CHAPTER 2

2.0 Literature Review

This chapter reviews the concept of quality by assessing the various definitions and views of numerous authors. A general frame work of what quality is all about is discussed under the elements of quality. Since the research is more concerned about the effects of TQM on service quality, the literature also looks at the concept of service and service quality and how it is been assessed by the organization and the customers alike. The road path to TQM implementation follows the concept of service quality, where the various stages and characteristics of these stages are discussed. The concept of TQM under review looks at the contributions of its founding fathers to the tenets of TQM. The benefits of TQM and the hindrance to its implementations are reviewed. Finally the literature gives an overview of the Novotel Bangkok Platinum.

Table 1: The stages of Quality management and Characteristics

TOTAL QUALITY MANAGEMENT	- Policy deployment - Involves suppliers and customers - Involve all operations - Process management - Performance measurement - Team work - Employee involvement
QUALITY ASSURANCE	- Quality system development - Advanced quality planning - Comprehensive quality manuals - Use of quality costs - Involvement of non-production operation - Failure mode and effect analysis
QUALITY CONTROL	- Develop quality manuals - Process performance data - Self-inspection - Product testing - Basic quality planning - Use of basic statistics - Paper work control

INSPECTION	• Salvage
	• Sorting, grading and re-blending
	• Corrective actions
	• Identify sources of non-conformance

2.1 Quality management and Characteristics

2.1.1 Total Quality Management

Total Quality Management (TQM) involves the application of quality management principles to all aspects of the organization, including customers and suppliers, and their integration with the key business processes. It is an approach which involves continuous improvement by in the organization. TQM is a principle which involves the mutual cooperation of everyone that aids the business process of an organization and it involves all the stake holders of an organization.

According to Mohammed (2006), TQM is an effective system for integrating the quality development, quality maintenance and quality improvement efforts of various aspects of a system so as to enable services at most economical level and derive full satisfaction. Oakland (1989), describes TQM as an approach to improve competitiveness efficiently and flexibility for the whole organization. According to Hellsten and Klefsjö (2000), TQM can be defined as a management system which consist of interdependent unit namely core values, techniques such as process management, benchmarking customer focused planning or improvement teams and tools such as control charts.

2.1.2 Quality Assurance

According to Dale et al, ((a) 1994), quality assurance is a prevention based system, which improves product and service quality with increased productivity by placing the emphasis on product, service and process design. The quality assurance philosophy opined that quality is created in the design stage and not the control stage and that problems associated with quality are caused by poor process design. According to Lockwood et al, (1996), 'to be effective, quality assurance must involve the development of a new operating philosophy and approach that looks to be proactive rather than reactive, that includes motivating and involving people in the process across normal departmental barriers'. Oakland (1995) defined quality assurance as broadly

prevention of quality problems through planned and systematic activities, which include documentation.

2.1.3 Quality Control

Juran (1988) defined quality control as the regulatory process through which we measure that actual quality performance, compare it with standards, and act on the difference. It is a more sophisticated management tool aims at preventing goods and services which do not conform to basic requirements from getting to the final consumer. Quality controls are operational techniques and activities that are used to fulfill quality requirement (ISO 8402, 1994).

2.1.4 Inspection

According to (ISO 8402, 1986) inspection can be defined as 'activities such as measuring, examining, testing, gauging one or more characteristics of a product or service and comparing these with specified requirements to determine conformity'. It involves the examination, measurement and testing of the characteristics of a product or service and the comparison to specified requirement and to access if the characteristics conform to specified requirement (Dale et al. (b) 1994). Inspection is an efficient and effective way of discovering defects in services and products. According to Deming (1986), 'inspection with the aim of finding bad product and throwing them out is too late, ineffective and costly'.

2.2 Major Principal of TQM

TQM can be defined as the way of managing for the future market scenario and is much wider in its implementation than just maintain product or service quality – it is the way of managing resources, people, time and various business processes to ensure complete customer satisfaction at every stage from procurement of material to the dispatch of finished goods.
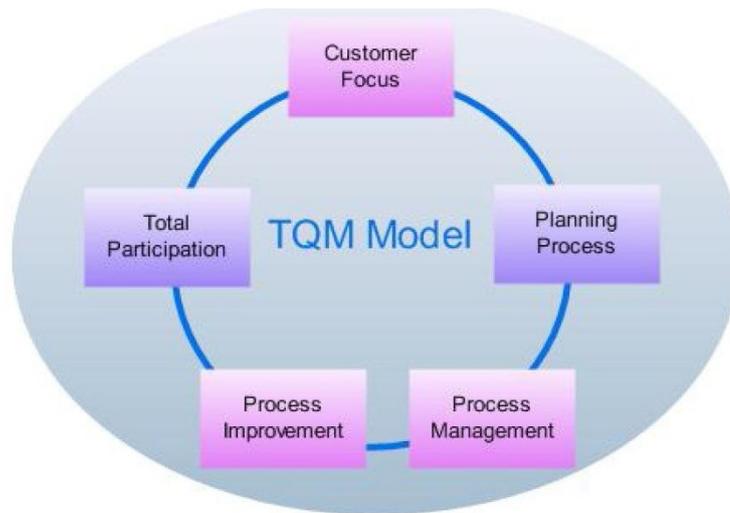
Figure 1: Basic TQM Model

