

## CHAPTER 5

### LITERATURE REVIEW – SUPPORTIVE DIMENSIONS OF THE TOTAL QUALITY MANAGEMENT FRAMEWORK

#### 5.1 INTRODUCTION

So far a framework has been provided in chapter 3 as a means to implement TQM in the SA Air Force. This was based on the most important points of view of international scholars and researchers as these appeared in literature on TQM. The framework (see figure 3.1, figure 3.2 and table 3.3) revealed 14 dimensions as being crucial for the effective implementation of TQM. Chapter 4 discussed the six primary dimensions in detail, and paid particular attention to the involvement of people. It also pointed to the necessity of having all these dimensions present in an organisation or institution in order to adopt and implement TQM effectively.

However, chapter 3 also identified eight *supportive* dimensions, which should be present to complement and support the primary dimensions of TQM. These dimensions include communication; training; culture forming; change management; support structures, systems and resources; systems thinking; self-assessment; and processes. Of the eight supportive dimensions, six form the basis of the “soft” outcomes of the supportive dimensions to achieve TQM. They include communication, training, culture forming, change management, systems thinking and processes. They are integrated, however, by some “hard” management necessities, which are represented by the two dimensions of support structures, systems and resources, and self-assessment. These dimensions, in their roles as the foundations and cornerstones of the TQM telescopic framework, are examined in greater detail in this chapter. They are integrated into a TQM telescopic framework (see figure 3.1, figure 3.2 and table 3.3), based on a core set of values and paradigms, to complement the focus on TQM. Their importance is also authenticated based on different institutional perspectives.

## 5.2 COMMUNICATION

The first supportive dimension (see figure 3.1 and table 3.3) that influences the success of a TQM effort is communication. To successfully implement TQM activities in an institution, it is essential for top management to communicate effectively. As can be derived from figure 3.2, communication is also involved in the six primary dimensions.

Communication is one of the most important supportive dimensions to be considered when implementing TQM in an institution (Oakland & Oakland 2001:779). From the principles of TQM (see chapter 2, paragraph 2.3.3) and from the writings of the quality guru, Juran (see chapter 2, paragraph 2.3.1.2), it becomes clear that communication is one of the key success factors in the quality improvement process. The success with which TQM is established in an institution largely depends on the success achieved with communication within the institution. Stamatis (1996:34) and Oakland & Oakland (2001:778), emphasises that communication is one of the most important factors (1) to guide and empower people, (2) to employ quality teams successfully, such as for example quality circles, (3) to establish effective problem solving within team context, and (4) to establish continuous quality service rendering results. They continue by stating that communication plays a central role in human interaction as well as the interaction between employees. The interaction is applicable to communication between individuals, between the individuals of teams and between employees within institutional context. Communication is inextricably linked to the quality process and is an extremely complex process (Swift, Ross & Omachonu 1998:28).

Before discussing communication, a definition of communication that encompasses all the ways it supports quality improvement is required. Kreitner & Kinicki (1998:429) define communication as the exchange of information between a sender and a receiver and the inference (perception) of meaning between the individuals involved. Analysis of this exchange reveals that communication is a two-way process consisting of consecutively linked elements. Leaders who understand this process can analyse their own communication patterns, as well as design communication programmes that fit team needs by putting quality objectives in plans of action. The more communication is managed toward specific quality goals, the greater the likelihood that employees will achieve those goals.

Communication is important in institutions moving towards a TQM philosophy because of the change involved. Oakland (2000:241) clearly states that the strategy, changes and culture that are established within an institution as a result of the TQM philosophy, should be communicated clearly and directly from top management to all employees and customers. Claver *et al.* (2001:478) and Kroon (1995:373) states that communication involves the following:

- Conveying a message, verbally or non-verbally, from a sender to a receiver regarding the activities or relationships between employees in an institution.
- That activity or process where one or more persons attempt to convey an idea, feeling, state of affairs or information to another person or persons. Communication only occurs if the second person or persons succeed in correctly interpreting or understanding the intended meaning (Kroon 1995:373).
- The connecting process between the decisions of management and the execution thereof in order to achieve the objectives of the institution.

The context within which communication takes place usually has an impact on the *climate* within which communication occurs. Climate refers to the psychological atmosphere that prevails in the environment where the communication process is taking place (Van Dyk 1991:58). A good communication climate is conducive to effective functioning, while a weak communication climate will result in poor functioning. To establish effective communication, according to Claver *et al.* (2001:477-478) management should understand all communication processes that is horizontally, vertically downwards, upwards and diagonally. He continue by stating that effective communication occurs when the message as intended by the sender is understood by the receiver of the message. If management communicates effectively, they will be able to achieve their objectives and to establish quality service. Managers spend most of their time communicating. The time spent on communication can be crucial for the continued existence of the institution. At Xerox a culture of “wandering around” was created, where managers were encouraged to leave their offices and walk around on the premises with supervisors and to communicate with the people who work at operational level.

According to Katzenbach & Smith (1993:304), overcoming communication barriers created by dealing with people from different cultures is another leadership challenge when working with diverse teams. Guidelines for leaders for overcoming cross-cultural communication barriers include the following according to Scully (1995:37): (1) be sensitive to the existence of cross-cultural barriers, (2) use straightforward language and speak slowly and clearly, (3) observe cross-cultural differences in etiquette, (4) do not be diverted by differences in style, grammar, accent or personal appearance, and (6) be sensitive to differences in non-verbal communication.

### **5.2.1 Employee communications**

According to Claver *et al.* (2001:477), the message of quality improvement has to be communicated to three distinct audiences: employees, customers and stakeholders. To build anticipation and enthusiasm, employees must be energized to transform to a TQM environment. Employees cannot be expected to be productive and effective if they do not receive accurate and relevant information. According to Evans & Dean (2003:249), communication has a direct influence on the productivity and performance of employees. Effective communication increases employees' level of trust and improves problem solving. Communication is essential for the entire empowerment concept. Creating opportunities for participation whilst considering the needs of employees are conducive to effective communication. Delport (2000:31) is of the opinion that if employees are allowed to air their work related anxieties, their performance will improve and that this will contribute to the general achievement of the objectives of the institution. By allowing employees to give inputs with regard to their jobs, management recognises that employees are an important source of knowledge and experience.

In the face of a crisis for an institution, management must communicate real threats to all employees to help convince them of the need for change. Positive reinforcement is an effective way to motivate people and generate their interest in transforming the institution. One of the most powerful ways to create interest in TQM is to communicate success stories to employees. Success stories of institutions implementing TQM must also include financial information by teaching employees to understand and play the "great game of business" (Townsend & Gebhardt 2002:79).

According to Oakland & Oakland (2001:779), communication is “the engine that powers the quality train”. For the two researchers, internal communication systems generally should have four important goals, namely:

- To inform the employees of ongoing objectives, policies and plans – internal communication of an institution can be characterized as the connection between policy and action. An institution’s commitment to quality processes should be demonstrated by providing appropriate, adequate information for all employees through effective communication activities.
- To control the work of employees to ensure that individual effort is congruent with institutional goals.
- To assist in problem solving at all levels of the institution.
- To develop team building by sharing information with employees and providing opportunities for them to give input.

Evans & Dean (2003:249), Oakland (2000:241), Swift, Ross & Omachonu (1998:29) and Townsend & Gebhardt (2002:79) state that the vehicles for communicating the total quality strategy to the institution’s employee’s are:

- Train and develop both managers and employees - Managers must understand the processes they manage as well as the basic concept of systems optimisation. Employee training should focus on the integration and appropriate use of statistical tools and problem solving.
- People’s attitudes and behaviour can be influenced by communication, and the essence of changing attitudes is to gain acceptance through excellent communication processes. Involvement, both vertical in the hierarchy as well as horizontal by cross-functional teams, is essential.
- The strategy and changes to be brought about through TQM should be clearly and directly communicated from top management to all employees. The first step is to issue a ‘total quality message’. A signed TQM directive should follow this.
- People must know when and how they will be brought into the TQM process, what the process is, and the successes and benefits achieved. First-level supervision has an important role in communicating the key messages and overcoming resistance to change.

- The complexity and jargon in the language used between functional groups, needs to be reduced in many institutions. Simplify and shorten are the guiding principles.
- ‘Open’ methods of communication and participation should be used at all levels. Barriers may need to be broken down by concentrating on processes rather than ‘departmental’ issues.
- Top management must ensure that each group sees TQM as being beneficial, through communication.
- Good leadership is mostly about good communications, the skills of which can be learned through training but must be acquired through practice.
- There are four principle types of communication: verbal (direct and indirect), written, visual and by example. Each has its own requirements, strengths and weaknesses.
- Empower employees by delegating authority to make decisions regarding process improvement within individual areas of responsibility, so that the individual “owns” the particular process step.

According to Chowdhury (2000:62), in order to implement TQM effectively, there must be people-orientated communication in an institution, which provides a friendly atmosphere in which everyone communicates quickly. Effective communication helps to break down the traditional institutional hierarchy. It also encourages communication of both good and bad news, so that any type of news can travel from one end of the institution to the other, and through all levels. Chowdhury (2000:62) states that to communicate necessary information effectively, adequate channels must exist. If they don’t, they must be established. The influence of the communication climate on quality performance at institutions can probably best be understood by studying the influence thereof on institutions that will subsequently be discussed.

### **5.2.2 Communication to ensure workflow**

De Swardt (1995:32) states that effective communication contributes to quick and effective execution of tasks while it also improves decision-making and teamwork. Two-way communication can be either vertical or horizontal (Claver *et al.* 2001:477-478). Effective communication works in two directions. By means of two-way communication unilateral decisions are avoided, greater involvement is encouraged,

knowledge is utilised more effectively and better attitudes by means of better *esprit de corps* (regard for honour) are fostered. By utilising vertical communication effectively, top management attempts to send their messages, points of view, expectations and aspirations quickly and correctly to the operational level. At the same time the reactions of the lower levels must be conveyed to higher levels quickly and correctly. Horizontal communication, on the other hand, encourages teamwork and better decision-making. This occurs by means of discussions and the exchange of information between sections or between co-workers who as a team aspires to reach certain objectives. (Oakland & Oakland 2001:779-781.)

