IMPROVING THE SERVICE QUALITY OF A CIVIL CONSULTING ENGINEERING FIRM THROUGH BENCHMARKING

BY

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TO WHOM IT MAY CONCERN

RE: CONFIDENTIALITY CLAUSE

The name of the organisation under review is kept confidential because the work presents potentially sensitive information. It is referred to as Company X.

Yours faithfully,

WERNER BELLINGAN
I, Werner Bellingan, hereby declare that:

- The work in this paper is my own original work;
- All resources used or referred to have been documented and recognised; and
- This dissertation has not been previously submitted in full or partial fulfilment of the requirements for an equivalent or higher qualification at any other recognised educational institution.

__________________________________________  ________________________
Werner Bellingan                                 Date
ACKNOWLEDGEMENTS

The successful completion of this study would not have been possible without the support and assistance of the following parties, which I would like to thank in particular:

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SUMMARY

The civil engineering industry in South Africa has seen a steady decline in the number of professionals during the last few decades, however it is expected that the government and private sectors are to spend over R200 billion on infrastructure in the next few years. This increases the demand on civil consulting engineering firms to achieve greater productivity, with reduced time and human resources, which has had a profound effect on the quality of service delivered to clients. These firms need to gain a competitive advantage by consistently providing Service Excellence, which is superior to their competitors. One way of achieving this is by benchmarking firms against their competitors.

In this research paper the Service Quality and Service Recovery procedures of Company X in Port Elizabeth were benchmarked against its competitors using a customised form of the recognised SERVQUAL research instrument - the SERVPERF questionnaire. The results proved to be invaluable because the survey revealed insightful information which can be used to their strategic benefit. Civil consulting engineering firms need to be aware that Service Excellence is an imperative in the service industry, but do not necessarily have to be perfect. Firms simply need to outperform their competitors to be rated as market leaders.

Strategies to improve the Service Quality and Service Recovery of the firm under review are suggested and this work concludes with suggestions for future research projects, which may be beneficial to the researcher, the civil engineering industry and the economy of South Africa.
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CHAPTER 1

THE BACKGROUND AND METHODS OF STUDY

1.1 INTRODUCTION

The civil engineering industry in South Africa has seen a steady decline in the number of professionals during the last few decades. This can be attributed to factors such as a reduction in the industry demand, a reduction in the number of graduates, an increase in the number of emigrations and poor financial and other rewards. The result is that personnel have left the industry at a higher rate than those professionals entering it through tertiary institutions and immigration (Lawless, 2006).

It is anticipated that over R200 billion is to be spent on infrastructure in South Africa from 2006 through 2013. Hence, the civil engineering industry is entering a long-term growth phase, which is set to continue beyond 2010. However, the projected growth will not be achieved unless appropriate interventions are made. The current drivers are the Gautrain project, the Soccer World Cup of 2010, the Coega Industrial Development Zone (IDZ), the Eskom and Transnet expansions, the huge challenges of New Partnership for Africa’s Development (NEPAD) and more private sector developments (Lawless, 2006).

South Africa will need, according to Lawless (2006), between 3 000 and 6 000 additional civil engineers, technologist and technicians, depending on whether projects are run concurrently. According to Van Zyl (2006), the Eastern Cape construction industry is in a growth phase and is expected to gain further momentum. The total number of commercial building plans approved in the first four months of 2006 grew by more than 300 per cent over the previous year and this figure is the highest of all the provinces in South Africa (Van Zyl, 2006). This increased demand for Civil Consulting Engineering Firms (CCEF) to be more productive, with reduced time and human resources, has a profound effect on the quality of service delivered to clients.
‘Order-qualifiers’ are the minimum characteristics that a firm must have to be considered as a potential source of purchase and ‘Order-winners’ are those characteristics of a firm that distinguish it from its competitors and are the reasons why it is selected by the client (Davis & Heineke, 2005: 40). The order-winners remain Service Quality, that is Reliability, Assurance, Responsiveness, Tangibles and Empathy (Davis & Heineke, 2005: 278). It is imperative for a CCEF to ensure that it satisfy the ‘order-qualifiers’, such as its Black Economic Empowerment (BEE) ownership and shareholding, but more important to gain a competitive advantage by consistently providing Service Excellence, service which is superior to that of its competitors. One way of achieving this is by benchmarking against its competitors. Benchmarking is a comparison of the performance of a company in certain areas with that of other firms in its industry (Davis & Heineke, 2005: 229).

1.2 PROBLEM STATEMENTS AND OBJECTIVES

1.2.1 MAIN PROBLEM STATEMENT AND OBJECTIVES

The main objective of this research project is to determine the perceptions of the clients of a CCEF about its Service Quality in relation to its competitors. The CCEF to be benchmarked is called Company X situated in Port Elizabeth, Eastern Cape, South Africa.

The two Service Quality dimensions, according to Gardiner (2004: 56), that require the most action in the civil consulting engineering industry in Port Elizabeth (PE) are Reliability and Responsiveness. The perceptions of the clients of these two dimensions are benchmarked against the competitors of Company X in PE. This provides a relative ranking of Company X in relation to the Service Quality of its competitors. The results of this survey may prove to be invaluable to Company X.

Civil consulting engineering firms are unaware of the perceptions of their clients with regard to their Service Quality. Most do not have the measures in place to gain valuable feedback from their clients to provide better Service Quality. An
unrealistic belief by a CCEF about the perceptions of its clients about its Service Quality is undesirable.

The main problem statement of this research is: “How can Company X improve its Service Quality to gain a competitive advantage?”

The following questions will be addressed as appendages to the main problem statement:

- How does Company X perform in terms of the two most important Service Quality dimensions Reliability and Responsiveness?
- How does the performance of Company X relate to its competitors?
- What can Company X do to minimise possible performance shortfalls to become the market leader?

1.2.2 SUB-PROBLEM STATEMENT AND OBJECTIVES

The secondary objective of this dissertation is to ascertain the perceptions about Service Recovery of Company X in relation to its competitors. In addition, this dissertation will build on the findings of a previous dissertation titled Evaluating the Service Delivery of a Consulting Engineering Firm, by Robin Gardiner (2004), which concerns Service Quality in the civil engineering industry in PE.

The sub-problem statement comprises the following questions:

- Is the Service Recovery of Company X lacking?
- How does Company X fare in relation to its competitors?
- What can Company X do to minimise errors and engage in effective Service Recovery to gain a competitive advantage?

1.3 OVERVIEW OF RELATED LITERATURE

The first step in the research was to conduct a comprehensive literature search on Service Quality and Service Recovery. Online databases such as SABINET, EBSCOHOST, Emerald and Google were used to obtain relevant information. Various books, journals and other relevant media such as newspapers were
researched. Cognisance was taken of relevant information, including important recommendations and conclusions, contained in the research projects of Keet (2000), Calitz (2001) and Vassen (2002). The research of Gardiner (2004) is particularly relevant and this research project builds on some of its findings. Gardiner (2004: 60) suggests that strategies for improving Reliability and Responsiveness be developed and this is addressed in this research project.

The majority of clients of CCEF focus on the quality of service rather than the quality of work. It is difficult for clients to appraise technical excellence, therefore the personal relationship between the client and the firm is important (Maister, 2003: 71). Maister (2003: 76) observed that few professional services firms give attention to improving Service Quality.

Some CCEF attempt to overcome the price sensitivity of clients by concentrating on their quality of work, but this proves to be costly and improvement is difficult to demonstrate. Ironically, the improvement of the quality of service is often at no tangible cost and is more visible to clients (Maister, 2003: 76).

1.4 DEFINITION OF KEY CONCEPTS

1.4.1 SERVICE QUALITY

Maister (2003: 71) encapsulates the essence of Service Quality as:

\[ SATISFACTION = \text{PERCEPTION} - \text{EXPECTATION}. \]

An example of Service Quality is as follows. A client perceives Service Quality to be at a certain level, but had expected more, then the client will be dissatisfied. CCEF need to attentively listen to the needs of its clients, before making claims about technical craftsmanship. This is being truly client-centred. CCEF need to make its clients feel cared for and in good hands, and not assume that the client will place trust, confidence and respect in the firm. CCEF need to discuss all the potential roadblocks, detours and contingencies that may arise and clearly explain how it will be handled. CCEF often make excessive
promises in a vigorous attempt to win new clients, which creates expectations that cannot be fulfilled. Therefore, Service Excellence is delivered when perceptions exceed expectations, or when the gaps between client expectations and perceptions are minimised.

