣	عدم الرغبة في المخاطرة (الخوف من خوض التجارب الجديدة) .	<input type="checkbox"/>	<input type="checkbox"/>
٤	محاولة تطبيق إدارة الجودة الشاملة فشلت في مؤسسات أخرى .	<input type="checkbox"/>	<input type="checkbox"/>
٥	المشركون راضون عن خدمات عمان تل ولا داعي للتغيير .	<input type="checkbox"/>	<input type="checkbox"/>
٦	الرضى الكامل بالوضع الراهن .	<input type="checkbox"/>	<input type="checkbox"/>
٧	القناعة بالنهج التقليدي في الإدارة .	<input type="checkbox"/>	<input type="checkbox"/>
٨	عدم الالتزام الكامل بإدارة الجودة الشاملة .	<input type="checkbox"/>	<input type="checkbox"/>
٩	عدم وجود مشاكل حقيقية تهدد بقاء المؤسسة في السوق .	<input type="checkbox"/>	<input type="checkbox"/>
١٠	عدم إدراك الحساتر الناجمة عن تقديم خدمات رديئة .	<input type="checkbox"/>	<input type="checkbox"/>
ب- عتبات متعلقة بالنظام الإداري في المؤسسة :		نعم	لا
١	تخطيط قصير المدى .	<input type="checkbox"/>	<input type="checkbox"/>
٢	الارتباط بأكثر من عملية تغيير في وقت واحد .	<input type="checkbox"/>	<input type="checkbox"/>
٣	تطبيق مبادئ الإدارة التقليدية .	<input type="checkbox"/>	<input type="checkbox"/>
٤	التركيز على تقديم الخدمة دون معرفة احتياجات السوق الحقيقية .	<input type="checkbox"/>	<input type="checkbox"/>
٥	عدم تقبل التغيير .	<input type="checkbox"/>	<input type="checkbox"/>
٦	عدم وجود أهداف واضحة ومحددة .	<input type="checkbox"/>	<input type="checkbox"/>

ج- عقبات متعلقة بأسلوب أو طريقة العمل :		
لا	نعم	
<input type="checkbox"/>	<input type="checkbox"/>	١ عدم وجود قنوات اتصال فعّالة بين الإدارة العليا والعاملين .
<input type="checkbox"/>	<input type="checkbox"/>	٢ أصوات العاملين وآرائهم لا تصل إلى الإدارة العليا .
<input type="checkbox"/>	<input type="checkbox"/>	٣ أسلوب العمل يساعد على الإهمال .
<input type="checkbox"/>	<input type="checkbox"/>	٤ عدم وجود برامج تدريبية فعّالة .
<input type="checkbox"/>	<input type="checkbox"/>	٥ أسلوب العمل لا يساعد على الابتكار والتجديد .
<input type="checkbox"/>	<input type="checkbox"/>	٦ عدم الإحساس بالأمن الوظيفي .
<input type="checkbox"/>	<input type="checkbox"/>	٧ الخوف من العقاب .
د- عقبات متعلقة بالقوى العاملة :		
لا	نعم	
<input type="checkbox"/>	<input type="checkbox"/>	١ انخفاض الروح المعنوية .
<input type="checkbox"/>	<input type="checkbox"/>	٢ عدم الالتزام الكامل بإدارة الجودة الشاملة .
<input type="checkbox"/>	<input type="checkbox"/>	٣ عدم الثقة بالإدارة .
<input type="checkbox"/>	<input type="checkbox"/>	٤ عدم تقديم أي رأي حول كيفية تطبيق إدارة الجودة أو تحسين الأداء .
<input type="checkbox"/>	<input type="checkbox"/>	٥ الاستهزاء بالقرارات الإدارية .
<input type="checkbox"/>	<input type="checkbox"/>	٦ عدم فهم عمليات التطوير .
<input type="checkbox"/>	<input type="checkbox"/>	٧ عدم تقديم أي مقترحات للتطوير .
<input type="checkbox"/>	<input type="checkbox"/>	٨ اللامبالاة في العمل .

أخرى فضلاً أذكرها :

إذا كان هناك أي ملاحظات أو اقتراحات ترون أنها ستساهم في تطبيق إدارة الجودة الشاملة في عمان تل
بشكل فعال ، الرجاء التكرم بذكرها :

شاكرين ومقدرين لكم تعاونكم واهتمامكم