The simplest TQM model is shown in the figure 1. In the beginning of this model we should understand customer needs. Implementation of TQM mainly consists of the set of processes which continuously collect data, analyses and act on customer information. TQM Activities are also extended to understanding of nature and behavior of competitor's customers. Developing a proper and systematic understanding of customer needs helps TQM organizations to predict behavior of future customer. Prime focus of TQM organizations is to integrate customer knowledge with other information available and effective use of the planning process to develop action plan throughout the organization to manage day to day activities and make efforts to achieve future goals. Business Plans are to be reviewed at regular intervals and are to be adjusted as per requirement. First phase of Implementation of TQM is the planning process, which acts as a glue that holds together all TQM activity. TQM organizations clearly understand that customers can only be satisfied if they consistently receive products and services meeting their requirements. Products /Services are delivered when expected and are priced for value. TQM organizations are using techniques of process management to develop cost controlled stable and capable processes meeting customer expectations. It is also understood by TQM organizations that today's exceptional performance may be unacceptable performance in the future so they should use the concepts of process improvement to achieve both incremental continuous improvement and breakthrough gains. In TQM System itself, Process improvement is even applied. The most important

and final element of the TQM model is total participation of all the employees. TQM organizations understand that all work is performed by the people working as a single unit. It begins with leadership and motivation. In TQM organizations, top management has to lead from the front by taking personal responsibility for implementing, nurturing and refining all TQM activities. They should make sure people are properly trained, capable, and actively participate in achieving organizational goals for long term success. Management and employees should come on same platform to build an empowered environment where people are valued for their efforts. All the elements of TQM model should work together to achieve results.

2.3 Six C's of TQM

For proper implementation of a TQM following Six Cs are required

1. **COMMITMENT:** All employees of the organization must have quality improvement commitment. If a good TQM culture is to be developed in the organization, then quality improvement should become a normal part of everyone's job, a clear support and commitment from the top management must be provided.
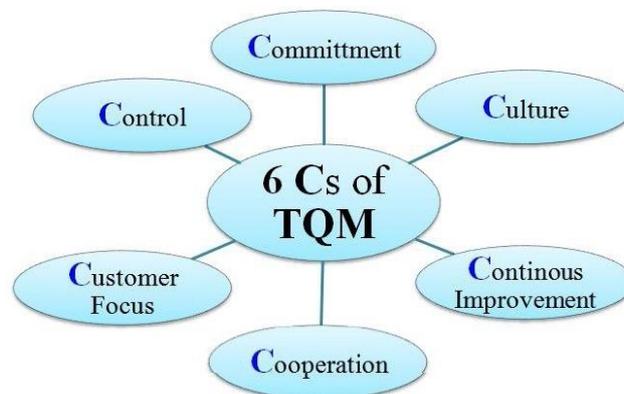

Figure 2: 6 C's of TQM

2. **CULTURE:** Organization must develop and follow a modern culture for quality improvement on a regular basis. Training on regular basis is very essential for bringing a change in culture and attitudes. Management accountants, too often associate 'creativity' with 'creative accounting' and associated negative

perceptions. It can be changed to encourage individual contributions and to make 'quality' a normal part of everyone's job.

3. **CONTINUOUS IMPROVEMENT:** There must be continuous improvement in all policies, procedures and activities laid down by top management for the company. Recognition that TQM is a 'process' not a 'programme' necessitates that we are committed in the long term to the never-ending search for ways to do the job better. There will always be room for improvement, however small.

4. **COOPERATION:** Cooperation among employee and experience of employees must be utilized for improving strategies and enhancing performance. The application of Total Employee Involvement (TEI) principles is paramount. The on-the-job experience of all employees must be fully utilized and their involvement and co-operation sought in the development of improvement strategies and associated performance measures.

5. **CUSTOMER:** For long-term survival of the business, organization must focus on customers' requirements and satisfaction of their expectations. The needs of the customer are the major driving thrust; not just the external customer (in receipt of the final product or service) but the internal customer's (colleagues who receive and supply goods, services or information). Perfect service with zero defects in all that is acceptable at either internal or external levels. Too frequently, in practice, TQM implementations focus entirely on the external customer to the exclusion of internal relationships; they will not survive in the short term unless they foster the mutual respect necessary to preserve morale and employee participation.

6. **CONTROL:** There must be effective control for monitoring and measuring the real performance of the business. Documentation, procedures and awareness of current best practice are essential if TQM implementation is to function appropriately. The need for control mechanisms is frequently overlooked, in practice, in the euphoria of customer service and employee empowerment. Unless procedures are in place improvements cannot be monitored and measured nor deficiencies corrected. Difficulties will undoubtedly be experienced in the

implementation of quality improvement and it is worthwhile expounding procedure that might be adopted to minimize them in detail.