Service Quality is different from product quality because goods are consumed and services are *experienced* (Maister, 2003: 71). The following are the main differences between goods and services (Zeithaml, Parasuraman & Berry, 1990: 15-16):

- **Services are predominantly intangible.** Services, unlike goods, usually cannot be measured, tested and verified in advance of sale to ensure quality. The selling of a service is purely a performance, therefore the criteria clients use to evaluate it are complex and hard to capture accurately;

- **Services are heterogeneous.** The performance of services varies from one service provider to another, from client to client and over time. The interactions between the staff of CCEF and the clients cannot be standardised to ensure uniformity in the way that the quality of goods produced are;

- **Production and consumption of many services are inseparable.** Service Quality often occurs during service delivery, rather than being delivered to the client as manufactured goods. Service providers do not have the advantage of factories serving as buffers between production and consumption. Service clients are said to be in the service factory.

These characteristics clearly explain the differences between goods and services. However, it is the perception of the client about the Service Quality that causes either satisfaction or dissatisfaction.

1.4.2 CLIENT SATISFACTION VERSUS SERVICE QUALITY

Leading service firms have identified total client satisfaction both as a goal and as an imperative. Client satisfaction need not be viewed the same as Service Quality. Service Quality does not necessarily lead to client satisfaction and client satisfaction is not necessarily an antecedent of Service Quality (Gardiner,
Client satisfaction is a short-term transaction-specific measure, whereas Service Quality is a long-term overall evaluation of service. Hence, the perception of Service Quality by a client is formed over time through a number of dealings during which either satisfaction or dissatisfaction was achieved (Hoffman & Bateson, 2002: 324).

Two approaches assist with the achievement of total client satisfaction, namely Service Recovery and Service Guarantees.

- **Service Recovery.** This approach, according to Davis and Heineke (2005: 282), is encapsulated by the phrase “To err is human, to recover, divine”. Mistakes are made and what is important is how the mistakes are rectified. Service Recovery is an integral and crucial part of Service Quality to assure client satisfaction;

- **Service Guarantees.** This approach comprises powerful methods for obtaining valuable feedback from clients on how services are performed. An unconditional service guarantee provides the platform for clients to voice their complaints, rather than simply taking their business elsewhere. The characteristics of an effective services guarantee are that it is (Hoffman & Bateson, 2002: 325):
  - Unconditional;
  - Easy to understand;
  - Meaningful;
  - Easy to invoke;
  - Quick and easy to collect on.

1.4.3 TOTAL QUALITY MANAGEMENT

The reputation of a CCEF is built by its quality, reliability, delivery and price. Quality is the most important of these. Quality is meeting the requirements of the client and is not restricted to the functional characteristics of the services (Oakland, 2003: 16).

Total Quality Management (TQM) can be seen as an organisation wide approach that focuses on producing high Service Quality and needs to be the
responsibility of each individual staff member. TQM is an integral part of a firm and is not a separate programme. It encompasses all the functional areas within the firm (Davis & Heineke, 2005: 283).

Planning, People and Processes are the keys to ensuring Service Quality, which improves overall Performance. The four Ps of Planning, People, Processes and Performance form a structure of management necessities, which form the TQM model as illustrated in Figure 1.1 (Oakland, 2003: 26).

![Figure 1.1 - A contemporary framework for TQM](image)

Source: Oakland (2003: 27)

Performance is achieved by using a business excellence approach and through planning the involvement of people in the improvement of processes. The four Ps are described as follows (Oakland, 2003: 26-27):

- **Planning.** Designing quality, the development of strategies and policies, and by setting up appropriate partnerships and resources;
• **Performance.** Carrying out audits, reviews and benchmarking and establishing a balanced scorecard for the firm;

• **Processes.** Continuous improvement, quality management systems and management;

• **People.** Managing the human resources of the firm, communications and teamwork.

### 1.5 SCOPE AND DELIMITATION OF THE RESEARCH

This research was primarily focused on the perceptions of clients of CCEF in PE with respect to the quality of service. The research is targeted at a relatively small segment of clients in the service industry, but the scope and delimitation of the research were nonetheless sizable enough to be indicative of the industry concerned. Clients deal with numerous individuals from many firms and the information that was obtained from these clients was relevant to the purpose of this research.

### 1.6 ASSUMPTIONS

The following have been assumed in conducting the research:

• All the respondents were objective, unbiased and that any personal issues that might exist between the clients and the staff of the CCEF under review did not influence the ratings;

• All the respondents rated the questions with the same standard of assessment;

• The ratings that were obtained are indicative of the industry as a whole in South Africa. Hence, the expectations and perceptions of clients in PE are not different to those in the rest of South Africa;

• The Service Quality dimensions Reliability and Responsiveness, as developed in the original SERVQUAL research instrument, are applicable to the civil consulting engineering industry;

• The expectations of the statement pertaining to Service Recovery in the questionnaire would be at or near perfection (as noted by Gardiner (2004: 58)). Hence, similarly to the standard Service Quality dimensions,
the Gap Scores of Service Recovery could be obtained and used to benchmark this factor against competitors;

- The perceptions of clients are based on the individual experiences obtained from the various local CCEF and that the research results provide an implicit comparison of results.

1.7 LIMITATIONS

The research is focused on government institutions in PE, which include the Nelson Mandela Bay Municipality (NMBM), Cacadu District Municipality, Department of Public Works, and the South African National Roads Agency.

Only the dominant CCEF in PE have been included in the research instrument (questionnaire) and provision was made for clients to specify and rate other firms which it had dealings with. Company X was benchmarked against its ten main competitors in PE and against the civil consulting engineering industry. The latter comprised the average rating of all the firms in PE.

The questionnaire included nine questions covering the two Service Quality dimensions, Reliability and Responsiveness and one question was pertaining to Service Recovery. Its results are limited to the Gap Scores of the aforementioned and no conclusions or inferences could be made on any other issue relating to Service Quality or Service Recovery. The research was limited to current and previous clients, as suggested by Parasuraman, Zeithaml and Berry (1988: 31), because meaningful responses to the perception statements of the SERVQUAL questionnaire require respondents to have some knowledge of or experience of Company X.

1.8 SUMMARY

The problem statements and objectives of this research were identified in this introductory chapter. The overview of the related literature and the definition of key concepts and the scope and delimitation of the research have set the parameters of this dissertation, which is structured as follows:
Chapter 2: Service Quality and Service Recovery in the Civil Consulting Engineering Industry;
Chapter 3: Research Design;
Chapter 4: Analysis and Interpretation of the Research;
Chapter 5: Recommendations and Conclusion.
CHAPTER 2

SERVICE QUALITY AND SERVICE RECOVERY IN THE CIVIL CONSULTING ENGINEERING INDUSTRY

2.1 INTRODUCTION

The aim of this chapter is to analyse and present the findings of a literature review that determines the factors influencing the Service Quality and Service Recovery of CCEF. It includes prior research and the application of Service Quality and Service Recovery in practice.

2.2 SERVICE QUALITY

An organisation needs a strategy to be successful. Strategy is defined as “… an integrated and coordinated set of commitments and actions designed to exploit core competencies and gain a competitive advantage” (Hitt, Ireland & Hoskisson, 2005: 7). The key to develop an effective strategy is to understand how to add value for clients. Value is added through the competitive priorities that are selected to support a strategy. The competitive priorities are (Davis & Heineke, 2005: 29):

- **Cost.** Organisations need to provide low-cost products and services;
- **Quality.** Organisations need to provide high-quality products and services;
- **Delivery.** Organisations need to provide products and services quickly;
- **Flexibility.** Organisations need to provide a wide variety of products and services;
- **Service.** Organisations need to focus on how products and services are delivered and supported.

Service Quality, according to Zeithaml et al (1990: 18), is defined as “… the extent of discrepancy between customers’ expectations or desires and their perceptions”. The importance of Service Quality is generally understood. Most CCEF acknowledge the critical distinction between technical quality and Service
Quality and the importance of Service Quality in ensuring client satisfaction. However, superior service in this area is rare (Maister, 2003: 79). The CCEF needs to be equally focussed on managing the experience of the client and on executing technical tasks. Clients will generally choose a CCEF which they can trust, have confidence in and which will give them reassurance, rather than for their “cold” technical expertise (Maister, 2003: 71).

Parasuraman et al (1988: 12-40) conducted a thorough research on the quality of service and categorised Service Quality into five major dimensions, namely Reliability, Tangibles, Responsiveness, Assurance and Empathy. These dimensions emphasise the perception by the client of the service rather than the view of the service provider of how the service need to be delivered (Davis & Heineke, 2005: 278).