### **5.2.3 Communication to ensure problem solving**

Problem solving implies a negotiating process, usually occurs in teams, form the basis of participation and requires exceptional communication skills from the participants. In this context the ability to listen and to gain information before stating a point of view plays an important role. Communication plays an important role in the process of problem solving, especially within team context. Obtaining the required expertise, experience and insight from others when attempting to solve a problem, forms an integral part of communication during problem solving. Communication in such situation is extremely complex and represents a combination of gaining information, providing information, convincing and influencing (Cândido & Morris 2001:826-833).

### **5.2.4 Communication to ensure service quality**

Communication to the customer should clearly reflect what customers will actually receive during service rendering and must help customers to understand their role in the service rendering process (Claver *et al.* 2001:481). Just like leadership, communication plays a primary role in an institution's service rendering to improve service quality. According to Schlieben (1996:37), the service quality of an institution can improve by means of accurate and applicable communication with the customer. Inadequate horizontal communication and an inclination to make promises that are not kept, is the biggest cause of gaps between customers and institutions. This problem can be solved and lessened by ensuring that communication with the customer does not create unnecessary expectations that cannot be met. Internal communication

between sections at the institution must be improved and communication with the customer should focus on the quality dimensions and characteristics that are the most important to the customer.

By virtue of the supportive dimensions, communication plays a key role in the TQM effort. In order to successfully implement TQM activities at an institution, executives have to communicate effectively. The second supportive dimension (see figure 3.1 and table 3.3) that influences the success of a TQM effort is training. As can be derived from figure 3.2, continuous training is involved in all six primary dimensions.

### 5.3 TRAINING

Dayton (2001:293-295) state in his research that training is one of the most critical and crucial prerequisites for institutional success when implementing TQM. Deming's sixth principle (see chapter 2, paragraph 2.3.1.1) emphasises that *in-service training* is essential for establishing continuous improvement at in institution. All employees are to follow continuous training programmes where they can be taught and learn to accept the culture of the institution. Mathews, Ueno, Repka, Pereira, & Silva (2001:484) state that employees should be trained in the strategic policy, procedures and culture of the institution as well as the requirements for their jobs. Deming's thirteenth principle (see chapter 2, paragraph 2.3.1.1) also emphasises that within an institution a programme of training and self-improvement should be established; the reason being that all employees should continuously acquire new knowledge and skills that will actively contribute to developing continuous improvement and problem-solving processes (Oakland & Oakland 2001:778). Crosby's ninth principle (see chapter 2, paragraph 2.3.1.4) of employee training is linked to Deming's preceding principles in respect of training. Crosby clearly states that once management has been trained in TQM, all employees should be trained in the philosophies and procedures to continuously demonstrate more pride of work, which will lead to an improvement in quality. As quality is enhanced, the workplace will become more pleasant and in this way Deming's eight principle (see chapter 2, paragraph 2.3.1.1) will be achieved, that is to eliminate fear at the workplace. Through training employees gain more self-confidence and are more willing to become involved in planning for the future of the institution.

Each employee at the institution must understand and apply quality principles (see paragraph 2.3.3) in their work. The training programme of an institution has become a growing responsibility of the quality function. Presenting quality training throughout an institution forms part of the total quality improvement process that is to be implemented by management. It is the leading edge of the total process as it provides communication and direction for everyone at the institution. Moreover, it is responsive to the quality strategy that states, "Quality is everyone's responsibility". Therefore, most appropriately, it is the expanding role of the quality function (Mathews *et al.* 2001:484-485).

Training and education provide the necessary skills and knowledge – the ability to make it happen. It is an investment that needs to be made. According to Eng & Yusof (2003:65), worker satisfaction, motivation and ability to act as a constructive part in the process of continuous improvement depend largely on education and training. In the past quality training was limited to the quality control or quality assurance people who worked daily in the staff or line quality function. The limitations of this narrow focus have been recognized in the renaissance of quality as a vital institutional issue. Quality should become part of the overall quality emphasis process in an institution. The training plan should be developed and applied with the following features: management training and participation, building quality training, use of outside assistance and internal direction (Bigelow 2002:75).

In the TQM environment everyone is required to gain additional capabilities to improve the process. Hence, a comprehensive training programme is necessary and must be institutionalised within the entire institution. Training in respect of the TQM philosophy, guiding principles and tools and techniques is never ending (Claver *et al.* 2003:101). Personal and team interaction skills must be refined continually. Training in this regard should be given, only as required, to the people who will use it immediately. It should start with specific training for management. Once management has the skills to lead the TQM process, the rest of the institution should be trained to ensure a systematic, integrated, consistent institution-wide effort (Eng & Yusof 2003:65). Specific job skills training must be provided and constantly updated to reflect the improved process. All training should be geared to specific, clearly defined objectives, must be performed as

close as possible to the time it is required and be reinforced to ensure the desired results.

In order for an institution to succeed with TQM implementation, people and work processes must be improved through training. According to Capezio & Morehouse (1993:141) "today's preparation determines tomorrow's achievement". The real success of TQM rests in an institution's ability to integrate people with technology – processes, systems and equipment. The training and development of employees should focus on the tools and skills necessary to create a competitive advantage in employees. According to Evans & Dean (2003:274) training should cascade down the organisation. Training and implementation should be integrated, using real situations, real problems and real improvement opportunities as case studies. The development of a culture and practices for institution wide, customer-focused performance improvement involves all employees, as all, including top management, will require training in the concepts and processes of TQM. Experience has shown that a successful TQM training strategy should have the following objectives (Bigelow 2002:79; Mathews *et al.* 2001:484; Oakland & Oakland 2001:783), namely:

- All members of the institution should be trained.
- Training should be based on the work actually performed by the employees involved and follow the format: (1) concepts, (2) case studies and (3) application to own job.
- Managers should lead the training of their work groups and be responsible for their effectiveness, following the learn-use-lead-support principle.
- Training should be cascaded down from the top of the institution, thus enabling senior managers to provide role model leadership and example to lower levels in the application of the TQM concepts and processes.

Training in technical, administrative, problem solving, quality management, productivity improvement and interpersonal skills is necessary to varying degrees across teams and institutional levels. Awareness training should cover topics such as: (1) the institution's mission statement, (2) structure and functions of teams, (3) the relationships between teams and ongoing quality and productivity programmes, (4) reasons for the shift to teams, (5) the transition to teams, (6) new roles and

responsibilities, (7) team member selection, (8) pilot projects, (9) compensation and reward structures, (10) team scope, and (11) job security (Weaver, 1993:65). Consultants should be contracted to provide a substantial portion of the training. While lacking in institution-specific experience, they bring a wealth of information and experience from their work in other institutions. Further, they are often more believable and competent teachers than insiders.

Top performing institutions such as Motorola, Corning, Federal Express and Solectron, treat their employees as assets to be developed, not commodities to be used, spending an average of 110 training hours per annum – all during working hours. They invest in their people through training because they must; their expectations of their employees are too high, their demands too great, to send them forward unarmed. Here are just a few of the things these four high-performance institutions are asking their employees to do (Claver *et al.* 2003:101,118; George & Weimerskirch 1998:97), namely:

- Contribute to work unit, department and cross-functional teams.
- Solve process problems in all parts of the institution.
- Communicate with customers and suppliers, both internal and external.
- Measure and analyse indicators of performance and improvement.
- Learn a wide range of skills to improve flexibility.
- Take the initiative in identifying and addressing improvements.
- Assume responsibility for quality and productivity.

These tasks require a host of advanced skills in such areas as teamwork, problem solving, communication, process management and leadership. For these reasons the institutions wanted to improve quality through quality-training programmes.

Training and education is an ongoing process in teams that facilitate continuous quality improvement in any institution. Leaders involved in the TQM implementation should identify the educational needs of the institution and be creative in meeting those needs efficiently and cost-effectively. Training and education according to Masters (1996:53) should be both formal and informal. One health care institution, for example, used a leading consulting group to train its vice presidents to be trainers for the rest of the institution. This process demonstrates management's commitment to TQM and

ensures the principles of teams are consistently taught to all employees. The vice presidents also continually learn the principles of teams as they teach them. Informal training could include circulating articles on “the purpose of teamwork in TQM” or displaying information about “teams in TQM” on institutional bulletin boards (Nwabueze 2001:670-671).

According to Johnson (1993b:154), there is no standard training programme for TQM as each institution is different with unique requirements. Most institutions will have adequate resources to begin the programme using their present in-house assets. The challenge is to marshal those assets to produce a productive quality-training programme. These will provide virtually all of the background information required to get a training programme up and running.

Training for management and those in leadership positions should begin with an overview of successful TQM and the process for programme implementation. In his book *Out of Crisis*, Deming emphasises the need for leadership and training from the beginning. Among the topics covered should be leadership styles, participative leadership, visioning, selling you and your ideas, and effective communications, i.e. positive negotiation skills and influence skills. Other important sessions should include initiating change, building teams, correct rewards and recognition efforts, various human relation topics, and leadership strategies for TQM implementation. Customer service should be a subject taught in the early stages. Leaders must become familiar with the technical aspects of the work produced in their area. This is extremely important to successfully lead people (Oakland & Oakland 2001:785).

Cross training is extremely productive. It produces well-rounded employees who can fill in for others during personnel absences. It also provides for a pool of trained people to cover rush orders and other like requirements. Perhaps the biggest benefits come from people learning how their products or services affect other employees and the challenges other employees face in their jobs. Many great ideas for performance improvements came out of cross-training sessions. Outside trainers and consultants are available to fill virtually every quality requirement. It is important to choose the source of outside training carefully. It should be tailored to the needs of the institution and use the institution’s material, where possible. This makes outside training a part of

the institution's training and quality team, and it makes the training more acceptable to employees.

Training should be spread over time. Most sessions should be one to four hours in length. Taking small steps at close intervals keep enthusiasm high and allow the material to be assimilated into work processes more easily. The material will become habit only if it is used on the job soon after the training sessions. Unused training is a waste of resources and can be a demotivator since people invested their time in training that had no payoff. Paced training also keeps minimal negative impact on current production and service delivery.