2.4 Theoretical Framework

"A theoretical frame work is a conceptual model of how one makes logical sense of the relationship among the several factors that have been identified as important to the problem"(Sekeran, 2003). Cases and variables are always part of elements used in research. Cases are objects whose behavior or characteristics studied. Usually, the cases are persons. But they can also be groups, departments, organizations, etc. They can also be more esoteric things like events (e.g., meetings), utterances, pairs of people, etc.

Variables are characteristics of cases. They are attributes and qualities of the cases that is measured or recorded. For example, if the cases are persons, the variables could be gender, age, height, weight, feeling of empowerment, math ability, etc. Variables are called what they are because it is assumed that the cases will vary in their scores on these attributes. For example, if the variable is age, we obviously recognize that people can be different ages. In any particular study, variables can play different roles. Two key roles are independent variables and dependent variables. Usually there is only one dependent variable, and it is the outcome variable, the one you are trying to predict. Variation in the dependent variable is what you are trying to explain. The independent variables, also known as the predictor or explanatory variables, are the factors that you think explain variation in the dependent variable. In other words, these are the causes. (Adapted from http//www.analytictech.com)

2.4.1 EFQM (European Foundation Quality Model)

According to Dubas and Nijhawan (2005), the European Foundation Quality Model (EFQM) Excellence Model is a non-prescriptive framework based on nine criteria. Five of these are 'Enablers' and four are 'Results'. The Enabler criteria cover what an organization does. The Results criteria cover what an organization achieves. Results are caused by Enablers and feedbacks from Results help to improve Enablers. It contains a set of nine weighted criteria that are utilized in the assessment process. The Model is based on the premise that: Excellent results with respect to Performance,

Customers, People and Society are achieved through Leadership driving Policy and Strategy, that is delivered through People Partnerships and Resources, and Processes. The EFQM Excellence Model is depicted below in Figure 3.1.
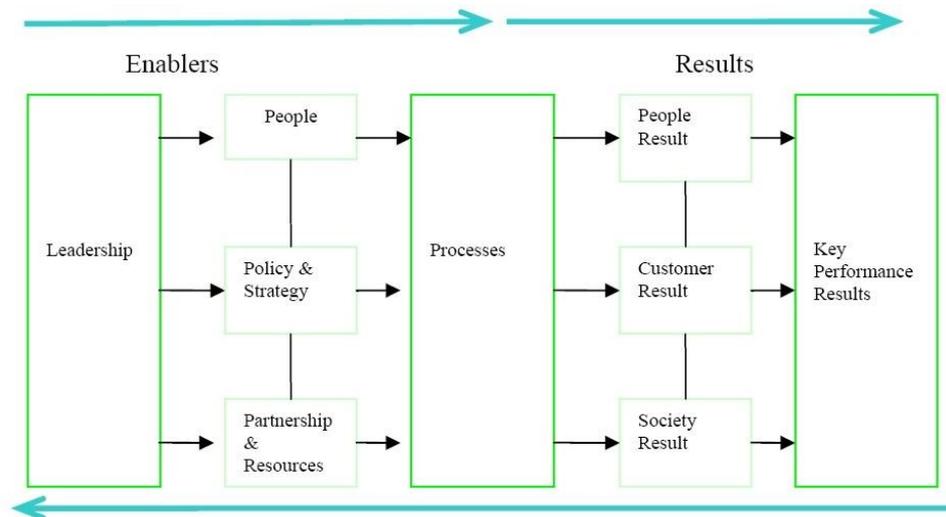
Figure 3: The EFQM Model

The EFQM model is based on the idea that customer satisfaction, people satisfaction and impact on the society are achieved through the leadership driving policy and strategy, people management, resources and processes, leading ultimately to business results. Organizations that are characterized by a relatively high degree of customer and employee satisfaction are believed to have a positive effect on society, will excel and achieve business results (Porter and Tanner, 1996). This is based on the fact that results are achieved through key processes which are funded and supported by skilled people with a clear direction. For an organization to achieve results, it must have an able executive leadership which drives the enablers of business success. Below is the EFQM criterion of quality and details on the model (Figure 3.1) as described by Dubas and Nijhawan (2005) and Slack et al (1995):

Enablers

- **Leadership** - The driver of the business who gives direction to business objectives, it is concerned about how the top management inspire and drive total quality as a vital process for continuous improvement.

- **People management** - This involves how the company harnesses the potential of her employees in order to improve the business continuously. With EFQM

covering training, evaluation, effective human resources development, team work, empowerment, rewards and recognition. It ensures the effective development of people's skill, time and effort.

- **Policy and strategy** - How the firm's policy reflects the concept of total quality and how this principle is being used to determine improvement strategy. It covers product, service quality and organizational policy and strategy.

- **Partnerships and Resources management** - This involves how the resources of the company are disbursed to support quality initiatives. Active encouragement of supplier partnership is given, with emphasis on mutually beneficial relationships. On resources, the facilities need to be maintained for capability, and materials should be conserved.

- **Processes** – The efficient managing of processes to ensure that business objectives of value creation are achieved. It involves identifying and reviewing the processes involved in production so as to deliver the organization's strategy.