Excellent service is beneficial in the short and long term because it creates true clients. These are clients who are pleased that they have chosen a firm after the service experience and clients who will come back for repeat business. The positive relationship between perceived quality and profitability has been documented in a database from the Profit Impact of Market Strategy (PIMS) programme, which illustrates this relationship. Figure 2.1 (from the PIMS database) illustrated the relationship between relative perceived quality and Return On Investment (ROI) (Zeithaml et al, 1990: 10).

![The Quality/Profit Relationship](image)

**Figure 2.1 - The Quality/Profit Relationship**

Source: Zeithaml et al (1990: 10)
It is evident that an increase in the relative quality results in an increase in the ROI.

2.2.1 A SERVICE QUALITY MODEL

The Service Quality Model (Zeithaml et al, 1990: 46) focuses on deficiencies within firms that contribute to poor Service Quality perceptions by clients. Organisations do not always meet the expectations of their clients and the differences between the expected and perceived service are called “Gaps”. It is noted that should firms fail to meet the expectations of clients, it does not necessarily result in dissatisfied clients. Figure 2.2 depicts a Conceptual Model of Service Quality as developed by Zeithaml et al (1990: 46).

![Figure 2.2 – Conceptual Model of Service Quality](source: Zeithaml et al (1990: 46))
The Gaps as illustrated in Figure 2.2 are narrowed through closing the provider gaps (Zeithaml et al, 1990: 49):

- **Gap 1** – The discrepancy between the expectations of the clients and the perceptions of management of those expectations. This translates into not knowing what the client wants;
- **Gap 2** – The discrepancy between perceptions by management of client expectations and Service Quality specifications. This translates into not selecting the right service designs and standards;
- **Gap 3** – The discrepancy between actual Service Quality specifications and the actual service delivery. This translates into not delivering to service standards;
- **Gap 4** – The discrepancy between service delivery and what is communicated to clients. This translates into not matching performance to promises;
- **Gap 5** – The assessment of the client about Service Quality.

The factors that contribute to Gap 1 through Gap 4 are as follows (Zeithaml et al, 1990: 35):

- **Gap 1**
  - Insufficient market research;
  - Inadequate use of market research findings;
  - Lack of interaction between management and the clients;
  - Insufficient upward communication from contact personnel to management;
  - Too many staff levels between contact personnel and management.
- **Gap 2**
  - Inadequate management commitment to Service Quality;
  - Perception of infeasibility;
  - Inadequate standardisation of tasks;
  - Absence of goal setting.
- **Gap 3**
  - Employee role ambiguity;
  - Role conflict;
  - Poor employee-job fit;
  - Poor technology-job fit;
o Inappropriate supervisory control systems;
o Lack of perceived control;
o Lack of teamwork.

- Gap 4
  o Inadequate horizontal communications;
  o Differences in policies and procedures across branches or departments;
  o Propensity to over-promise.

This Conceptual Model of Service Quality helps organisations to focus on strategies to ensure Service Excellence.

It is important to note that the term “expectations” differs between Service Quality and client satisfaction literature. Expectations, in the ‘satisfaction’ literature, are viewed as predictions made by clients about what is likely to occur during a transaction or exchange. Oliver (1981: 33, as cited by Parasuraman et al, 1988: 17), states that “It is generally agreed that expectations are consumer-defined probabilities of occurrence of positive and negative events if the consumer engages in some behaviour”. Expectations, in Service Quality literature, are viewed as the desires or wants of clients, as what clients feel a service provider need to offer, opposed to what firms will offer (Parasuraman et al, 1988: 17). It is therefore evident that the above Conceptual Model is not applicable to client satisfaction, but only to Service Quality.

2.2.2 SERVICE LEADERSHIP

The main reason that Service Quality is not at the desired level is due to a lack of sufficient Service Leadership. Zeithaml et al (1990: 5) states that “Too many workers are over-managed and under-led”. Service Leadership means profit, and is an integral part of any business. The following are important characteristics of Service Leadership (Zeithaml et al, 1990: 5-8):

- **Service Vision.** Service leaders view Service Quality as the basis for competing. Service Excellence is a central part of the vision. Service leaders realise that Service Excellence requires constant attention;
• High Standards. Service leaders strive to achieve the right service the first time;

• Hands-on Leadership style. Service leaders lead from the field, as opposed to from their desks;

• Integrity. Personal integrity is vital to successful Service Leadership. There is a strong connection between Service Excellence and employee pride. This pride is partly shaped by their perceptions of management fairness.

2.3 CLIENT SATISFACTION

The difference between Service Quality and client satisfaction have been introduced and briefly discussed. Client satisfaction is a subjective concept, because expectations differ from client to client. Any firm that wants to assess its performance needs to distinguish between measuring the following (Van Looy, Gemmel & Van Dierdonck, 2003: 125):

- Perceived Service Quality;
- Client satisfaction;
- Technical Quality.

This distinction is important in the civil consulting engineering industry, because of its inherent simultaneity and intangibility.

2.3.1 SERVICE SATISFACTION FRAMEWORK

Satisfaction and dissatisfaction, according to Van Looy et al (2003: 125-126), are at either end of a continuum, while the actual position is defined by a comparison between expectations and outcome. A service satisfaction framework is presented in Figure 2.3 and it contains the following concepts (Van Looy et al, 2003: 125-126):

- Satisfied client. This occurs when the outcome of the perceived Service Quality meets expectations;
- Delighted client. This occurs when the perceived Service Quality exceeds the expectations;
• **Dissatisfied client.** This occurs when the perceived Service Quality is below expectations.

![A service satisfaction framework](image)

**Figure 2.3 - A service satisfaction framework**

It can be deduced from this framework that only a certain percentage of clients who are dissatisfied make their complaints heard. Client satisfaction management and complaint management are crucial parts of a strategy to increase client loyalty, and ultimately increase profits. This is achieved when firms minimise client defections, have effective Service Recovery strategies and maximise repeat business. Service satisfaction is achieved through client satisfaction measurement and complaint management (Van Looy et al, 2003: 125-126).

### 2.3.2 MEASURING CLIENT SATISFACTION

If something can be measured, it can be managed. The prime reason for measuring client satisfaction is the ability it creates to balance the scorecard of the organisation. Performance measurement systems appear to be biased in favour of financial measures and typically require the following (Van Looy et al, 2003: 127):

- The measuring of client satisfaction for organisational units opposed to the organisation as a whole;
- The satisfaction data is made available to everyone to create peer pressure and healthy internal competition;
• The appraisals of managers are linked to the client satisfaction data. A reference point is required for these measures to be meaningful and this is why benchmarking is needed. The most common benchmarks include (Van Looy et al, 2003: 128):
  • Development over time;
  • Different organisational units;
  • Competition.

Benchmarking that is done over time, serves as a good indicator about whether the client focus efforts of the organisation are successful. Van Looy et al (2003: 128) state that outperforming competitors may yield more than merely achieving the highest possible performance. Hence, it is not uncommon to benchmark client satisfaction scores against those of the competitors. This is done in terms of the actual performance and the rate of improvement.

Client loyalty is affected by client satisfaction, therefore a measurement instrument need to typically cover the following aspects (Van Looy et al, 2003: 130-131):

• **Overall satisfaction.** A distinction needs to be made between measuring transaction satisfaction and relationship satisfaction. Transaction satisfaction refers to the satisfaction pertaining to the most recent interaction with focus on the core part of the service. Relationship satisfaction refers to a feeling of satisfaction with the firm as a whole;

• **Client loyalty.** The relationship between satisfaction and loyalty in the firm can be assessed by establishing a client loyalty measure. The clients of CCEF pay for the same service from different firms, therefore loyalty needs to be defined either according to the intent or behaviour of the client:
  o **Intent:** Clients will remain loyal to the firm if it is considered to be the preferred firm;
  o **Behaviour:** This is a more meaningful measure as it is based on actual buying behaviour.

• **Referrals.** It is difficult in practice to measure actual referrals and it is common for firms to measure the intent to refer instead.
One way to measure specific aspects of a service is to divide it into its quality dimensions. These dimensions are related to the needs of the clients. A perfect measurement model, according to Van Looy et al (2003: 132), needs to have the following characteristics:

- The various dimensions are valid across a wide range of services (that is, universal);
- The dimensions are independent. The dimensions measure the various aspects of service quality perceptions;
- The dimensions comprise a comprehensive set;
- The dimensions are homogenous;
- The dimensions are unambiguous;
- The number of dimensions is limited.