Kanji (1995:104) states that training within an institution is necessary to implement the concept of total quality in such a way that it will be to the financial advantage of the institution. Training should assist in forming a culture in which all activities of an institution are focussed on the needs of its customers. Future and current managers should receive training in the management of institution culture. Managers should not try to establish foreign cultural values, as a change in culture implies a change in set values, norms and beliefs. The more foreign the culture, the bigger the probability that implementation will fail. Institutions should rather build up an institution culture with time by selecting cultural values and strengthen those that are in line with the desired objectives of the institution. According to Eng & Yusof (2003:65), management itself should present all culture changing training. In this way it can be ensured that subordinates are aware of management's commitment and involvement that integrity is lined to cultural values and that open communication is enhanced. Through training management can establish a culture of trust that can make an important contribution to productivity improvement and employee commitment. Trust is a cornerstone of institutions and is regarded as the basis for success. Institutions should not duplicate other culture forming training programmes, but should utilise their own curriculum, resources and structures in pursuance of the objectives and policy of the institution. Courses have added value if managers mutually share the same values and objectives.

To successfully implement TQM activities at an institution, executives must be trained effectively to implement TQM. The third supportive dimension (see figure 3.1 and table

3.3) that influences the success of a TQM effort is culture forming. As can be derived from figure 3.2, culture forming is involved in all six primary dimensions.

#### **5.4 CULTURE FORMING**

Kanji (2001:271) states that culture forming is a critical success factor to implement TQM. Every institution, whether small or large, new or old, has a particular culture, determined by the individual values and experiences that each person brings to it, the way in which its people act and interact, and the footprints they leave behind. A unique culture will be apparent in any ongoing institution (Flanagan & Finger 1998:305). The management of people to achieve total quality within an institution, as became clear whilst studying the previously discussed dimensions, eventually has to do with creating a specific climate, or more specifically, culture. If the culture is positive, it enables the implementation of new management strategies or philosophies as well as the smooth functioning of the institution (Claver *et al.* 2001:469).

Wilton & Reavill (1995:105) state that the culture of an institution is influenced by various factors, such as the size, geographical location and type of industry, as well as industrial psychological aspects, such as leadership, training, recognition, the commitment of employees and their attitude. According to Wilton & Reavill (1995:105), the absence of culture in an institution is one of the main reasons why transformation to TQM fails. An institution's culture is based on the institution's mission, vision, values and its requirements for success, namely high quality, reliability, customer service, innovation, hard work and loyalty (Mellahi & Eyuboglu 2001:747; Pun 2001:328). Changing people's beliefs and attitudes is mainly obtained by means of experience, observation, interaction, participation and persuasive communication.

Culture is a primary determinant of the institutional environment. Before embarking on a quality revolution, an institution must determine whether its culture offers an environment that is conducive to total quality. If not, the culture must be changed. Institutional culture is a key means to communicate the goals of the institution and the appropriate behaviour in attaining those goals. According to Claver *et al.* (2001:470), the cultural dimension is to create commitment to TQM. Changing the culture within an institution is one of the dimensions required to move an institution from a hierarchical,

traditional institution to an empowered institution (Mellahi & Eyuboglu 2001:747). The beliefs, behaviours, norms, dominant values, rules and climate in the institution form the culture of the institution. Any institution needs a vision framework, comprising its guiding philosophy, core values and beliefs, purpose and mission. The effectiveness of an institution depends on the extent to which people perform their roles and move towards the common goals and objectives. TQM is concerned with moving the focus of control from the outside to the inside of individuals, so that everyone is accountable for his or her own performance (Oakland 1995:32). Everyone who adopted the new institutional culture of TQM must assume ownership of their processes and the quality of their deliverables. To really understand what is meant by the culture of an institution, it is important to clearly define the concept.

Johnson (1993b:37) defines culture as "... a personality that defines the way business is conducted internally and externally. The culture in each organisation tends to have distinctive properties that make it different from other organisations such as (1) top-down leadership, (2) vision, (3) customer focus, (4) employee well-being, (5) performance management system, (6) reward system, (7) communication system, (8) roles and relationships, (9) structure and (10) teamwork." Pun (2001:328) notes that institutional culture consists of the key values, traditions, norms, habits or symbols and beliefs that are shared by institutional members. According to Links (2002:51), culture has two distinct elements. One is the level of structural stability in the group, which relates to its deep, sub-conscious and intangible composition. The other is integration that ties together various elements into a larger paradigm. Culture implies that rituals, climate, values and behaviour bind together a coherent whole. Links (2002:51) continues and states that the most useful way to think about culture is to view it as the accumulated shared learning of a given group that covers behavioural, emotional and cognitive elements of the group's psychological functioning. He offers the following definition of group culture: "A pattern of shared basic assumptions that the group learned as it solved its problems of external adaptation and internal integration, that has worked well enough to be considered valid and, therefore, to be taught to new members as the correct way to perceive, think and feel in relation to those problems." According to Stahl (1995:279) and Schein (1992:10), culture operates at three levels, namely:

- Visible artefacts - The observable part of culture in all institutions consists of the artefacts and the behaviour of its members, including things such as signs, symbols, stories, slogans, heroes, ceremonies and products of culture that signify the institutional values. Artefacts are easily observed but difficult to decipher.
- Espoused values - These are harder to determine or observe and can sometimes only be inferred through public statements and speeches by key members of the institution. They represent the manifested or espoused values of a culture and as such only reflect expressions of what 'ought to be', and not what actually happens.
- Basic assumptions - Some values do lead to changes in behaviour, as they become solutions to problems, seem to work continuously and become underlying basic assumptions of how things really are or work. As they are used more often and by more and more people, they tend to be non-debatable and embedded in the institution's culture.

From the above, institutional culture can be defined as the integrated pattern of human behaviour peculiar to a specific institution that came into being as a result of the institution's survival process and interaction with its environment. The culture directs the institution to achieve objectives. All existing and newly appointed employees should be made aware of behaviour that is regarded as the best way of action. The most important elements of institutional culture are the following (Claver *et al.* 2001:471; Kreiner & Kinicki 1998:62; Martins 1989:45; Nwabueze 2001:670), namely:

- It provides employees with an institutional identity and a feeling of common vision and direction that serves as guideline for decision-making and behaviour.
- It gives employees a feeling of purposefulness and empowers them to achieve common objectives.
- It grows or develops through the example set by top management – that is what top management does and not what they say.
- It provides employees with guidelines on how to work together and facilitates a collective commitment.
- It is a product of the interaction between employees in the process of adapting to their environment.
- It is acquired behaviour that develops through new experiences, that is specific patterns of behaviour and patterns of organising.

- An established culture makes people feel better about what they are doing. It therefore results in them working harder.
- Subcultures can develop in subdivisions of institutions that develop their own group or subgroup culture.
- Culture is acquired by the individual in-group context and is only found in a definable group with a proven history.
- In the long term institutional culture serves as a basis for success at the institution.
- Once culture has been established, there is considerable resistance to attempts to change it.

Researchers such as Oakland (2000:197) also broadly define the internal environment of an institution as culture. According to Oakland, an institution's culture forms the basis of its mission, vision, values, goals, strategy, the structure of the institution, the choice and utilisation of resources and technology, the manpower strategy with due consideration of training, recognition system, communication systems between employees and management and employees amongst themselves and satisfying the needs and objectives of employees/customers – summarised, the effective and successful functioning of the institution as a whole. It therefore follows logically that a thorough understanding of an institution's culture serves as an important point of departure for understanding the internal environment of the institution.

According to Martins (1989:45), establishing a quality culture at any institution means getting people to change the way they think and behave. People's behaviour, or the choices that they make, are influenced by at least three dimensions, that is knowledge (based on rationality), aesthetics (based on emotion) and culture/ethics (based on values) (McAdam 1995:28). Quality is therefore linked to a chain of dimensions. It is linked to people's actions, to their behaviour and finally to their underlying values or views of the world, in other words, the totality of their culture. TQM involves a cultural change requiring significant change in behaviour. If you want to change people's behaviour, you have to involve them in the process in order for such change to be lasting. It therefore requires a participative environment with open communication lines and trust between management and the workforce.

### 5.4.1 Reasons for cultural change

Institutional culture continuously proves to be of importance as it is one of the factors that determine the institution's strategy and driving power with regard to the implementation of strategy. Culture is the product of complex influences from both internal and external environments. Culture is therefore not easily adaptable in the short term – a fact that top management should bear in mind during strategy analysis and choices. It is therefore essential for top management to analyse the institutional culture and to identify those factors that have the biggest influence on the culture of an institution, so that, just as in the case of strategy, culture can be developed in the right direction in course of time. It requires much insight, time, resources and the right attitude by top management (Nwabueze 2001:664).

The culture at an institution should support the strategy of total quality and enable the successful implementation thereof. Strategy and culture are therefore closely linked to one another and both have an important influence on the survival of institutions. Culture forms the “soft” component of strategy activation, as it is subjective in nature and cannot be observed, measured or evaluated easily. Culture is also important to the individual employee as the institution forms the social value system in which the individual pursues the achievement of his or her personal objectives (Kreiner & Kinicki 1998:63,70). Therefore, establishing a culture should already be considered during the mission statement phase. Organisation structure, policy and resources, on the other hand, are regarded as the “hard” components of strategy activation.

Adaptations in the culture of an institution take a long time and require special attention from top management who has to accommodate it as part of strategic management. Claver *et al.* (2001:470) indicates that cultural change commences with diagnosing the prevailing culture of the institution and adapting this culture to current or proposed strategy. As there is a close relationship between the culture and strategy of an institution, changes in strategy require supportive changes in institutional culture and systems. Although there is no correct culture for an institution, it is still important that bigger and more fundamental areas of ethics and social responsibility are built into the culture of the institution.

According to Johnson (1993b:39) and Nwabueze (2001:664), certain conditions are essential for a successful change in culture, namely:

- Top management's commitment to the TQM programme, as well as their visible involvement, is important.
- Leaders must exhibit the new desired behaviour and their general behaviour should be in accordance with slogans based on their vision, mission and values.
- Clear objectives should be formulated – these should include objectives with regard to performance, programming and cultural expectations.
- Change should be regarded as a process to build skills, of which training forms an important component. The change process should take place simultaneously in all subsystems in the institution.
- A compensation or recognition system should be linked to the desired behaviour or actions.
- Sufficient time should be allocated to ensure the success of the project.
- The programme should be result-orientated.