- **Employee Result** - People are supposed to be adequately surveyed, with ideas such as team briefings and suggestion schemes incorporated.

- **Customer Results** - This is external customer's perception of the company's product. This requires evaluation of customer satisfaction through surveys and interviews. Loyalty and market share are measures.

- **Key Performance results** – what the company is achieving in relation to its planned business. EFQM requires a "balanced scorecard" type approach, as well as cost of quality, product and process measures.

While the first set of five characters can be regarded as drivers to effective quality management, the last three are the results that accrue to a firm when the drivers are efficiently deployed. This research will focus on the latter, since it is concerned about the effect of TQM implementation. Thus hypothesis test would be conducted based on the model below, where TQM serves as the independent variable and the expected effects are the dependent variables.

2.5 Conceptual Framework

• Gender		**TQM**
• Age	→	• Employee Satisfaction
• Department		• Effective Operation
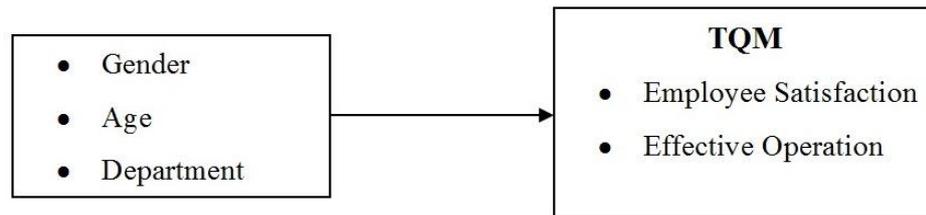
Figure 4: Conceptual Framework

2.5.1 Employee Satisfaction

Employees are more loyal and productive when they are satisfied (Hunter & Tietyen, 1997), and these satisfied employees affect the customer satisfaction and organizational productivity (Potterfield, 1999). Employee satisfaction is defined as the combination of affective reactions to the differential perceptions of what he/she wants to receive compared with what he/she actually receives (Cranny, Smith, & Stone, 1992). One the other hand, as stated by Organ and Ryan (1995), the employee satisfaction is one of the basics of organizational citizenship behavior (Ozdevecioglu, 2003). That is, the well-satisfied employees will work more willingly and this contributes to the effectiveness of their organizations. There is no limit for the employees to reach the full satisfaction and it may vary from employee to employee. Sometimes they need to change their behaviors in order to execute their duties more effectively to gain greater job satisfaction (Miller, 2006). Having good relationships with the colleagues, high salary, good working conditions, training and education opportunities, career developments or any other benefits may be related with the increasing of employee satisfaction. When investigating the employee satisfaction, it should be known that; -an employee may be more satisfied by a satisfying item, whereas the other employee may be less satisfied with the same item. As a general definition, the employee satisfaction may be described as how pleased an employee is with his or her position of employment (Moyes, Shao, & Newsome, 2008). An employee must be happy with his job for they are a crucial part of an organization in implementing its strategy and be well informed as to how they affect customers; this can lead to a great performance in the company. A successful TQM environment requires a committed and well-trained work force that participates fully in quality improvement activities. Such participation is reinforced by reward and recognition systems which emphasize the achievement of quality objectives.

On-going education and training of all employees supports the drive for quality. Employees are encouraged to take more responsibility, communicate more effectively, act creatively, and innovatively. As people behave the way they are measured and remunerated, TQM links remuneration to customer satisfaction metrics. (http://www.johnstark.com/fwtqm, last assessed 20/11/08). In the hospitality industry, which is characterized by a substantial level of contacts with customers, employees play a rather crucial role in creating customer satisfaction, through their service delivery approach. The goal of any business is profitability, but the manners in which they achieve this differ from firm to firm depending on the type of organization either for manufacturing or service. Most service organizations strive to attain profitability through the processes of service delivery which creates customer satisfaction, the manufacturing industry might add values to their products to create customer satisfaction. However, creation of these valued added activities will depend on how satisfied the employees are. That is, the satisfaction of customers is dependent on employee's satisfaction. One of the major emphases of TQM is the empowerment of employees, in an attempt to generate improved individual and organizational performance and also to help employees achieve certain personal goals by giving them the rights to participate in the decision making process and allowing them have control of their immediate job environment (Seibert et al, 2004). Past findings have shown that empowerment programs provide employees with a positive experience thus leading to greater employee satisfaction (Seibert et al, 2004). Thus this research will find out if empowerment, through delegation of Management in the Novotel Bangkok Platinum leads to greater employee satisfaction.