A perfect model does not currently exist, but one model which is widely accepted and possesses most of the abovementioned characteristics is the SERVQUAL research instrument.

2.4 MEASURING SERVICE QUALITY

The SERVQUAL model was developed as a Service Quality measurement instrument by Zeithaml et al (1990). Originally, ten determinants or components of Service Quality were identified. Zeithaml et al (1990: 21-22) described these ten determinants of Service Quality as:

- **Reliability**: The ability of the service provider to perform the promised service dependably and accurately, for example:
  - Accurate billing;
  - Performing the service at the designated time.
- **Responsiveness**: The willingness of the personnel of the service providers to assist clients with their specific problems, for example:
  - Mailing a transaction slip immediately;
  - Calling the client back immediately;
  - Giving prompt service such as setting up appointments quickly.
- **Access**: The accessibility of the service and delivered with minimum waiting, which implies:
  - The service is easily accessible by telephone;
- The waiting time to receive the service is not excessive;
- There are convenient hours of operation.

- **Security**: The service needs to be free from danger and risk, and may involve:
  - Physical safety;
  - Financial security and confidentiality.

- **Credibility**: The service provider must be honest and trustworthy. Contributing to credibility are:
  - The company name and reputation;
  - The personal characteristics of the contact personnel;
  - The degree of hard-sell involved in interactions with the client.

- **Understanding and knowing the client**: The amount of effort the firm expends to know and understand the needs of their clients. It involves:
  - Learning the specific requirements of the client;
  - Providing individual attention.

- **Competence**: The personnel need to possess the necessary skills and knowledge to perform the service, which involves:
  - Knowledge and skill of the contact personnel;
  - Knowledge and skill of the operational support personnel;
  - Research capability of the firm.

- **Courtesy**: The personnel of the service provider must be polite and courteous to clients, which includes:
  - Consideration for the property of the client;
  - Clean and neat appearance of contact personnel.

- **Tangibles**: This includes the physical evidence of the service and covers:
  - The physical facilities and the appearance of personnel;
  - The tools and equipment used to provide the service;
  - The physical representation of the service.

- **Communications**: The firm need to communicate effectively what services are provided, which involves:
  - Explaining the service itself and its cost;
  - Explaining the trade-offs between service and cost;
  - Assuring the client that problems will be resolved.
Zeithaml et al (1990: 18) discovered that a high degree of correlation existed between communication, competence, courtesy, credibility and security and combined them into one new dimension, namely Assurance. A similar situation for access and understanding was discovered, which were merged into Empathy. These ten general criteria were narrowed down to a total of five Service Quality dimensions. These are briefly examined as follows (Zeithaml et al, 1990: 25):

- **Tangibles** – The appearance of physical facilities, the personnel, the tools or equipment used to provide the service and communication material;
- **Reliability** – Consistency of performance and dependability, that is to perform services correctly the first time and to honour its promises;
- **Responsiveness** – The willingness to assist the client and to provide prompt service;
- **Assurance** – Knowledge and courtesy of employees and their ability to inspire confidence and trust;
- **Empathy** – Individualised, caring attention to clients.

These five Service Quality dimensions comprise the SERVQUAL research instrument (Zeithaml et al, 1990: 25).

One criticism about the SERVQUAL dimensions is related to more fundamental methodological and conceptual issues, for example, the presence of conceptual inconsistency in the dimensions. Tangibles and Responsiveness are completely different concepts. Tangibles are deemed to be part of service, but are not a quality dimension. The quality of the Tangibles (availability, operating characteristics, and the like) influences the perceived quality as much as the quality of the personnel (appearance, competence, et cetera). Tangibles, like personnel, are not a quality dimension, but are rather a crucial quality-determining element which influences dimensions such as Reliability, Credibility and others. Another conceptual problem is the homogeneity of the generic dimensions (Van Looy et al, 2003: 134). The SERVQUAL tool has received some criticism, but the tool has been used to measure the Service Quality in a variety of industries with great success.
The SERVQUAL research instrument is a relationship survey, which was developed to capture client perceptions of Service Quality represented as performance expectations minus perceptions. These relationship surveys comprise 22 multidimensional questions about all facets of the relationship of the client with the service (Zeithaml & Bitner, 2000: 118). A modified use of the questionnaire is to limit the average perception score. This is called the SERVPERF survey (performance perceptions only) and is used when expectations are likely to be all the same, typically high. It was observed that all the expectations for each of the statements in a SERVQUAL questionnaire in a survey conducted in the civil engineering industry in PE were all rated at or near perfection (Gardiner, 2004: 58). This indicated that the SERVPERF method would be a better instrument of measure for this research (Gardiner, 2004: 59).

2.5 PRIOR RESEARCH

This research uses some of the findings by Robin Gardiner (2004) in his dissertation “Evaluating the Service Delivery of a Consulting Engineering Firm”. His research was aimed at mainly the same clients in the Eastern Cape as those of Company X and used the SERVQUAL questionnaire. Gardiner discovered that Gaps existed between client expectations and perceptions. Some of the findings and recommendations by Gardiner (2004: 59-60) have been incorporated in this research and include:

- The use of the SERVPERF instrument opposed to the SERVQUAL research instrument;

- The adoption of a variety of measures with the aim to improve response rate:
  - Distribution of the questionnaire by a senior member of the firm such as the Managing Director;
  - Prior notification by the firm that the questionnaire is to be sent to clients;
  - Implementing a follow-up procedure to remind the respondents.

- The relative importance of the Service Quality dimensions to clients of CCEF in PE, which are:
  - Reliability – 37 per cent;
  - Assurance – 21 per cent;
o Responsiveness – 19 per cent;
o Empathy – 12 per cent;
o Tangibles – 11 per cent.

- Strategies for improving Reliability and Responsiveness which are the two Service Quality dimensions with the largest Gap Scores;
- The suggested changes to the X-axis and Y-axis scales of the Importance–Performance Matrix.

2.6 THE IMPORTANCE–PERFORMANCE MATRIX

The Importance–Performance Matrix is a method which can be used to reflect perceived relationships between importance, performance and priority for improvement. The Matrix contains zones which are depicted in Figure 2.4.

Figure 2.4 - The Importance–Performance Matrix
Source: Slack (1994: 67, as adapted by Gardiner, 2004: 56)

The “lower bound of acceptability” is shown as line AB. It is below this line that managers would typically have a dire need for improvement, whereas above this line there is no pressing urgency for improvement. Not all factors falling below this line AB have the same degree of improvement priority. A boundary represented by line CD represents the distinction between “Urgent Action” and
“Improve”. Similarly, factors falling above the line AB have been classified as either “Appropriate” or “Excess?”. The four zones imply different approaches as described below (Slack, 1994: 67-69).

2.6.1 THE “APPROPRIATE” ZONE

The lower limit of the “Appropriate” zone is the “lower bound of acceptability”, which is the level of performance that the firm would not want fall below. The objective of any improvement programme is to move performance up to or above this boundary. Factors falling in the Appropriate zone can be considered satisfactorily in the short and medium term. Long-term objectives will be to continuously improve and to strive towards the upper boundary of this zone.

2.6.2 THE “IMPROVE” ZONE

Factors lying below the lower edge of the Appropriate zone need to be improved. The “Improve” zone is depicted as the area below the AB line, and above the CD line in Figure 2.4. Factors lying in the bottom left-hand corner of the Matrix are likely to be classified as non-urgent, lower-priority cases where performance is poor, but is less important.

2.6.3 THE “URGENT ACTION” ZONE

Any factor that lies within the “Urgent Action” zone, depicted as the area below line CD in Figure 2.4, is classified as crucial. The short-term objectives are to raise the performance to the Improve zone. The medium-term goal is to improve performance to above the lower boundary of the Appropriate zone.

2.6.4 THE “EXCESS?” ZONE

The “Excess?” zone is depicted as the area above the EF line in Figure 2.4. Its punctuation mark, the “?”, is of particular importance. Any factors that lie in this zone imply that their achievement performance is better than would seem to be warranted. This can mean that too many resources are being utilised to
achieve such a level. This needs to be assessed to ascertain whether some of these resources could be diverted to a more needy factor.

2.6.5 QUALIFICATIONS TO THE USE OF THE IMPORTANCE–PERFORMANCE MATRIX

The adjusted use of the Matrix needs clarification. The version of the Importance–Performance Matrix by Slack (1994: 67) was based on a Likert-type scale of one to nine. Gardiner (2004: 57) suggested that a changed Matrix be used, with the difference being that the Y-axis is on a scale from -4.5 to 0, at intervals of 0.5.