As TQM has to be incorporated in the management philosophy of an institution, the implementation of TQM is a strategic decision with long-term objectives and implications. If the mission and philosophy of the institution support employee participation, total quality has a good chance to survive. It is essential that a thorough study be made to determine whether the institution is ready for the implementation of TQM as it can have a major impact on the culture of an institution.

#### **5.4.2 The role of top management**

According to Martins (1989:78): "Quality improvement depends on people changing." The reason for this need of a different approach is that people are the factor having the largest influence on quality, both within the created and the creating system. People, through the ways in which they think and act, i.e. their behaviour, create quality. TQM is therefore directed at changing people's behaviour towards being quality sensitive and this applies to both workers and management. Instead of an elite group of executives running an institution, all institutional employees need to be involved to transform to TQM. Institutions that do not use the talents of all the employees,

combined with the new techniques, will begin to falter and eventually fail in today's highly competitive marketplace. To implement TQM a new culture must be established at the institution (Nwabueze 2001:664). The new culture that must be developed should promote and support TQM and it should allow an institution to survive new challenges. Success with TQM will depend on the following: (1) achieving customer satisfaction, both internally and externally, (2) creating and sustaining cultural change, (3) achieving the goals of the institution through Business Success Factors, and (4) continuously improving performance measurements.

Top management should understand why cultural change is necessary at the institution (Bowden 2000:638). Transformation is a process of change in terms of which institutions adapt to changing national and regional or local conditions in order to survive and to remain relevant, to make qualitative improvements and to develop a competitive edge. Leaders must lead the pro-active change to TQM to overcome fear of change. Change to TQM demands stamina, a spirit of entrepreneurship, endless patience, continuous communication, encouragement and recognition of those who achieve successes along the line. It is a process that is exciting as well as dangerous. According to Perigod (1990:56), change demands that you take your staff, the community, customers and shareholders with you, especially in a time of crisis. With transformation to TQM each person enters the process with his or her own agenda, which is why transformation usually starts off in a number of directions. If all parties to the process can agree to and develop that vision of change, it eliminates much of the tension during the process.

According to Miller (2001:54), the reason for gaining the commitment of top management to implement the TQM programme is that management has the responsibility to help employees through all the different stages of TQM. Leadership is the heart and soul of change. Change will not occur without leadership. Just as soldiers on the battlefield may be overcome by their fears without the strength and conviction of leaders, employees participating in change may be overcome by their fears without the strength and conviction of their leaders. Throughout the process it will be helpful if leaders and change agents share information with all of the employees. This indicates they are taking the concern of employees into consideration. Top managers are the system's gatekeepers. If, and only if, they open the gates to change

to the new TQM programme, will the transition begin. According to George & Weimerskirch (1998:211), the leaders of world-class institutions not only open the gates, they lead the transformation, putting their minds, hearts and souls into the new management programme, namely TQM. The journey towards a TQM culture requires the motivation and creativity of all top managers in the beginning to lead the TQM programme to implementation (Bowden 2000:638). TQM also requires that top management be empowered and encouraged to take ownership of their output, to measure their own performance and to prioritise, develop and implement improvements. This change in management style is vital to the growth of the institution.

Dale (1994:25) states that cultural change should be planned and should occur in a consistent and incremental manner, since experience indicates that if the change is too great and unplanned, the institution will revert back to the status quo. Dale (1994:25) divides corporate culture into two behavioural dimensions, namely:

- institutional culture (as evidenced by group behaviour), and
- management culture (as evidenced by individual behaviour).

The reason for this split (two behavioural dimensions), as motivated by Dale, is that executive or top management culture (behaviour) heavily influences the institution culture (behaviour) and that: "The key to implementing culture change lies in management's behaviour. Instead of concentrating on the institution's culture, management should focus on educating and changing its own 'undesirable'."

As the environment changes, institutional cultures must change. Yet, many institutional cultures require several years to change and then do so only with much effort. Frequently it takes a survival crisis to energize an institution to change its culture from one set of values to another set of values. There are several processes at work to keep corporate cultures stable and resistant to change. In the sequence of institutional change, the first thing managers must change is people's behaviour. Then there must be cultural justifications for the behaviour. New rituals, new stories and new heroes are needed to justify the new behaviours. These new cultural artefacts, stories, symbols and rituals need to be widely and consistently communicated (Stahl 1995:293).

By virtue of the supportive dimensions, culture forming plays a key role in the TQM effort. To successfully implement TQM activities at an institution, executives have to manage culture forming effectively. The fourth supportive dimension (see figure 3.1 and table 3.3) that influences the success of a TQM effort is change management. As can be derived from figure 3.2, change management is involved in all six primary dimensions.

## **5.5 CHANGE MANAGEMENT**

“Change involves the crystallisation of new possibilities (new policies, new behaviours, new patterns, new methodologies, new products or new market ideas) based on the reconceptualised patterns in the institution. The architecture of change involves the design and construction of new patterns, or the reconceptualization of old ones, to make new, and hopefully more productive actions possible” Kanter (1982:279).

In their pursuance of objective achievement, institutions sometimes find it necessary to bring about certain changes to their work activities. These changes cover a wide area, such as changes to the procedures of the institution, changes to the structure, changes to rules and regulations, changes in technology, changes to training and changes in customer needs for service rendering (Kanji & Moura 2003:272; Lycke 2003:206). Should an institution accept a new strategy or philosophy, such as for example TQM, it is desirable that it occurs by means of involving all personnel members. Changing over to a new strategy or philosophy forms an integral part of the institution’s culture. Each institution has a philosophy, even if the philosophy is unclear to its employees. The philosophy of the institution includes aspects such as traditions, values, beliefs, motives and objectives. The focus of TQM is to improve performance at the institution and to ensure an effective commitment to the strategy. The TQM management philosophy has an impact on the whole system of the institution and culminates in the fundamental redefining of what the institution stands for. It changes the basic framework of the institution, including strategy, structure, people, processes and core values.

The term “change” is rather elusive, difficult to describe with accuracy, difficult to pin down. Kanter (1992:279) notes that institutional theorists have produced much more

work, and of greater depth and intellectual sophistication, on the recalcitrance of institutions and their people to change – how and why they resist change - than on the process of change itself. She speculates that it is precisely because “change” is so elusive that researchers concentrate on the former.

The world according to Lycke (2003:206) has changed and it will continue to change at an accelerating rate. Many TQM programmes fail because managers and employees have not become convinced that *change* is essential, which is the most important reality today. Lacking motivation to change is one of the biggest barriers to transform to TQM. For some institutions too many change efforts place a disproportionate amount of effort on creating a new management philosophy and insufficient time is spent on developing readiness to change.

It is a reality according to Dervitsiotis (2003a:261) that institutions make many types of changes all the time. Change can be (1) developmental – the fine-tuning of an existing institutional process, (2) transitional – where the institution evolves slowly through reinstitutions, mergers, or the introduction of new processes or technologies, or (3) transformational, where the institution completely rethinks its mission, culture, activities and critical elements of success. Therefore, it is imperative to determine the kind, depth and complexity of the necessary change before beginning the process. For many institutions, instituting TQM programmes involves transitional change as taking the steps necessary to initiate TQM programmes occurs incrementally (Rao *et al.* 1996:427).

Corporate and unit executives in the leading institutions studied by Dervitsiotis (2003a:264), prepared the institution for change by helping people understand the institutional context in which the change must be made. Sharing information about the competitive environment, for example, competitive cost and quality, was the most frequently used method. Management now routinely shares information that just a few years ago was thought to be too confidential to share with customers, employees and shareholders. However, communication alone about the reality of change is not sufficient. It must be translated into clearly understood goals. These goals must be demanding by developing very stringent specifications for its primary products or service delivery. Leaders according to Dervitsiotis (2003a:258) must uplift the energy

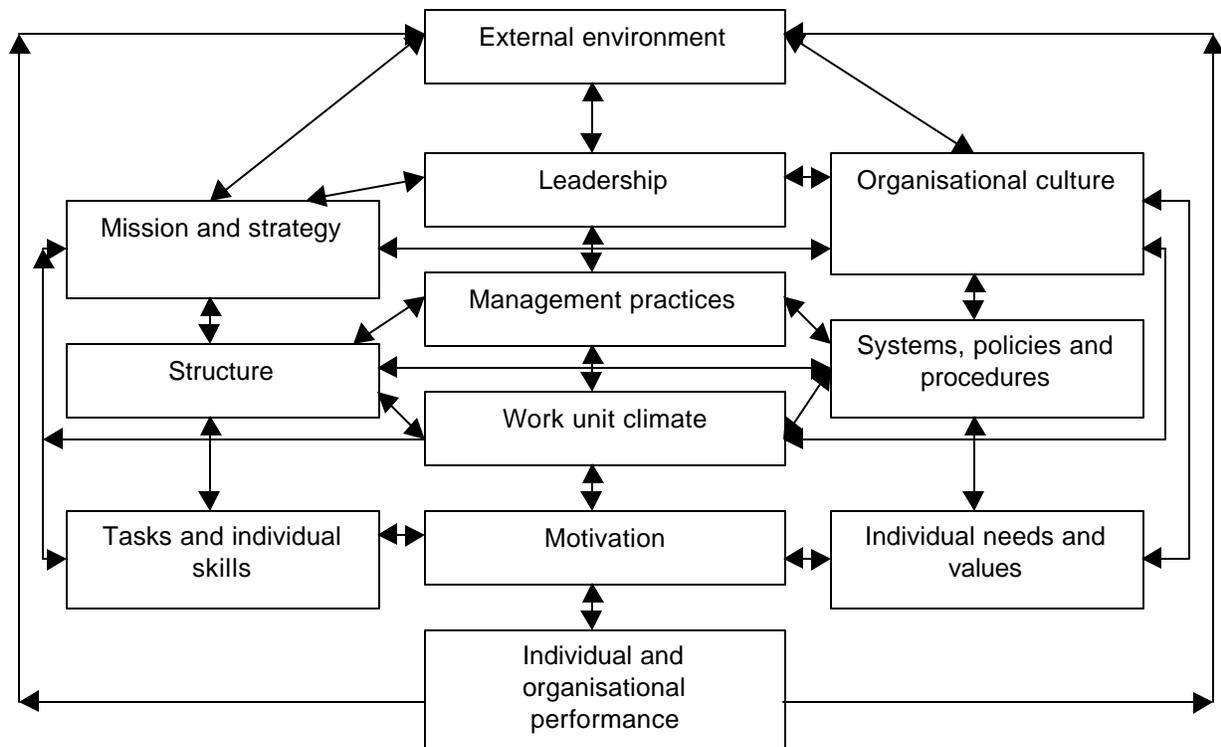
level of the institution to change, by developing strategic plans for institutional and technological change.