Hypothesis 1: TQM Hotel will have a higher degree of employees' satisfaction than NON TQM Hotel

- **H1** - There is a significant difference in employee satisfaction between TQM Hotel and Non-TQM hotel

2.5.2 Operational Effectiveness

In recent years, organizational effectiveness in the practical and theoretical spheres has attracted special attention. Beyond the domain of the TQM literature, there are several fields, which have contributed to the development of current knowledge,

namely organizational theory, strategic management, project management, production & operation management and finance. However, we can see, most of these fields have been studied separately, which has resulted in fragmented and disputed findings. Organizational effectiveness (OE) is one of the most extensively researched topics from the early phase of development of organizational theory. Organizational effectiveness & Performance measurement are integral part of all management processes and traditionally has involved management accountants through the use of budgetary control and the development of financial indicators such as return on investment. It is clear that TQM acts as a platform for organizations to enhance their competitiveness, still many organizations have been disappointed in the extent to which TQM has been associated with constant improvements in organizational effectiveness. Performance management systems are like cornerstone of human resource management (HRM) policies and are the basis for developing a systems oriented approach to organization effectiveness. Theoretically, a performance management system provides a linkage between organizational and employee goals through a goal-setting process, and subsequently links employee goal achievements to a variety of HR management decisions through a performance measurement process.

The adoption of TQM is believed to have great impact on organizational effectiveness. From the literature review, different authors have linked TQM management to effective operation. While Sila, (2007) pointed to the fact that suppliers involvement in the overall process of quality improvement have a major role to play in the overall effectiveness of operations. Others pointed to the fact that continuous improvement, a major tenet of TQM leads to efficient operation According to O'Brien and Voss, (1992), quality depends on broad base employee involvement and commitment. The principles of TQM such as employee involvement, improved communication and team work brings about effective operation, this in turn creates a better quality service delivery which creates customer satisfaction. 'According to Muhleman et al, (1992), for an organization to be truly effective, every single part of it, each department, each activity and each person and each level, must work properly, together, because every activity affects and in turn is affected by others'. Thus, this research will access the reliability of this in the Novotel hotel by accessing the

effectiveness of the operation of hotel that have adopted TQM ideology and comparing it with those hotels that have not adopted the TQM ideology.

Hypothesis 2 – Hotels adopting TQM approach will have greater operational performance than non-TQM Hotels.

- **H1** - TQM Hotels are more effective in their operation than non-TQM Hotels

2.6 Benefits of TQM Implementation

The effective implementation of TQM will increase customer satisfaction with the service offerings (Omachonu and Ross, 1994). Quality enhances customer loyalty through satisfaction; this in turn can generate repeat business and lead to the attraction of new customers through positive word of mouth. The word of mouth communication will help in cost reduction. This Omachonu and Ross (1994), noted will provide competitive edge to the company. The improvement in quality will result in increased market share and profitability (Figure: 6)
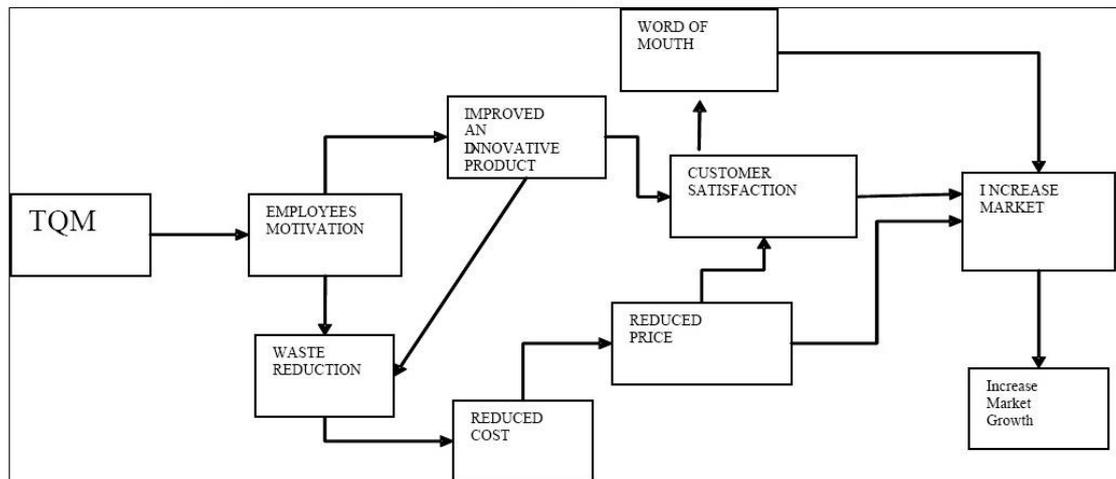
Figure 5: An adaptation of the effect of quality management

Total quality management is a management philosophy which emphasizes the devolution of authority to the front line staff. It ensures the participation of everyone in the decision making process through activities such as quality cycles and team work. The question is, does this devolution of authority leads to employees' satisfaction or not? Motivations theories indicate that two major forms of motivation exist – the intrinsic and the extrinsic motivation. While some will argue that the best form of