The relative importance, according to Gardiner (2004: 43), of each of the five SERVQUAL dimensions in the civil engineering industry in PE is illustrated in Figure 2.5.

![Relative Importance of Service Quality Dimensions](image)

**Figure 2.5 - Relative Importance of Service Quality Dimensions**

Source: Gardiner (2004: 43)

2.7 SERVICE RECOVERY

Service Recovery is a well-accepted term describing the actions service firms take to compensate the negative reactions by a client to poor service. Manufacturing firms can have a goal of zero defects, but service firms need to have Service Recovery strategies in place. These strategies can include, for
example unconditional service guarantees and empowered employees, to correct any service failures and to strive towards “zero defections” of clients. Effective Service Recovery can lead to more satisfied or even delighted clients, than had these clients not receive the poor service (Bowen & Johnston, 1999: 118). Hence, a service paradox exists; a client will rate the performance of a firm higher if a failure occurs and the service is recovered, than if the service had been delivered correctly the first time (Hoffman & Bateson, 2002: 335). Service Recovery is said to be the reaction of an organisation to the complaint by a client that results in client satisfaction and goodwill. Client complaints need to be viewed as opportunities to improve Service Quality and to ensure that the client is satisfied before the encounter ends. Clients voice complaints for a number of reasons and these include (Hoffman & Bateson, 2002: 347):

- To have the problem solved;
- To gain emotional release from frustration;
- To regain some measure of control by influencing the evaluation of the source of the complaint;
- To solicit sympathy or test the consensus of the complaint; and/or
- To create an impression.

Stiefbold (2003: 44) discovered that between 85 and 95 per cent of disgruntled clients will never complain to the firm about poor service, but will simply take their business elsewhere. More than 90 per cent of these dissatisfied clients will never use the same organisation again. This strengthens the reason for organisations to have Service Recovery processes in place. An effective Service Recovery process needs to be able to convert at least 80 per cent of dissatisfied clients into satisfied ones.

Stiefbold (2003: 44) summarises the following about why Service Recovery needs to be done:

- The client may not use the firm again, but should the recovery attempt be perceived by the client as satisfactory, that individual is not likely to embark on a market damaging campaign against the firm;
- More than 70 per cent of dissatisfied clients will re-engage in business activities with the firm should the problem resolved be perceived as satisfactory. Some 90 per cent of clients will return if the Service
Recovery was perceived as fair and prompt. Firms need to try to get more of their disaffected and dissatisfied clients to complain, since this would create a unique economic opportunity;

- Clients who have experienced effective Service Recovery will engage in more business with the firm and will promote the firm to a greater degree than loyal clients;
- Effective Service Recovery can differentiate a firm from its competitors. It is perceived as part of the overall Service Quality.

Research has indicated that there are four types of activities necessary for Service Recovery (Bowen & Johnston, 1999: 120):

- **Response.** The acknowledgement that a problem occurred, together with an apology, empathy, quick response and management involvement;
- **Information.** The explanation of the failure, listening to suggested solutions, agreeing on a solution, giving assurance that it would not happen again and a written apology;
- **Action.** The correction of the failure, taking the necessary action to avoid failures in the future, follow-up action to ascertain the after-effects;
- **Compensation.** Token compensation, equivalent compensation or refund.

There are, according to Stiefbold (2003: 44-46), firms with excellent Service Recovery efforts who make a number of mistakes. These include the following:

- Most managers do not believe that Service Recovery is worth the time and effort. It is believed that Service Quality is taken for granted by all clients and that it is costly to excel continuously. These managers think that poor Service Quality has nearly become the norm and that the clients, themselves, are very cynical;
- Many managers disregard evidence that Service Recovery has a substantial financial pay-off. Most firms have turned their focus towards cost reduction and pay lip-service to client retention strategies aimed at the most profitable clients. The need to respect all clients appears forgotten;
• Firms fail to take advantage of free client data on critical incidents. There is little coordination of information from the various client segments that will allow the firm to plan and respond effectively to Service Recovery opportunities;

• Firms fail to invest sufficiently in actions which prevent poor service. Preventative measures may not eliminate the need for excellent Service Recovery systems, but greatly reduce the load. Inadequate preventative actions are typically found in the following three areas:
  o The measurement of dissatisfaction both qualitatively and empirically. This leads to an ignorance of the activities in the various client segments;
  o The implementation of regular tracking polls on significant service indicators and the analysis of the resulting data by applicable market segments;
  o The design and implementation of user-friendly client complaint systems to collect feedback.

• The most important aspect of Service Recovery is attitude. The Service Recovery effort will not succeed without the proverbial “smile-in-the-voice”;

• Firms make it difficult for clients to complain or give feedback. Most firms do not have a mechanism whereby clients can get problems solved;

• Firms do not train and empower employees to convert disgruntled clients into satisfied clients. Employees often quote the organisational policies, rather than asking the clients for solutions to amicably resolve the problem;

• Some firms collect data on client problems, but fail to communicate this information as a preventative measure for future problems.

Firms that implement effective Service Recovery strategies incur a variety of the benefits; financial consequences of market damage are avoided, the revenue potential from the clients that have been successfully recovered is increased, and it assists with the loyalty of the client base. The quality of customer support processes throughout a firm can reduce the need and cost of Service Recovery. Stiefbold (2003: 46) aptly summarises it by stating that “Service Recovery is smart and profitable business”.
2.7.1 CONCEPTUAL MODEL OF SERVICE FAILURE AND RECOVERY STRATEGIES

Zhu, Sivakumar and Parasuraman (2004: 497-498) have developed a conceptual model of service failure and recovery strategies. Figure 2.6 depicts this conceptual framework incorporating the perspectives from both the client and the firm.

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**Figure 2.6 - A conceptual model of service failure and recovery strategies**

Source: Zhu, Sivakumar and Parasuraman (2004: 497)

The service failure, as perceived by the client, is divided into two components, namely Failure Type (outcome versus process) and Failure Magnitude. The
client experiences a value loss when a failure occurs. This loss is moderated by the sensitivity of the client to each type of failure and the perceived importance of the outcome and process dimensions. The client experiences a value gain, depending on the effectiveness of the Service Recovery efforts. This perceived value gain is moderated by the sensitivity of the client to each type of recovery and the perceived importance of the two dimensions. The perceived value by the client of the service is collectively determined by the previous perceived value, perceived value loss from failure, and perceived value gain from the Service Recovery by the individual.

The Service Recovery efforts, from the perspective of the service firm, have a two-fold objective. First, the firm needs to aim to re-establish the cumulative perceived value by the client to the desired target level that is necessary to retain the client. This level is indicated as the “Value Recovery Target” in Figure 2.6. Second, the firm needs to try to minimise the overall recovery cost required to realise the Value Recovery Target.

Zhu et al (2004: 497-498) suggest that the type and magnitude of Service Recovery need not depend on the severity of the failure and the principle of matching mental accounting alone. Their model conceptualises a value-driven approach. The firm determines the optimum recovery strategy by firstly deciding on the target for its recovery efforts. This target is based on the existing and potential profitability of the client and other criteria that influence the importance of the client to the firm.

2.8 DISSATISFACTION AND COMPLAINING BEHAVIOUR

Client dissatisfaction has a significant negative impact on loyalty towards a firm and on the intentions for repeat business. Therefore, managers need to understand the relationship between dissatisfaction and client complaint behaviour. The research by Johnston (1998: 69-76) reveals the percentage of clients and their level of dissatisfaction reported, as indicated in Table 2.1.
Table 2.1 - Percentage of clients and level of dissatisfaction reported

<table>
<thead>
<tr>
<th>Level of dissatisfaction</th>
<th>Percentage of Respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Slightly dissatisfied</td>
<td>8%</td>
</tr>
<tr>
<td>Annoyed</td>
<td>14%</td>
</tr>
<tr>
<td>Very annoyed</td>
<td>30%</td>
</tr>
<tr>
<td>Extremely annoyed</td>
<td>22%</td>
</tr>
<tr>
<td>Absolutely furious</td>
<td>26%</td>
</tr>
<tr>
<td>Total</td>
<td>100%</td>
</tr>
</tbody>
</table>

Source: Johnston (1998: 74)

Johnston (1998: 74) states that “[Figure 2.7] confirms … that the number and types of responses made by a dissatisfied client will be proportional to the intensity of the dissatisfaction with the execution of complaining which appears not to be significantly proportional to the intensity of dissatisfaction”. He notes that the chances of not re-using the services of a firm or actively dissuading other people rises sharply with the intensity of dissatisfaction experienced.