Top management's role is to encourage and orchestrate this change process Dervitsiotis (2003a:258). But what does each institutional unit have to do to move change along? Firstly, the most successful institutions used a participative management process by empowering employees. Secondly, institutions that change the roles, responsibilities and relationships of managers and workers in performing the task succeed in changing. Those that concentrate on attitude change and knowledge change only fail. In other words, the structure of the institution must change first to a *supporting structure* (see paragraph 5.6). Changes in roles and responsibilities demand new behaviours. This demand energizes people to attempt new approaches and is followed by behavioural learning. Once engaged in new approaches to managing, people begin to change their attitudes and demonstrate an interest in learning more about the new way. Successful institutional change can only occur if the manager in charge *leads by example* (Mellahi & Eyuboglu 2001:750). Without that example, people doubt the sincerity of management's espoused goals and philosophy. This means that management must be willing to examine their own behaviour and they must be capable of personal change themselves. Leaders must create a context for change, articulate a change vision, and demand that managers develop plans for institutional cultural change of their own design (Addey 2001:851). Leaders must pull change through by creating an atmosphere for institutional innovations. Effective leaders are aware that they need partners in managing change. They should cultivate the support of customers, employees and stakeholders. They should effectively utilize the human resource function as well as outside consultants and ensure that these groups network with each other; that they meet periodically to discuss progress, assess barriers to change, and develop new responses. Change is, however, not top-down, nor is it bottom-up. It is both. Institutions that want to change their culture to TQM will have to learn to manage such a long-term process. The quick fix will not work (Kanji & Moura 2003:272).

### 5.5.1 Change models

According to Shinn (2001:46), there are two change models that can lead to effective change management. The first model is the Burke-Litwin Institutional Performance Model (see figure 5.1) and Change Process Model (see figure 5.2).

Figure 5.1: Burke-Litwin Organisational Performance Model

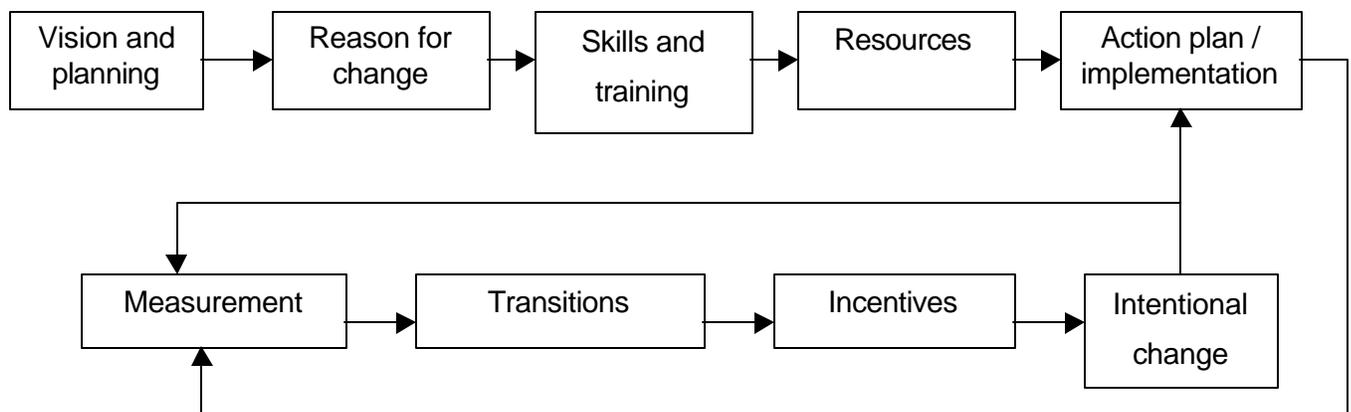


Source: Shinn (2001:48)

The Burke-Litwin Model shows the 12 critical variables involved in performance and change. The top four variables - external environments, leadership, mission and strategy, and institutional culture - are called transformational variables because they relate to the values and beliefs underlying an institution and any alteration of them will require new behaviours. The remaining eight variables are called the transactional variables because they describe the day-to-day interactions and exchanges in an institution (Shinn 2001:46).

The important thing of the Burke-Litwin Model is that it identifies executive leadership, through its position in the hierarchy of variables, as having a profound impact on the culture and management practices of an institution. Without a basic understanding of the relationships between the 12 variables, change looks like a trap shooter standing on a moving platform aiming at moving targets that are travelling in seemingly random directions. The trap shooter is the change agent while the moving platform is the institution undergoing change. The moving targets are the 12 variables. Understanding the interrelationships of a dynamic institution helps demystify some of the randomness and unpredictability of the change process. The second model is a change model (see figure 5.2), which is an adopted and expanded version of an earlier model developed by the University Health System Consortium in the USA.

Figure 5.2: Change Process Model



Source: Shinn (2001:49)

The model is sequentially structured as a tool to facilitate an understanding of the variables required in a change initiative. Being sequential, this model also suggests that earlier variables are prerequisites for those variables that follow. The change process model contains four *baseline elements* and eight *change variables* leading to intentional change. The baseline elements are credibility, commitment, communication and condition. The eight *change variables* are vision and planning, reason for change, skills and training, resources, action plan/implementation, measurement, transitions and incentives. The four *baseline elements* leading to intentional change are explored, namely:

- Baseline 1, credibility – According to Kouzes and Posner (quoted by Shinn, 2001:49), credibility is the foundation of leadership. Credibility comes from the shared vision, competence and integrity of the leader. When a leader possesses credibility, he or she may exercise the five leadership activities: challenge the existing order, inspire others, model the expected behaviour, enable and encourage others. Without strong leadership there is little change.
- Baseline 2, commitment – Commitment is the element most lacking in leaders according to change agents. Joseph M. Juran essentially says this is a “non-delegable responsibility” (Shinn 2001:48). It is primarily a top management responsibility and secondarily a middle management responsibility. Commitment means being active and visible with change; in other words “walking the talk.” It means modelling the behaviour and providing the resources when and where they are needed. It also means rewarding success, supporting change activities and participants, and using change setbacks as lessons learned.
- Baseline 3, communication – A particularly effective form of communication is empathetic listening, whereby the listener tries to see the world from the perspective of the speaker and vice versa. Communication can be formal or informal. Formal systems are management information systems, publications, meetings and memos. Informal systems are the rumour mill and informal conversations.
- Baseline 4, condition – The condition can be examined, by returning to the Burke-Litwin Model and asking, what is the condition of each of the 12 variables, especially the top four transformational variables? Assessing each variable objectively will provide valuable insight into the institution’s readiness for change. If change is the movement from an existing state or condition to a future state or condition, the existing condition prior to embarking upon a new or future one should be assessed.

The *change variables* leading to intentional change are explored (refer to figure 5.2), namely:

- Variable 1, vision and planning – For an institution to implement effective change, it must know the direction it is heading. Vision and planning include the institution's mission statement, policy strategies, action plans and values statement. Knowing the goal and the means to accomplish it will help managers provide necessary directions and set employee expectations.
- Variable 2, reason for change – Having a clear reason for change is necessary because most employees struggle with change as it upsets the existing condition. Change causes an imbalance in an institution, which wants to right itself into a balanced condition. During this period of imbalance, there is often confusion and insecurity among the employees. Providing a sense of alignment and urgency helps prepare employees for this period of uncertainty and insecurity. Variables 1 and 2 are sometimes reversed because the reason for change (variable 2) may require a change in the vision and planning (variable 1).
- Variable 3, skills and training – Skills and training do not happen on their own, but both are necessary for the effective and efficient use of resources. Change requires the skilful use of quality management tools and training. In most cases change impacts more than one person, so change is usually associated with teams. Change is collaborative. Training is often necessary because there is a lack of skills among the employees regarding the change initiative. Take an institution that wants to become certified to a quality management standard, for example. The institution may have employees with great skill, knowledge and expertise within their industry but who are unaware of the specific standard required in a specific situation and how to implement it. Training is needed here.
- Variable 4, resources – Resources can be human, financial or other. Human resources are employees, managers, technical experts, consultants and so forth. Financial resources include budgets with identified expense and revenue streams. Other resources include information, access, materials, space and equipment. Resources must be available when and where they are needed.

- Variable 5, action plan/implementation – The action plan answers the questions of who, what, where, when, why and how change will take place. Effective implementation requires effective project management.
- Variable 6, measurement – Measurement through surveys is the means of verifying that the proposed change is occurring in some form (Swaffin-Smith, Barnes & Townsend 2002:856). If change is going as planned, no corrective action is needed. If not, then a diagnostic journey is needed to remedy an out of control condition. Taking measurements is a visible and objective means of demonstrating the reliability and validity of an outcome or change in terms of its goal.
- Variable 7, transitions – There is three periods associated with change, namely endings, neutral zone and beginnings. The endings are what employees are leaving behind, the current condition. The neutral zone is the period of uncertainty and insecurity between what is left behind and what is to come. The beginning period is the change as it is embraced and incorporated into daily work activity.
- Variable 8, incentives – Incentives are defined as basic compensation, benefits, promotional opportunities, publicity, peer recognition and minor tokens of appreciation, such as movie tickets and free meals. They are the institution's way of saying "thank you" for a job well done.