motivation is monetary incentive, others argue for self-fulfillment and recognition. The motive behind the intrinsic reward is to provide the employee with some autonomy which empowers him to take decisions that affects his job, thus making him responsible and accountable. This is said to increase the employee's level of job satisfaction (Dimitrades, 2000). The implementation of TQM ensures that every worker in the organization does his work with quality the first time, thus improving the efficiency of operation and avoiding some cost associated with waste. This in turn will offer more value to customers in terms of price and service quality, thus making them satisfied. Implementation of TQM further ensures that organizations change how they perform activities so as to eliminate inefficiency, improve customer satisfaction and achieve the best practice (Porter, 1996). Porter noted that constant improvement in the effectiveness of operation is essential but not a sufficient factor for organization to be profitable. According to Sila (2007), TQM helps in improving the quality of products and also reduces the scrap, rework and the need for buffer stock by establishing a stable production process. He argued that TQM will reduce the cost of production and time of production. Continuous improvement which is a feature of TQM is said to reduce the product cycle time thus improving productivity (Huang and Lin, 2002). Many other TQM practices such as training, information system management, relationship with suppliers etc. have a positive impact on operational performance. The efficient management handling of these practices will improve efficiency and no doubt affect the profitability of the firm According to Sila (2007), TQM can minimize the total cost of production through 'sole sourcing'. The cost in this case is reduced by limiting the number of suppliers used by the firm and providing them with necessary training and technology. The efficient functioning of an operation will then depend on how well the suppliers meet up with the expectations of the organization. This is why the TQM principle emphasizes the totality of quality in all facets which includes the suppliers. TQM endorses the total quality approach in creating customer satisfaction. The total quality approach creates an integrated method of analyzing operation by focusing the processes of production on customer satisfaction. Thus, it requires that quality be built into all the processes so as to be efficient in the overall operation (Andrle, 1994). Kaynak (2003), suggested that the effectiveness of TQM organizations should be measured by the degree of integration with their supplier bases because supplier quality management is a critical component of TQM. Operational effectiveness is then a

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function of how well the various units of an organization carry out their functions with quality.

2.7 Overview of Novotel Bangkok Platinum

This part reviews the link between engineering and the hotel quality performance. It also review how Novotel engineering department roles and responsibility and how they support the overall quality performance.

Located in Bangkok's fashion district, Novotel Bangkok Platinum is situated above Platinum Mall, a few minutes' walk from Central World Shopping Center, Siam Square, MBK, Platinum market and BTS stations. Blending comfort and technology, the hotel is the perfect choice for your next holiday or business trip. Featuring 283 well designed rooms, the hotel offers two bars and one restaurant, five multi-purpose meeting rooms, free Wi-Fi. Internet, swimming pool, fitness center and indoor car park.

Mission Asia Pacific

- Committed to a diversity and highly engaged team
- Construct the most powerful hotel loyalty membership base with 4 million members by 2015.
- Deliver consistently high (above market) return to our hotel owners.
- Contribute 25% of Accor global cash contribution by 2015
- Operate a network of 700 hotel Accor Asia pacific by 2015

Vision - Worldwide

A new Organization bringing more:

"AGILITY, CLARITY AND ACCOUNTABILITY

Novotel Bangkok Platinum
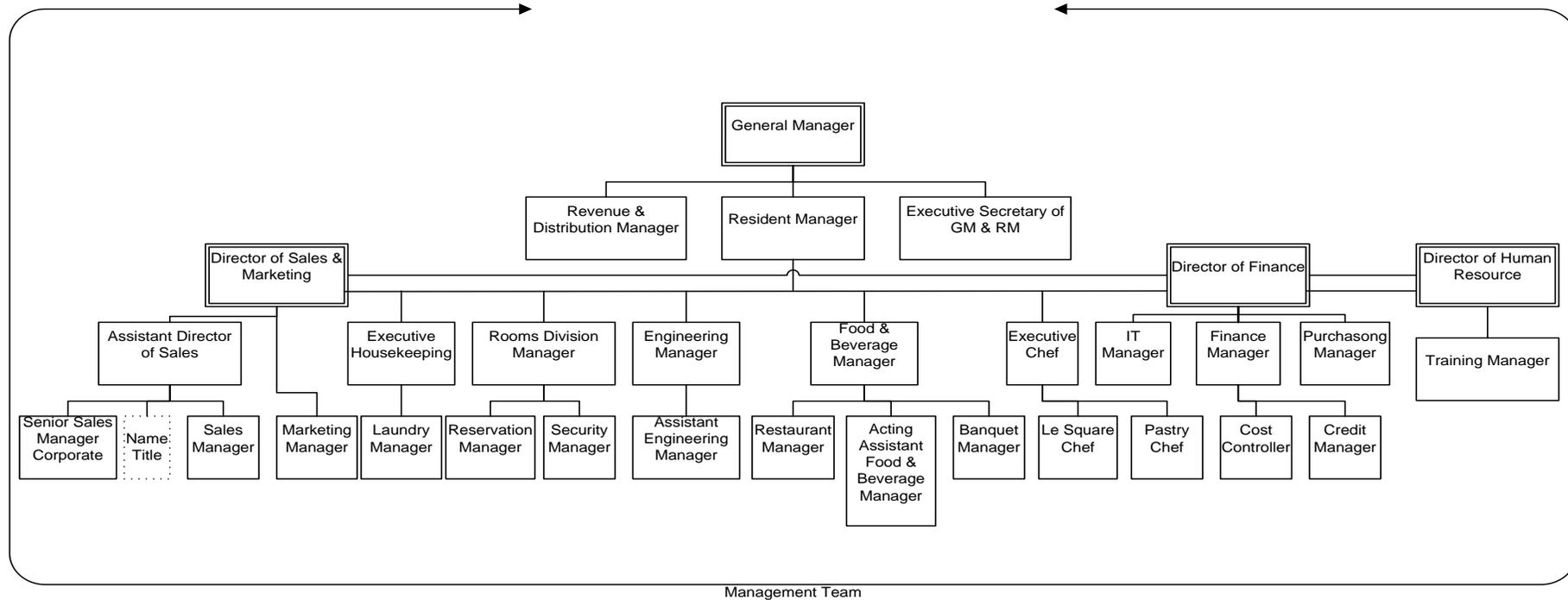
Figure 6: Novotel Bangkok Platinum Organization Chart