Figure 2.7 - Actions taken for different levels of dissatisfaction

Source: Johnston (1998: 74)
It is surprising to note that a large number of only *Slightly Dissatisfied* clients were willing to take action. These clients were prepared to re-use the service, although their dissatisfaction was not voiced at the time. Approximately half of these clients told their friends (66 per cent) and made a formal complaint (50 per cent). It was observed that each dissatisfied client will communicate their experience to an average of 11 others. Johnston (1998: 74) further reveals that the majority of dissatisfied clients do complain; from 50 per cent of the *Slightly Dissatisfied* clients rising to 90 per cent of the *Absolutely Furious* clients.

There were 85 per cent of the *Absolutely Furious* clients who told other people about the incident and 90 per cent made a formal complaint, whilst 55 per cent voiced their dissatisfaction during the service. These took action against the firm with 70 per cent actively dissuading other people from using the services. Only 10 per cent were prepared to take further actions and actively campaign against the firm. This includes acts such as legal action or petitioning. The fact that the vast majority of clients made themselves available for Service Recovery by either making a fuss or formally complaining, or both, is noteworthy. Fifty per cent of the *Slightly Dissatisfied* clients made themselves available for Service Recovery by voicing their dissatisfaction. This increased to 100 per cent of the clients who were *Absolutely Furious*. Therefore, the majority of clients complain and so make themselves available for Service Recovery (Johnston, 1998: 75-76).

The research by Johnston (1998) was not specifically aimed at the CCEF under review in this dissertation, however, the importance of Service Quality is stressed and the fact that firms must engage in effective Service Recovery is affirmed.

### 2.9 TOTAL QUALITY MANAGEMENT IN THE CIVIL CONSULTING ENGINEERING INDUSTRY

The current trend in most services firms is to have a Quality Management System (QMS) which is ISO 9001:2000 compliant and accredited. This applies to CCEF. The first version of the International Standards Organisation (ISO) 9000 series of standards was adopted in 1987 and originally provided a basic
model for quality assurance. Subsequently, the ISO 9000 series was instrumental in establishing a solid basis for further quality improvement and the implementation of more sophisticated QMS. Currently, ISO accreditation and compliance with an ISO 9001:2000 quality system holds many advantages for both firms and clients and include:

- The reduction of risk;
- It encourages the technical staff of the firm to be quality conscious and be responsible for their own quality.

The ISO 9001:2000 manual, as cited by Bureau Veritas Quality International (BVQI, 2000: 2.5 – 2.10), defines the following key concepts:

- **Quality** is the “degree to which a set of inherent characteristics fulfils requirements”;
- **Quality Assurance** is the “part of quality management focused on providing confidence that quality requirements will be fulfilled”;
- **Quality Control** is the “part of quality management focused on fulfilling quality requirements”;
- **Quality Management** as “coordinated activities to direct and control an organisation with regard to quality”.

The ISO 9001:2000 requires that “… top management shall ensure that quality objectives, including those needed to meet requirements for product are established at relevant functions and levels within the organisation. The quality objectives shall be measurable and consistent with the quality policy” (BVQI, 2000: 3.15).

Quality Management, according to Bureau Veritas Quality International (BVQI, 2000: 2.11), is based on eight principles:

- **Client focus** – Firms depend on their clients and need to identify their current and future needs to be able to meet or exceed them;
- **Leadership** – Leadership is needed to provide direction and unity of purpose and to create an environment in which the organisational stakeholders become fully involved in achieving its goals and objectives;
• **Involvement of staff** – The involvement of personnel, and especially their co-operation, allows for their abilities to be fully used for the benefit of the firm and themselves;

• **Process approach** – All activities and resources need to be managed as processes for the results to be achieved;

• **System approach to management** – Interrelated processes need to be identified, understood and managed effectively for achieving objectives contributing to the effectiveness and efficiency of the firm;

• **Continual improvement (Kaizen)** – This needs to be a permanent organisational objective;

• **Factual approach to decision-making** – Decisions are most effective when based on factual data and information;

• **Mutually beneficial supplier relationship** – A good relationship between the firm and its suppliers will enhance the ability of both firms to create value.

The modern concept of quality focuses on how firms meet or exceed all the requirements and expectations of their clients. This broadened understanding of quality led to the concept of TQM, which is based on the following three elements (BVQI, 2000: 2.12):

- No one in the firm is excluded. Everyone in the firm is responsible for implementing quality which has an impact on the client perception of quality;
- Internal and external client must be satisfied. Firms are viewed as a series of client supplier relationships;
- Appreciation of the firm by society. This plays a crucial role in securing the success of the business.

**2.10 SUMMARY**

This chapter presented the findings of a literature study which determined the factors influencing the Service Quality and Service Recovery of CCEF and the suggested research instrument to be used to benchmark the firm under review against its competitors. The next chapter describes the design of the research.
CHAPTER 3

RESEARCH DESIGN

3.1 INTRODUCTION

The objective of this chapter is to outline the research method followed, the research questions and hypotheses, and the selection and appropriateness of the research instrument used, the questionnaire.

3.2 RESEARCH METHODOLOGY

The main research paradigm used in this study can be labelled as positivistic. Other recognised terms for this research paradigm are quantitative, objective, scientific or experimental (Collis & Hussey, 2003: 47). The positivistic paradigm deals with the facts or causes of social phenomena, with little regard to the subjective aspects of human activity (Collis & Hussey, 2003: 52).

The phenomenological paradigm has the following attributes (Collis & Hussey, 2003: 55):

- It uses large samples;
- It is concerned with hypotheses testing;
- The data is specific and precise;
- The location is artificial;
- The reliability is high;
- The validity is low;
- It generalises from the sample to the population.

The methodology of this research is concerned with the following main issues (Collis & Hussey, 2003: 55):

- Why certain data was collected;
- What data was collected;
- From where was the data collected;
- When was the data collected;
• How was the data collected;
• How the data will be analysed.

3.2.1 TRIANGULATION

The potential bias and sterility of a single-method approach can be overcome by using different research approaches, methods and techniques in the same study. This is known as triangulation and this approach could lead to greater validity and reliability than a single methodological approach (Collis & Hussey, 2003: 78). Validity is the extent to which the research represents what is happening in a situation and whether the collected data represents a true picture of the subject matter. Reliability deals with the findings of the research and whether the same results would be obtained if the same research is repeated by someone else (Collis & Hussey, 2003: 186).

The following types of triangulation are used in this research:

• **Data triangulation.** Data was collected at different times and from different sources in the study of a phenomenon. In this research, data triangulation is with the research findings of Gardiner (2004);

• **Methodological triangulation.** Both qualitative and quantitative methods of data collection have been used in this research. Section A of the questionnaire is qualitative and Section B is quantitative.

Jick (1979, as quoted by Collis & Hussey, 2003: 78), states that triangulation has important strengths. It encourages productive research, enhances qualitative methods and allows the complementary use of quantitative methods.

3.3 RESEARCH QUESTIONS AND HYPOTHESES

3.3.1 RESEARCH QUESTIONS

There are questions which arise when taking cognisance of the purpose of the research and its objectives.
The questions arising around Service Quality issues are as follows:

- How does the Service Quality of Company X rate against that of its competitors in PE?
- Can Company X improve its quality of service?
- What is the overall perception of Service Quality of CCEF in PE?
- How concerned is Company X with Service Quality?
- How important is Service Quality to clients?

The questions arising around Service Recovery issues are as follows:

- How does the Service Recovery of Company X rate against that of its competitors in PE?
- How could Company X improve its effectiveness of Service Recovery?
- What is the overall perception of Service Recovery of CCEF in PE?
- How concerned is Company X with Service Recovery?
- How important is Service Recovery to clients?

These research questions lead to the formulation of the research hypotheses.

3.3.2 RESEARCH HYPOTHESES

The normal research process under a positivistic paradigm, as suggested by Collis and Hussey (2003: 56), was followed. The literature is studied, the appropriate theories are established and hypotheses are constructed.

Three theories comprising the main theory are proposed, namely:

- **Theory 1.** Civil consulting engineering firms in PE do not assess, even subjectively, their Service Quality in relation to other firms and therefore have a misconception about their competitive position in the marketplace;

- **Theory 2.** Firms predominantly use the ISO 9001:2000 system to measure quality. This system is subject to internal and external auditing, but it does not address the theory as stated in Theory 1;
• **Theory 3.** Firms cannot profess to excel in quality management and offer superior Service Quality if their Service Quality is not benchmarked against other firms.