By virtue of the supportive dimensions, change management plays a key role in the TQM effort. To successfully implement TQM activities at an institution, top management have to manage change effectively. The fifth supportive dimension (see figure 3.1 and table 3.3) that influences the success of a TQM effort is support structures, systems and resources. As can be derived from figure 3.2, support structures, systems and resources are involved in all six primary dimensions.

## **5.6 SUPPORT STRUCTURES, SYSTEMS AND RESOURCES**

The sustenance of TQM is dependent on the creation of (1) support structures, (2) support systems and (3) is the process of linking the institution's resources to its demands. Each of these three activities will subsequently be discussed in more detail.

### 5.6.1 Support structures

The sustenance of TQM is dependent on the creation of support structures (Ghobadian *et al.* 1998:153). Support structures, which include the design of an institutional structure as a key dimension, should be considered in institutional improvement focus (Billich & Neto 2000:11). Attention to how an institutional structure supports or negates quality improvement efforts is urgently required. The primary purpose of an institution is to accomplish goals, preferably customer-relevant goals. Institutional design as a support structure is necessary to describe the requisite components for TQM institutions to achieve customer-relevant goals.

Determining appropriate institutional support structures is a constant challenge for managers (Rao *et al.* 1996:470). According to Stahl (1995:208), a structure can be defined as the design of the institution. The design has two aspects, which includes, first, the lines of authority and communication between departments, and, secondly, the information and data that flow through these lines of communication and authority. A support structure nowadays is necessary to adapt to environments that rapidly change. To be effective, institutions have to be designed with a balance between their need for different functional specialties and the requirements for coordination. Sometimes an institutional structure is out of touch with the needs of the customer.

Institutions should adapt many ways to prevent this and should increase integration and coordination across functions to support the TQM transformation. Methods for increasing integration include physical co-location (locating several functions in the same facility), interdepartmental rotation (assigning individuals jobs so they can gain experience in several departments) and use of information technology. According to Rao *et al.* (1996:471), the challenge to institutions is to eliminate bureaucracy. Control systems, hierarchy, integrating roles and structures (notably matrix institutions) need to give way to an institution designed around information flows with loose, flexible structures, and networks of employees who are knowledgeable and creative and able to serve the customers' needs.

Boundaries in institutions will always exist, but essentially the boundaries that matter in the new institutions of the 21<sup>st</sup> century include an authority boundary (who is in charge

of what), a task boundary (who does what), a political boundary (what is in it for the group), and an identity boundary (who is and isn't the institution). The institution that is flexible enough to develop these boundaries and decrease others that block productivity can compete in the future. Institutions should use the concepts of boundarylessness (freedom to make own decisions) in their TQM processes. Boundary fewer institutions as a support structure to implement TQM keep people close to internal and external customers, so that they hear, see and feel customer/employee requirements. Practices that impede process improvement and promote wasted effort are decreased. Any process or action is viewed in terms of "adding value" to the institution as a whole, not to the unit or function of which it is part. According to Tichy and Devanna (quoted by Rao *et al.* 1990:471), these "boundaryless" institutions are able to bridge real differences in terms of cultural orientation and functional and institutional goals, in order to create shared goals and to find common ground that enables cooperative behaviour. This spirit of cooperation involves formally eliminating unnecessary work, as well as developing a culture of trust and empowerment. For example, General Electric Company's *workout* programme first eliminated unnecessary repetitive work so that more productive time could be spent eliminating institutional roadblocks to productivity.

The composition of the organisational structure must be such that it allows for cooperation contributing to employee empowerment (König 1995:52). If the organisational structure of the institution becomes stumbling blocks to participation, the structure should be renewed. Organisational structures should bear continuity in mind and avoid a feeling of indispensability. The structure should offer both management and employees the opportunity to establish mechanisms and channels to allow for decisions in partnership. The structure should be reconcilable with the dynamics and processes that employees and management use to render effective and efficient service. The structure should allow for liaison and information distribution so that employees are able to address problems and gain information for possible solutions. Management should create a climate that is supportive of nature and that encourages mutual support. Husain, Abdullah, Idris, & Sagir (2001:928) emphasises that an organisational culture should be such that employees are given the power to act on behalf of management. It therefore involves conveying the formal rights to act on someone else's behalf. A sound support infrastructure should also be created and the

required facilities be provided to employees to perform their duties with the minimum restrictions. The value of an organisational structure is measured against the results that it establishes as a management aid (De Swardt 1995:33).

An organisational structure is the most important coordinating instrument and entails much more than defining jobs and giving an indication of posts (compare the role of human relations and the institution as an organisation consisting of subsystems). It also includes the formal arrangement of roles and relationships between employees and command line employees, as well as the pattern of relationships, and forms the primary instrument through which coordination is obtained at the institution. Therefore, it becomes more important as institutions become more sophisticated. Many sources regard organisational structure as the most important aspect that has to receive the necessary attention during the formulation/implementation of institutional strategies. It must therefore be ensured that the organisational structure supports the strategy and the achievement of objectives.

## **5.6.2 Support systems**

### **5.6.2.1 Management Information Systems**

The Management Information System (MIS) as support system is sometimes taken for granted and its linking potential to support the TQM effort is often overlooked. An MIS is a set of computer hardware and software that gathers, organizes, summarizes and reports information for use by managers, customers and others. The design and operation of an MIS as a key system can be of value to customers and should be integral to TQM at the institution (Stahl 1995:444). Swift, Ross & Omachnu (1998:44) suggest the integration of MIS with strategic planning as a prerequisite for strategy formulation and implementation. In a strategic planning role the MIS is used to collect, summarize and disseminate information dealing with external changes and forecasted changes that may affect the future of the institution (Alazmi & Zairi 2003:200). In a competitive-weapon role the MIS is used to track competitors, their products and actions to help managers decide on competitive responses. In a customer-value role the MIS is used to provide customers with timely, accurate, reliable, and accessible information that has value for the customer (Van Riel, Semeijn, & Janssen 2003:438).

The information needs of both external and internal customers include accessibility, timeliness, accuracy, understandability and user friendliness, and security. Those managers who find new ways to provide these values to customers will gain new customers for their institutions. MIS's have had far-reaching effects in the workplace. As a cross-functional system in many institutions, an MIS can enable an institution to evolve to a flatter institution structure by providing decision support systems and expert system support (Naveh & Halevy 2000:89).

Information is a unique resource in an institution. The kind and quantity of information that is valuable to managers depend on their role and level in the institution. Information can tie together diverse parts of the institution, including multinational operations. The costs of poor information and of not providing customers with the information that they demand are usually far greater than the investment cost in a state-of-the-art MIS. There are several steps to be followed in the design and implementation of a new MIS. The first and most important is determining what value it provides to external customers and internal institutional members (Van Riel, Semeijn, & Janssen 2003:438). The designers of the system must tailor the required information to the various levels of management, determine the nature of the information, design the hardware and software, test the MIS, implement it, deal with resistance to change, and monitor, maintain and continuously improve the MIS as resource (Stahl 1995:467).

According to (Naveh & Halevy 2000:89; Stahl 1995:468), information technology can be a support resource to:

- link performance data to sub-processes and swiftly sending this information to the lowest levels in an institution; and
- use computer graphics to enhance the ease, accuracy and speed of making, analysing and introducing improvement ideas.

Ang, Davies & Finlay (2001:153) states that the use of technology to communicate information within and outside the institution can be used as a means of support and introduce more flexibility to the TQM process. Information software should be developed with flexibility in mind. Therefore programming should be designed to accommodate changes, alterations and improvements quickly, easily and cost-

effectively, while still ensuring quality information. Institutions should invest in flexible hardware configurations, which can be adapted to their changing information needs. Pasmore (1994:164) says that information design alternatives should emphasise flexibility in technology to allow for unforeseen changes in customer demands, industry developments and technological upgrades.

### **5.6.2.2 Document control**

Document control as support system, together with its support structure, supports an institution's TQM system by ensuring that information is approved, current and available. Viewing controlled documentation as an independent system consisting of inputs, process or activity transformation and outputs leads to a better understanding of its elements (Fine & Read 2000:65). Controlled documents cover all areas of institutions and follow guidelines to ensure that the information issued is appropriate, adequate, available and current. The benefit of document control is assurance that information is current, available to users, approved by authority, changed in a controlled manner, monitored for access and archived for legal and knowledge preservation.

Elements of a document control system will vary depending on quality system requirements. A system for documentation to support the TQM approach of an institution can be viewed as consisting of six elements (Fine & Read 2000:65), namely:

- The system starts with the identification of the need for documentation.
- This leads to considerations about matters such as compliance with appropriate regulatory standards, strategic and tactical goals and assessment findings and to subsequent decisions.
- Resources include people, training, documentation aids and equipment and management involvement. Effective communication and management commitment are essential for implementing and maintaining a document control system.
- These resources support the actions necessary to implement and maintain quality system documentation.
- Defined results are achieved when the implementation plan is completed.
- The system is periodically audited.

Business objectives, customer requirements and regulatory mandates are key factors in determining documentation requirements. A document that affects an entire institution is best controlled centrally. Examples are the corporate quality manual and institutional-wide policies. Although system-wide documentation is best controlled centrally, each functional area or department may recommend changes to the document originators. Documentation that concerns facility or division operations below the level of institutional-wide policies may be controlled locally. Departmental procedures and individual or composite work instructions can either be controlled centrally or distributed. Centralized control provides consistency of processes and economies of scale in managing documentation throughout the institution. A centralized documentation control system can support various institutional structures. Depending on the electronic media selected, institutions may find a centralized database easier to maintain. Documentation control allows quick changes in documents at work areas to keep pace with changes in process. Distributive control may foster employee awareness of policies and procedures and encourages employees to think of process improvements. Distributive control integrates documentation more closely with departmental work. Document control at the operating level fits well with attempts to deploy process responsibility to those who perform the work. Whether documentation is controlled centrally or distributed, there need to be a consistent approach established at all levels of the institution to support the TQM programme of an institution (Fine & Read 2000:65).

Another support system as discussed in chapter 2, paragraph 2.6 and 2.7 is the ISO 9000:2000 and Six Sigma, which must be in place to support TQM implementation.