Table 2: Novotel Green team (TQM) role and responsibilities

Roles and responsibilities	Responsibilities
Preventive maintenance	• Provide proper lighting, comfortable air-conditioning, clean water supply, vertical transportation; • Maintain a cozy and warm atmosphere for hotel guests with contemporary decoration; • Minimize interruption to guest comfort due to the suspension of building facilities; • Sustain customer satisfaction and value for money; • Support other departments' productivity; • Enhance safety; Enhance the property value; and, • Increase the return on investment for the building owner.
Health and safety policies	• Ensure occupant safety, guests feel safe to stay; • Enhance readiness for crisis management such as earthquake, power outage, water flooding…etc • Ensure swimming pool water hygiene; Eliminate air-borne disease; • Promote safety awareness by conducting training, fire drill, evacuation and precautionary measures; Assist in food safety and hygiene; • Reduce staff accidents and injuries; • Minimize damages to the property; and, Avoid fatal injuries.
Energy conservation 'Going green'	• Promote a health environment by reducing pollution; • Suggest and select energy efficient products; • Promote brand image by going green; • Promote 'green' awareness; and, Save expenses by reducing energy consumption.
Control of expenses	• Budget and meet financial target; • Control utility expenses; • Reduce cost by value engineering; and, • Effective use of resources.
CSR	• Serve local community; • Promote brand image; guests feel good to stay with a good CSR hotel; and, Build corporate identity.
Project management	• Maintain 'contemporary' for hotel hardware; • Minimize disturbance by arranging proper construction time; • Meet budgeted cost and time; Control quality; and, Ensure construction site safety.

Management and leadership	• Achieve hotel and departmental goals • Achieve staff satisfaction; • Reduce turn-over rate; and, • Support career development.

2.7.1 Preventive maintenance

Each guest's expectation is different; the high expectation of service from hotel guests has caused Novotel employees to pay more-than-required attention to react to and predict guest needs. Now day's customers' expectation has been changing due to the change of technology. For example, traditional desk phone and hardwired internet connection could not satisfy customers' needs today. Hotel guests expect '3G' and Wi-Fi' as their cell phones and hand-held internet access devices are not equipped with a hardwired connection. So Novotel employees focus on technology change. In Novotel they have health and safety team. They check the room every week they have room inspection and make report and send to the every department and give to assistant engineer who divide the responsibility between the technicians.

2.7.2 Comfortable, healthy and safe environment

To ensure a safe and health working environment in the hospitality sector, everyone involved has health and safety duties and responsibilities which are clearly outlined in Sections 8, 13 and 14 of the Occupational Health and Safety Act, Act 85 of 1993.The hospitality industry covers a wide range of different businesses including hotels, pubs and restaurants, contract caterers in various industrial and commercial premises, fast food takeaways cafes and bistros. Whether it is a hotels, pubs and restaurants, contract caterers in various industrial and commercial premises, fast food takeaways cafes and bistros, there is a part to play in making sure people's health and safety is not put at risk. Engineering department also involve in health and safety tasks that have to be tackled, such as:

- completing risk assessments
- selecting suitable equipment for the job
- ensuring employee health and safety
- setting out safe working procedures
- ensuring people are adequately trained

- supervising the work

Hotel employees play an important role in providing a healthy, comfortable and safe environment for people inside the building. The large firms, before they sign a business agreement with the hotel, would send safety officers to check the hotel building and review the fire and safety policy and procedures. This is to ensure that the hotel will be safe for their staff to stay; fire and life safety is the fundamental to the hotel business.In Novotel there are two restaurants in square and premiere lounge, every day they check the food temperature they concerned about guest health and food hygiene. The Novotel hotel use this machine for checking food temperature and this is the food temperature service record. They maintain the record for food hygiene.

In Novotel every week they doing weekly audit check all the machine kitchen equipment, laundry equipment, housekeeping equipment, fire extinguisher etc. They try to give a health environment for a guest even they inspect all area of hotel so guest can feel comfortable.

2.7.3 Energy conservation
Novotel has a one green team every department of one member involves in this green team. This team work for pollution energy consumption. In Novotel everyday they update the energy consumption and analysis. They involve in 7pillars planet 21. They concern about health, environment. Reducing the energy consumption or minimizing the wastage could reduce environmental pollution; it can also save on utility expenses.