A secondary theory is established that CCEF in PE do not have formal Service Recovery procedures in place, because Service Recovery is not explicitly defined by firms as an important deliverable and a factor contributing to the overall Service Quality experiences of the client.

Two sets of ideas or propositions or hypotheses have been constructed, based on these two theories, which are tested in this research and are labelled as directional or relational hypotheses. The independent variables are defined as Reliability, Responsiveness and Service Recovery, whilst the dependent variable is the perceived Service Quality by the client.

- The first set of hypotheses based on the first theory is to test the effect of the two Service Quality dimensions, Reliability and Responsiveness, on perceived Service Quality:

  \[ \text{H}_{1.1}: \text{There is a positive relationship between the independent variable, 'Reliability', and the dependent variable, 'Perceived Service Quality'.} \]

  \[ \text{H}_{1.2}: \text{There is a positive relationship between the independent variable, 'Responsiveness', and the dependent variable, 'Perceived Service Quality'.} \]

- The second hypothesis based on the second theory is to test the effect of Service Recovery on perceived Service Quality:

  \[ \text{H}_{2.1}: \text{There is a positive relationship between the independent variable, 'Service Recovery', and the dependent variable, 'Perceived Service Quality'.} \]
3.4 THE RESEARCH INSTRUMENT

The SERVQUAL research instrument comprises a concise multiple-item scale with high reliability and validity. It is used to ascertain the service expectations and perceptions of clients and as a result can improve organisational Service Quality. SERVQUAL is designed to apply to a wide spectrum of services (Parasuraman et al, 1988: 30-31). SERVQUAL adds the most value when it is used periodically to track Service Quality trends, and when it is used with other forms of Service Quality measurement. For example, firms will ascertain a great deal about their Service Quality by simultaneously administering the following:

- Periodically sending out SERVQUAL questionnaires to clients;
- Conducting employee surveys;
- Systematically soliciting and analysing client suggestions and complaints.

Another application of the SERVQUAL research instrument is to assess the level of organisational quality pertaining to each of the five Service Quality dimensions of Reliability, Responsiveness, Assurance, Empathy and Tangibles and to obtain an average score of all five dimensions. SERVQUAL can be used to rank the relative importance of the five Service Quality dimensions in influencing overall Service Quality perceptions of clients (Parasuraman et al, 1988: 30-31).

The standard SERVQUAL questionnaire was obtained from Zeithaml et al (1990: 181) and the original questions for Reliability (five questions) and Responsiveness (four questions) were adapted to suit the particular service setting (Hoxley, 2000: 605). An additional question regarding Service Recovery is included. These ten questions are rated using a seven-point Likert-type interval scale and the clients of a number of CCEF in PE were asked to participate. The use of the adapted SERVPERF research instrument implies the Gap Scores will be either negative or zero, because the service quality is always less than or equal to the expected ‘perfect’ Service Quality, but will never exceed it.
The research questionnaire comprises two sections. Section A consists of the name and position/job title of the client, and a subsection allocated for general suggestions and comments. Section B comprises the ten questions as presented in the adapted SERVPERF research instrument. The questionnaire is included as Appendix A.

3.5 CHOICE OF SAMPLE

The majority of clients of CCEF in PE are government institutions such as municipalities. The choice of sample was obvious because approximately 70 per cent of clients in PE are from the NMBM, Cacadu District Municipality, the Department of Public Works and the South African National Roads Agency. The remaining 30 per cent are from various other companies. Only those clients with direct dealings with Company X were identified as possible respondents.

3.6 SUMMARY

This chapter discussed the research methodology, the research questions and hypotheses. The approach of triangulation was introduced and the SERVPERF research instrument was expounded. The results of the research are presented in the Chapter 4.
CHAPTER 4

ANALYSIS AND INTERPRETATION OF THE RESEARCH

4.1 INTRODUCTION

The previous chapter introduced the SERVPERF research instrument and the design of the research. This chapter presents the method of data collection, the response rate and the analysis and interpretation of the data collected.

4.2 DATA COLLECTION

The SERVPERF questionnaire was circulated to all the existing clients of Company X, which includes the following:

- The NMBM which comprises approximately 70 potential respondents;
- Cacadu District Municipality which comprises approximately 10 potential respondents;
- Department of Public Works which comprises approximately 10 potential respondents;
- South African National Roads Agency which comprises approximately 10 potential respondents;
- Private (non-governmental) and various other clients who comprise approximately 40 potential respondents.

The proposed clients were forewarned through letters, on an official letterhead of Company X, addressed to each individual and sent on behalf of the most senior person in the region, the Regional Principal. Their purpose was to stress the seriousness of the survey and to create anticipation. These letters were posted, faxed and e-mailed to all the potential respondents during October 2006.

The actual questionnaires were sent out one week later, accompanied by official, personalised letters. These letters contained pertinent information including the expected due dates for the return of the completed questionnaires.
The clients received the questionnaire via three different methods which signalled the urgency of the matter and the insistency by Company X. Approximately two weeks was allowed for the clients to respond, during which time a reminder e-mail was sent. One week after the return date, the clients who returned the questionnaires were thanked via e-mail. Another two weeks response time was allowed, after which the available data was analysed.

4.3 DATA ANALYSIS

The data analysis was conducted in three phases. First, the response rate and overall validity of the results were analysed. According to Collis and Hussey (2003: 58-59), “Validity is the extent to which the research findings accurately represent what is really happening in the situation”. Errors, such as the research procedures, inaccurate measurement, and the like can undermine validity.

Second, an assessment of the reliability or internal consistency of the research was done using Cronbach’s Alpha reliability analysis (Cronbach, 1951). Reliability deals with the findings of the research and constitutes one aspect of the credibility of the findings. Hence, a research finding is reliable if it can be repeated (Collis & Hussey, 2003: 58).

Third, the average Gap Score for each dimension was calculated by totalling the average Gap Scores per respondent divided by the total number of respondents. The Gap Scores for the two individual Service Quality dimensions, Reliability and Responsiveness, are plotted onto graphs and used to benchmark Company X against its competitors.

The data is plotted on an Importance–Performance Matrix and checked for consistency against the results obtained by Gardiner (2004: 55). This is to establish how the results of the SERVQUAL method previously used relate to the results of the SERVPERF method used in this research. It assumes that the importance of the two Service Quality dimensions to clients is unchanged, as observed by Gardiner (2004).
4.3.1 RESPONSE RATE

A total of 137 questionnaires were distributed and a total of 26 were returned. This represents a response rate of approximately 19 per cent. Twenty six questionnaires were returned, of which 18 were comprehensively completed and were usable for statistical analysis. Figure 4.1 depicts the response rate.

![Response Rate Chart]

Figure 4.1 - Response rate of questionnaire

The following are potential reasons why the response rate was lower than expected:

- A few clients indicated their unwillingness to complete the questionnaire.

The following are typical reasons:

- “I am unfortunately not in a position to complete the questionnaire because it may compromise the position of trust and independency that we maintain with all consultants.”
- “As a client we cannot divulge our opinion of other consultants to yourself. I believe it is not ethical…”
- “I have completed the questionnaire, only as far as [Company X] are concerned. I don’t believe it to be ethical to provide individual companies comments on the quality of service received from their...
competitors. Please note that any comments you may receive from other officials from whom you requested the same information, is not to be construed as the opinion of the Nelson Mandela Bay Municipality.”

- The inherent lack of anonymity. It was beneficial to personalise and direct correspondence to individuals to ensure a better response rate, but it had the unfortunate drawback that it lacked anonymity when a respondent returned the questionnaire. It was easy for the researcher to identify the source of the responses because e-mail addresses are clearly identifiable, facsimiles numbers are displayed on the top margins of faxes received and posted mail was stamped by the various divisions of the municipalities.

Clients often voice their criticisms of ‘other consultants’, but given the opportunity to formally respond, most opted not to. This was understandable given the professional environment within which the services are rendered, and the relationships formed between individuals. The lack of anonymity is believed to be the biggest contributing factor towards the low response rate.

- Some of the respondents may have found the number of ratings to be too many. Ten questions needed to be rated for each of the consultants and in some cases this amounted to 170 ratings.