### **5.6.2.3 Resource allocation**

To successfully implement TQM, institutions need resources to enhance quality improvement efforts. Top management of institutions must demonstrate commitment to TQM by the amount of resources that they provide for the TQM effort (such as manpower, budget and information technology). According to Van Schalkwyk (1990:370), resource allocation forms the trigger that enables the execution of an institution's strategy and is therefore closely linked to strategic planning and implementation mechanisms such as programmes, projects and schedules. Resources

can be physical, human and institutional assets (Husain *et al.* 2001:928). Funds are of primary importance as they are essential for obtaining other resources. The budget, as planning and control instrument, is therefore an important strategy implementation mechanism. The allocation of resources (especially if it is extensive) is always a risk, as the total task of TQM implementation occurs in an atmosphere of uncertainty. The establishment of a policy that can direct resource allocation and the application of procedures that can formalise the task and make it more controllable, will therefore promote TQM implementation.

To successfully implement TQM activities at an institution, top managers have to manage support structures and resources effectively. The sixth supportive dimension (see figure 3.1 and table 3.3) that influences the success of a TQM effort is the systems thinking approach. As can be derived from figure 3.2, systems thinking are involved in all six primary dimensions.

## **5.7 SYSTEMS THINKING**

Swift, Ross & Omachonu (1998:158) define a system as an entity composed of interdependent components that are integrated for achievement of an objective. The institution is a social system comprising a number of components such as marketing, production, finance and research. These institutional components are activities that may or may not be integrated, and they do not necessarily have objectives or operate toward achievement of an objective. George & Weimerskirch (1998:4) define systems thinking as "... a discipline for seeing wholes. It is a framework for seeing interrelationships rather than things, for seeing patterns of change rather than static snapshots." Van Zyl (2002:17) defines a system as a set of interrelated and interdependent parts that are arranged in a way that produces a unified whole. Something happening in one part of a system affects what happens throughout the system.

The TQM telescopic framework in chapter 3, figure 3.1 is nothing more than a discipline for viewing the entire institution, the interrelationships among employees and processes that determine success, and patterns of change that demand vigilance. In an increasingly competitive marketplace, an institution cannot survive in a system that

is out of control. It is out of control if an institution does not: (1) know exactly what its customers require, (2) have well-defined processes for translating those requirements into internal actions, (3) align all of their tasks and processes along common goals and objectives, (4) use key measures to manage continuous improvement, (5) involve everyone in continuous improvement, (6) understand and improve all the institution's critical processes, and (7) satisfy all the customers. Most people are not used to thinking about their institutions in this way (George & Weimerskirsh 1998:5). Thus, synergism, a necessary attribute of a well-organised system, may be lacking as each activity takes a parochial view or operates independently of the others. This lack of synergism cannot continue under the TQM approach to strategic management, as interdependency across functions and departments is a necessary precondition (Karapetrovic & Jonker 2003:455).

A system is simply a number of interdependent components that form a whole and work together with a view to attaining a common goal (Karapetrovic & Jonker 2003:455). A person, for example, is also a system (a biological system) (Dervitsiotis 2001:690). In the literature, a distinction is made between a closed and open system. A closed system is said to be self-sufficient entity. It is "closed" to the surrounding environment. In contrast, an open system requires certain input or stimuli from elsewhere, known in technical terms as the environment. A system is open if: (1) it is dependent on the environment in which it operates, (2) the environment depends on it, and (3) there is interaction between the system and the environment.

Inputs to the system are converted by institutional activities such as planning, organising and decision-making to an output. The system takes inputs from its environment (which represents a larger system), processes them, and returns them to the environment in another form as output. The most important characteristics of a system according to Nel *et al.* (2001:52) are:

- Energy intake – The first characteristic of an open system is that an institution as a system is dependent on the intake of energy to activate the functioning process. Energy includes resources and information. Energy intake may also be described as the input process.

- Throughput process – All open systems transform the energy at their disposal by means of some throughput system. This throughput process differs from one institution to the next, but it remains essential for the functioning of a system.
- Output process – Each open system has an output process for the very reason that it has an input process and a throughput process. Output may be regarded as the dependent variable in a system. Outputs usually take the form of finished products, services, and so on.
- A system as a cycle of events – The service released by means of the output process provides a source of energy for the repetition of the cycle of events. In a service delivery institution making use of resources to produce a service, monetary returns are used to procure more resources for a repetition of the process.
- Mutual dependence – The components of a system are dependent on one another. If a change should take place in one part of the system, this will influence all the other components of the system, either directly or indirectly.

Schein (quoted by Nel *et al.* 2001:53) expands on the above and defines an open system as follows, namely:

- An institution is an open system, which implies that it is continuously interacting with its environment. During this process it takes in resources, information and energy, which it transforms into products and services made available to the environment in the form of outputs.
- An institution is a system with multiple goals or functions, which implies that there are multiple interactions between an institution and its environment. Many of the activities of the sub-systems (see next point) will not be understood unless these multiple functions and interactions are taken into consideration.
- An institution consists of a number of sub-systems in a state of dynamic interaction for instance human resources as a functional sub-system. It is becoming increasingly important to analyse the behaviour (functioning) of these sub-systems when focussing on the concept of the institution, instead of describing individual behaviour.
- Change in one sub-system is followed by changes in other sub-systems, as the sub-systems in an institution are interdependent.

- An institution functions in a dynamic environment, which consists of other sub-systems differing in scope. The environment makes certain demands on an institution, which inhibit it in certain respects. Therefore, thorough investigation of environmental problems and restrictions is essential to understand the overall functioning of an institution.
- The multiple connections between an institution and its environment complicate the delimitation of the boundaries of an institution.

It is essential that institutions undertake environmental scanning to identify opportunities and threats in its external environment and to formulate its strategy accordingly. Even if an institution identifies its needs, it will not automatically be successful, unless the external infrastructure is such that it favours the satisfaction of needs (or goal achievement). According to Nel *et al.* (2001:53), there must be an optimal fit between the external environment and the internal components (internal components as the internal infrastructure that is used in the institution's transformation process to render desirable output) of the institution as a system. According to the systems approach, an institution strives for multiple objectives. The former refers to what institutions primarily pursue, i.e. customer satisfaction, return on investment and an increased market share, while non-tangible outputs generally refer to the quality of work-life of the institution's worker corps. This includes aspects such as morale, empowerment and job satisfaction (Dervitsiotis 2001:690).

For institutional success, management should set measurable objectives for those outputs, and the attainment thereof should be measured by a set performance standard. An institution will only be successful in the long term if the employees, customers and other stakeholders are consistently satisfied, such as by empowerment of employees and service and product reliability (Dervitsiotis 2001:695). The system approach demonstrates the necessity for an understanding of a system and its characteristics. An institution must be managed in accordance with the characteristics of the systems approach if it is to be successful (Taiwo 2001:968-969).

Van Zyl (2002:18) states that (1) an institution must be viewed as a system, as institutions are systems that employ various processes to convert input into output, (2) institutions as systems must adapt to feedback from both internal and external sources,

(3) work gets done (or fails to get done) horizontally or cross-functionally, not hierarchically. Systems thinking are a discipline for seeing wholes. The shift in thinking is as dramatic as the transition from old ways to the new TQM telescopic framework, a process of discovery that is exhilarating and enlightening.

To successfully implement TQM activities at an institution, top managers have to manage the institution according to the systems thinking approach. The seventh supportive dimension (see figure 3.1 and table 3.3) that influences the success of a TQM effort is self-assessment. As can be derived from figure 3.2, self-assessment is involved in all six primary dimensions.

## **5.8 SELF-ASSESSMENT**

Self-assessment is rapidly gaining importance at institutions and an increasing number of institutions are beginning to focus on the quality of their policies and action plans. Self-assessment is a comprehensive, systematic and regular review of an institution's activities and results referenced against a model of performance excellence (Russel 2000:664). The self-assessment process allows the institution to clearly identify its strengths and areas in which improvements can be made (Balbastre & Moreno-Luzón 2003:369). It culminates in planned improvement actions, which are then monitored for progress.

The self-assessment models discussed in chapter 2, paragraph 2.5 are committed to helping institutions improve their performance. Self-assessment models are non-prescriptive frameworks that recognise that there are many approaches to achieving sustainable institutional excellence. When an institution first undertakes self-assessment, it is usually performed at an independent unit level, often starting with a pilot exercise before being implemented across all units or at corporate level. When considering the level of deployment, careful attention should be given to the particular approach to self-assessment. Each institution should select an approach that meets its own requirements and circumstances. The culture and structure of the institution as well as the benefits desired will influence the particular approach adopted (Pun 2002:771).

The benefits of self-assessment are (Balbastre & Moreno-Luzón 2003:384; Kueng 2000:68):

- a rigorous and structured approach to continuous performance improvement;
- an assessment based on facts and not individual perception;
- a means to achieve consistency of direction and consensus on what needs to be done by everyone in the institution sharing the same conceptual base;
- a means to educate people in the institution on how to apply, in a meaningful way, the principles and practices of performance excellence;
- a means to integrate various quality and excellence initiatives into normal institutional operations, a powerful diagnostic tool;
- an objective assessment against criteria that have become internationally accepted;
- a means of measuring progress over time through periodic self-assessment;
- process induced improvement activities focused where it is most needed;
- a method that can be applied at all institutional levels, from independent institution units up to the institution as a whole;
- a means to create and promote enthusiasm amongst the people within the institution, involve them in the improvement process and give fresh impetus to their pursuit of performance excellence;
- opportunities to promote, share and replicate excellent approaches within different areas of the institution or, on a wider scale, with other institutions of a similar or diverse nature;
- opportunities to recognise and reward both progress and outstanding levels of achievement through internal and external awards;
- a link between what the institution needs to achieve and how to put strategies and processes into place to deliver its objectives; and
- a means to benchmark internally as well as against other institutions.

Self-assessment should indicate the extent to which the institution's activities are covered by, and the relative importance of the parameters chosen to measure results, including relevance of the measurements to the various stakeholders (Seghezzi 2001:865). The results presented should include perception or direct feedback data as well as predictor or relevant institution performance measures. The reliability and validity of any survey results presented should be discussed (Pun 2002:772).