2.7.4 Control of expenses
Controlling utility expenses is one of the major responsibilities for the engineering department; one way to analyze utility consumption is through benchmarking. However, engineers only compare the consumption with their own history data such as the data of last month or same month of previous years; they do not benchmark with other hotels. There are two reasons; no two hotels have the same design. Different designs will have different energy demand; for example, hotels with more restaurants will have more kitchen equipment and require more gas consumption

for cooking. Also, different geographic areas have different weather conditions. Therefore, hotels in mild weather areas will use less energy than those hotels in the tropical area or northern zone. Hotel engineers need to be sensitive in controlling the spending of expenses in order to meet the financial budgets. Novotel employees is to support the profit margin by controlling the expenses of utilities by implementing energy conservation programs, and the outsource expenses by selecting competent contractors. They try control the utilities expense. In Novotel they give the training to the staff that health and safety is important. They give special training about save energy through by green team. In Novotel they stick the sticker on the wall that after you use the toilet switch of the light.

2.7.5 Project Management

Hotel areas need to be refurbished at regular interval in order to maintain. Even Novotel planning to renovated the hotel, After 3 year Novotel going to renovated this year. They start their project everything change new rooms design new lounge, even they change the office design employee dress etc. For this Hotel every department employees coordinate these projects.

2.7.6 CSR

As the Accor group enters a new phase of sustained expansion, it is reaffirming its approach to responsible development, which generates value shared by everyone. The PLANET 21 sustainable development program accelerates and intensifies Accor's sustainable development commitment, transforming it into a decisive competitive advantage for the Group, its brands and its partners. The program is structured around 21 commitments backed by quantifiable objectives that all hotels are expected to meet by 2015. With PLANET 21, Accor is making sustainable hospitality the focus of its strategic vision, as well as its development and innovation processes.
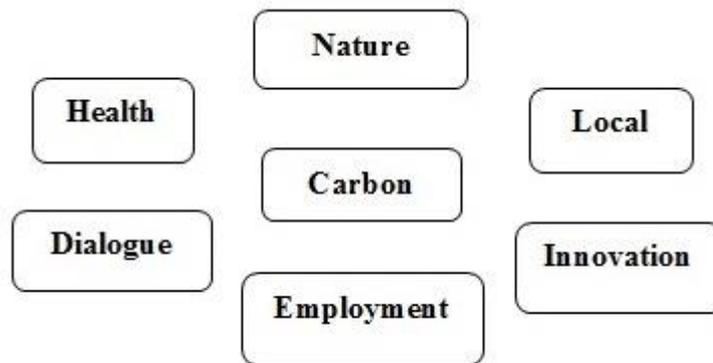
Figure 7: Planet 21

- In today's uncertain world, where food-related, hygiene and environmental threats abound, Accor provide guests and employees with a healthy environment and a haven of tranquility.

- To protect the environment, Accor is reducing its water use and recycling its waste. In addition, the Group has already planted three million trees as part of a global reforestation project supported by the United Nations.

- Caused mainly by the burning of fossil energies, CO2 is one of the greenhouse gases most responsible for climate change. Accor is committed to reducing its energy consumption with the goal of limiting its carbon footprint.

- By fully integrating sustainable development into its operating procedures and offers, Accor is responding proactively to emerging customer expectations and supporting the development of new business models, making PLANET 21 the crucible for the hospitality industry of the future.

- Firmly rooted in its host communities, Accor contribute directly to their economic development, which it shares, and protects what is most precious, yet so vulnerable: their children and the natural ecosystems in which the hotels are located.

- Accor's robust expansion is underpinned by the extraordinary social, cultural and professional diversity of its 170,000 employees. The Group is committed to helping them to expand their skills and responsibilities with the goal of offering them motivating, rewarding careers and enhancing their employability.

- Through its commitments to franchisees and suppliers, Accor is engaging partners in its sustainable development strategy and integrating them into the responsibility chain.

2.8 Novotel Performance measurement

The performance measurements for the engineering department are summarized in table 4.2

Table 3: Performance Measurement

Performance Measurement for Hotel Department in Novotel Bangkok platinum		
Measurement	Frequency	Criteria
Process management measures		
Departmental audit.	Yearly	Compliance of company requirements.
ISO 14001:20004 audit.	Yearly	Compliance of environment conservation.
HACCP audit.	Yearly	Compliance of food safety.
Fire and Life safety audit.	Yearly	Measurement of safety readiness.
Work request response time.	Daily	Timeliness, integrity, predictability, customer satisfaction.
Individual performance measurement		
Individual performance appraisal.	Yearly	Individual performance
Performance review		
Utility critique and review.	Monthly	Analysis of energy consumption.
Customer survey.	Online	Customer satisfaction (working order of facilities).
Associate survey.	Yearly	Employee satisfaction.
Financial critique and review.	Monthly	Meeting maintenance expenses and utilities budget.
Work requests review.	Daily	Identify problems and guest preferences.
Fire and Life safety inspection.	Weekly	Identifying safety hazards.