The main shortcoming of many institutions that have some sort of self-assessment programme in place is that their self-assessment efforts do not take a systems approach (see paragraph 5.7) to planning (Salegna & Fazel 2000:56). Institutions that do not have a formalised plan for integrating self-assessment activities from day one, when transforming to TQM, will find that these programmes fall short of reaching their desired goals. If managers are not careful, assessment practices will fail for the same reasons many TQM programmes have failed: a lack of strategic planning, failure to consider culture and a lack of a systems approach. Self-assessment programmes should be viewed as more than tools to obtain performance. These programmes need to be perceived as a means to continually improve the product or service of an institution. They should also be consistent with prevailing quality management principles. This means that institutions need to maintain a customer focus, empower employees and provide for the continual improvement of the institution when developing self-assessment initiatives (Balbastre & Moreno-Luzón 2003:370; Salegna & Fazel 2002:57).

For most institutions the question is not whether assessment practices will be implemented, but rather how the assessment process will be integrated within institutional activities. The right culture, one that incorporates trust among institutional employees, is the primary enabler of a successful assessment programme. Therefore, institutions must view the self-assessment process as a means to continually improve the quality of the assessment programme and not as a threat, with information used to punish or control.

To successfully implement TQM activities at an institution, top managers have to use self-assessment as a tool to implement TQM. The eighth supportive dimension (see figure 3.1 and table 3.3) that influences the success of a TQM effort is, processes. As can be derived from figure 3.2, processes are involved in all six primary dimensions.

## **5.9 PROCESSES**

The cornerstone of continuous improvement, according to Lindsay & Petrick (1998:24) and Kanji (2001:271), is process management and process planning. The two researchers define a process as a sequence of steps, which adds value by providing

required outputs from a variety of inputs. A process is the activities that change inputs to outputs and which enhanced value in the sense of continuous improvement (Mani, Murugan & Rajendran 2003:621). For Stahl (1995:5) processes are groups of activities that take input, add value to it, and provide an output to an internal or external customer. Process planning assures that all-key processes work in harmony with the mission and meets the needs and expectations of the customers by maximizing operational effectiveness. The focus of process planning is to design operations to identify, hear and respond rapidly to the changing voices of the customer. Process management is required to implement and coordinate measured, streamlined and controlled processes to continually improve operations (Sinclair & Zairi 2001:539). This management stage often requires cross-functional efforts, since many functions are performed cross-departmental boundaries. The outcomes are a common language for documenting activities and shared decision making to eliminate waste, redundancy and bottlenecks. Process management tools, which enhance institutional performance, include affinity diagrams, interrelationship digraphs, tree diagrams, arrow diagrams, process decision programme charts, matrix data analysis, competitive benchmarking, flowcharting, nominal group techniques, structured surveys, trend charts and computerised systems analysis (Dervitsiotis 2001:697; Gardner 2001:58; Lindsay & Petrick 1998:24).

The aim of an institution should be to let all its processes function in harmony in order to establish improved customer/employee satisfaction (Yong & Wilkinson 2001:253). Tranmer (1996:717) is of the opinion that institutions should have a network of processes and that these processes should be managed continuously. He states that there should be three categories of processes within an institution, namely:

- Core processes – The core process is the institution's right of existence for providing a specific product or service.
- Supporting processes – Those activities that ensure that the core process works effectively. Supporting processes, for example, include the strategic planning process maintenance of equipment/systems, control of systems and marketing.
- Assurance processes – These processes should ensure that the institution achieves its operational needs. Regulatory specifications such as the ISO 9000 provide a type of assurance process. Assurance processes include: process reviews/audits,

affirmative actions for problems, preventing problems, processes for dynamic improvements and the administration of management's system documentation.

It is important to manage processes in an institution, as the institution cannot render any products or services without the necessary process. Without products and services the vision and mission of the institution cannot be achieved. According to Van der Watt (1997:96) and Mears & Voehl (1995:61), there are six key steps in the implementation of process management, namely:

- Identify the core processes, supporting processes and assurance processes.
- Perform a process analysis for each process.
- Perform a problem analysis; it refers to the reason for improving the current process by gaining all relevant and recent information.
- Investigate the current situation in the search for solutions by breaking the process into components and by identifying which component within the process has the biggest impact. An action plan must be established to solve the problem.
- Implement the solution.
- Evaluate after implementation and compare the old and new results graphically to one another.

Process management is about delighting customers by managing and improving processes. The goal of process management is to provide superior products or services or to achieve excellence in execution. According to Brache & Rummier (1988:48), an institution's key processes are those that have the most effect on its customers. Defining quality at the process level should begin with identifying the end customer's requirements for the process. These customer requirements must then be converted into specific measures that should drive one or more internal measures for the overall process. The measures should cascade throughout the sub-process and sub-sub-process levels. The result is a set of meters located at key junctures of the process. These meters and the specific standards they generate serve as the basis for monitoring each step's contribution to process quality and for troubleshooting the system when customer requirements are not being met. Statistical process control techniques can strengthen the measurements process by reducing the variability of the

meter readings and by telling the user when a reading requires action (Dale *et al.* 2001:444).

According to Gardner (2001:53), process performance is evaluated along three dimensions, namely:

- Effectiveness - The extent to which the outputs of a process meet the needs and expectations of its customers. Effectiveness is synonymous with quality and exists primarily for the customer.
- Efficiency - The extent to which resources are minimised and waste eliminated in the pursuit of effectiveness. Efficiency is primarily for the benefit of the institution.
- Adaptability - The ability of a process to accommodate change. Adaptability is not change control - it is the ability of a process to know when external conditions have changed and to dynamically reconfigure itself to handle those changes without sacrificing effectiveness or efficiency.

The importance of process management is to provide the basis for obtaining knowledge and an understanding of the relationship between causes (inputs) and consequences (outputs) in order to ensure continuous improvement. TQM provides a basis for the application of knowledge, understanding and skills required for continuous improvement of quality.

### **5.9.1 Business process reengineering**

According to Hammer & Champy (2000:31), an institution should continuously redesign its processes in order to ensure continuous improvement: "Reengineering an institution means tossing aside old systems and starting over. It involves going back to the beginning and inventing a better way of doing work." The two authors define process reengineering as: "... the fundamental rethinking and radical redesign of business processes to achieve dramatic improvements in critical, contemporary measures of performance, such as cost, quality, service and speed." According to them most institutions are not process orientated, but rather focussed on tasks, on work, on employees and on structures individually. Institutions should rather focus on these aspects as part of a process or processes in order to render continuous better results,

such as improvement in cycle times, greater efficiency, lower costs, better quality, better service, bigger flexibility, improved capabilities and improved value for all interest groups. While TQM is often considered to only involve continuous and incremental improvements to existing institutional processes, process reengineering involves “radical redesign of business processes, institutional structures, management systems and values of an institution to achieve breakthroughs in business performance” (Selladurai 2002:614). Ernst & Young’s (quoted by Weitz 1994:75) definition of reengineering, or process improvement, is as follows: “Process improvement refers to the practice of continuously reengineering the processes by which a given product or service is created and distributed. Process improvement, at its heart, means always searching for ways to improve procedures ... one must continuously review, analyse, incorporate changing customer expectations, and refine the process so that products and services continuously improve.”

Reengineering is the fundamental rethinking and radical redesign of institutional processes to achieve dramatic improvements in critical, contemporary measures of performance, such as cost, quality, service and speed. A two-word definition for reengineering is ‘starting over’. Reengineering is about beginning again with a clean sheet of paper. It is about rejecting the conventional wisdom and received assumptions of the past. Reengineering is about inventing new approaches to process structure that bear little or no resemblance to those of previous areas. Reengineering is the search for new models of institutional work. Reengineering is a new beginning. (Selladurai 2002:615.)

Reengineering is also a set of principles to shape the structure, management and performance of institutions. With reengineering managers must throw out their old notions about how institutional activities should be organised and run. They must abandon the institutional and operational principles and procedures they are now using and create entirely new ones where applicable. Reengineering demonstrates how existing institutions can reinvent themselves successfully by embracing and apply the principles of process reengineering.

Van der Watt (1997:163) is adamant that process reengineering cannot be done without TQM if continuous improvement is pursued. Process reengineering and TQM

should complement one another, as both focuses on processes and the customer. According to Hammer & Champy (2000:216) and Selladurai (2002:615), there are minor differences between process reengineering and TQM, namely:

- Process reengineering accelerates the processes of institutions to achieve results, while TQM directs the institution in the same direction, albeit much more slowly.
- Process reengineering brings about radical and drastic process changes, while TQM brings about incremental adaptations.
- If TQM is established as a culture within an institution, it can continue without the daily support of top management, while process reengineering requires continuous and intensive top to bottom, vision-driven efforts and support from top management.
- TQM begins with redefining quality management of the strategy while process reengineering basically just follows this process.

Van der Watt (1997:164) further states that the similarities between TQM and process reengineering are as follows:

- Both are based on the forecast that excellent process performance is crucial for competitiveness.
- Both require top management to direct and manage extensive changes in the institution.
- Both require teams to implement new procedures and programmes.
- Both improve relationships between customers and suppliers, empower employees and improve products and processes.

## **5.10 SUMMARY**

This chapter has provided an in-depth examination of the eight supportive dimensions of the TQM framework. What has emerged from this review is that an integrated framework is required in which not only the six primary dimensions of TQM, but also all eight supportive dimensions operate synergistically within an institution. As shown in figure 3.1 and 3.2, all of the supportive dimensions are involved in all of the primary dimensions. An integrated approach must therefore be followed to both the primary

and supportive dimensions if an institution wants to transform successfully through utilising the philosophy and principles of TQM.

In the next chapter, attention will be paid to the SA Air Force where the empirical research for this thesis was undertaken. An attempt is made to contextualise the research by discussing organisational detail of the SA Air Force, including its aim, functions, strategic direction, organisational design and structure. The implementation of TQM since 1980 is sketched by focusing on the development and methodology followed by the SA Air Force. Further attention is paid to the general self-assessment methodology employed by the SA Air Force.