- The duration of the response period may have been too short. Every effort was made to stress the urgency of returning the questionnaires; by means of numerous correspondences and with a relatively short timeframe. Some municipalities have lengthy administrative processes where all correspondence has to pass in and out of the records divisions. This may have had a time-delaying effect in that some respondents may have received the questionnaires only a few days prior to its return date. The respondents may have chosen not to complete the questionnaires given the relatively short response period remaining.
• The lack of mental energy to complete the questionnaire. The questionnaires were distributed during the latter part of October, with the return deadline being early November 2006. Most clients are busy during this time of the year as projects draw to a close and contractors aim to finish before the annual shutdown.

4.3.2 CRONBACH’S ALPHA RELIABILITY ANALYSIS

Cronbach’s Alpha is used to measure the reliability of a psychometric instrument and indicates the extent to which a set of items can be used to measure a single latent variable. Cronbach’s Alpha can be written as a function of the number of test items and the inter-correlation among these items. The standardised formula is expressed as follows (Cronbach’s Alpha, 2007):

\[
\alpha = \frac{N \cdot r}{1 + (N - 1) \cdot r}
\]

Where

- \(\alpha\) = Cronbach’s Alpha
- \(N\) = The number of items;
- \(r\) = The average of all (Pearson) correlation coefficients between the items.

Cronbach’s Alpha increases as the correlation between the items increases. For this reason, this coefficient is also called the internal consistency reliability of the test. The value of Alpha (\(\alpha\)) can range from negative infinity and to a positive one, although only positive values make sense. The closer Alpha is to one, the higher the internal consistency reliability (Sekaran, 2003: 307). A reliability coefficient of 0.70 or higher is considered acceptable in most cases. It is evident from the formula that as the number of items increase, so does Cronbach’s Alpha. Alpha is low when the average inter-item correlation is low. Hence, as the inter-item correlations are high, then evidence exists that the items are measuring the same underlying construct and therefore have a high reliability (Cronbach’s Alpha, 2007).
Cronbach’s Alphas are calculated for every competitor and Company X for every question in this research. The results are summarised in Tables 4.1 and 4.2 respectively.

Cronbach’s Alphas are consistently above 0.90, which indicates that the data is of high reliability.

Table 4.1 – Cronbach’s Alphas for Competitors 1 to 6

<table>
<thead>
<tr>
<th>Competitor:</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Variable</td>
<td>Alpha</td>
<td>Alpha</td>
<td>Alpha</td>
<td>Alpha</td>
<td>Alpha</td>
<td>Alpha</td>
</tr>
<tr>
<td>Question 1</td>
<td>0.94</td>
<td>0.95</td>
<td>0.95</td>
<td>0.94</td>
<td>0.97</td>
<td>0.95</td>
</tr>
<tr>
<td>Question 2</td>
<td>0.93</td>
<td>0.95</td>
<td>0.97</td>
<td>0.94</td>
<td>0.97</td>
<td>0.95</td>
</tr>
<tr>
<td>Question 3</td>
<td>0.95</td>
<td>0.95</td>
<td>0.96</td>
<td>0.96</td>
<td>*</td>
<td>0.96</td>
</tr>
<tr>
<td>Question 4</td>
<td>0.93</td>
<td>0.95</td>
<td>0.95</td>
<td>0.95</td>
<td>0.96</td>
<td>0.95</td>
</tr>
<tr>
<td>Question 5</td>
<td>0.93</td>
<td>0.95</td>
<td>0.95</td>
<td>0.95</td>
<td>0.96</td>
<td>0.96</td>
</tr>
<tr>
<td>Question 6</td>
<td>0.95</td>
<td>0.95</td>
<td>0.96</td>
<td>0.94</td>
<td>0.96</td>
<td>0.96</td>
</tr>
<tr>
<td>Question 7</td>
<td>0.93</td>
<td>0.95</td>
<td>0.95</td>
<td>0.95</td>
<td>0.96</td>
<td>0.96</td>
</tr>
<tr>
<td>Question 8</td>
<td>0.94</td>
<td>0.95</td>
<td>0.96</td>
<td>0.95</td>
<td>0.97</td>
<td>0.95</td>
</tr>
<tr>
<td>Question 9</td>
<td>0.93</td>
<td>0.95</td>
<td>0.95</td>
<td>0.95</td>
<td>0.96</td>
<td>0.96</td>
</tr>
<tr>
<td>Question 10</td>
<td>0.93</td>
<td>0.95</td>
<td>0.95</td>
<td>0.95</td>
<td>0.96</td>
<td>0.95</td>
</tr>
<tr>
<td>Mean =</td>
<td>53.7</td>
<td>48.8</td>
<td>49.4</td>
<td>54.0</td>
<td>49.4</td>
<td>41.3</td>
</tr>
<tr>
<td>Standard Deviation =</td>
<td>8.2</td>
<td>11.1</td>
<td>8.6</td>
<td>11.2</td>
<td>8.1</td>
<td>11.0</td>
</tr>
<tr>
<td>N =</td>
<td>6</td>
<td>8</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>4</td>
</tr>
<tr>
<td>Average inter-item correlation =</td>
<td>0.69</td>
<td>0.77</td>
<td>0.88</td>
<td>0.83</td>
<td>0.83</td>
<td>0.85</td>
</tr>
<tr>
<td>Cronbach's Alpha =</td>
<td>0.94</td>
<td>0.96</td>
<td>0.96</td>
<td>0.95</td>
<td>0.97</td>
<td>0.96</td>
</tr>
</tbody>
</table>

* Question 3 has been omitted since all five respondents gave the same rating. Hence, no variance could be calculated and could not be used in the analysis.
Table 4.2 – Cronbach’s Alphas for Competitors 7 to 10 and Company X

<table>
<thead>
<tr>
<th>Variable</th>
<th>Competitor:</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>Company X</th>
</tr>
</thead>
<tbody>
<tr>
<td>Question 1</td>
<td>Alpha</td>
<td>0.99</td>
<td>0.94</td>
<td>0.93</td>
<td>0.96</td>
<td>0.91</td>
</tr>
<tr>
<td>Question 2</td>
<td>Alpha</td>
<td>0.99</td>
<td>0.93</td>
<td>0.94</td>
<td>0.96</td>
<td>0.91</td>
</tr>
<tr>
<td>Question 3</td>
<td>Alpha</td>
<td>0.99</td>
<td>0.95</td>
<td>0.94</td>
<td>0.97</td>
<td>0.93</td>
</tr>
<tr>
<td>Question 4</td>
<td>Alpha</td>
<td>0.99</td>
<td>0.94</td>
<td>0.94</td>
<td>0.96</td>
<td>0.91</td>
</tr>
<tr>
<td>Question 5</td>
<td>Alpha</td>
<td>0.99</td>
<td>0.94</td>
<td>0.93</td>
<td>0.96</td>
<td>0.91</td>
</tr>
<tr>
<td>Question 6</td>
<td>Alpha</td>
<td>0.99</td>
<td>0.94</td>
<td>0.93</td>
<td>0.96</td>
<td>0.91</td>
</tr>
<tr>
<td>Question 7</td>
<td>Alpha</td>
<td>0.99</td>
<td>0.93</td>
<td>0.93</td>
<td>0.96</td>
<td>0.91</td>
</tr>
<tr>
<td>Question 8</td>
<td>Alpha</td>
<td>0.99</td>
<td>0.93</td>
<td>0.93</td>
<td>0.96</td>
<td>0.92</td>
</tr>
<tr>
<td>Question 9</td>
<td>Alpha</td>
<td>0.99</td>
<td>0.94</td>
<td>0.94</td>
<td>0.96</td>
<td>0.92</td>
</tr>
<tr>
<td>Question 10</td>
<td>Alpha</td>
<td>0.99</td>
<td>0.94</td>
<td>0.93</td>
<td>0.96</td>
<td>0.91</td>
</tr>
</tbody>
</table>

Mean = 50.0 54.0 52.2 53.4 52.7

Standard Deviation = 15.5 8.5 8.2 9.5 8.6
N = 4 6 10 5 21
Average inter-item correlation = 1.00 0.76 0.65 0.84 0.57
Cronbach’s Alpha = 0.99 0.94 0.94 0.96 0.92

4.4 SERVICE QUALITY DIMENSIONS

The results of the research and the Gap Scores for each of the nine questions comprising the Service Quality dimensions, Reliability and Responsiveness, are depicted in Figures 4.2 to 4.12 and Tables 4.3 to 4.13. The Gap Scores indicate the average of the numeric differences between the assumed expectations of the clients, as a perfect score of seven out of seven for all firms, and the actual perceptions as rated by the respondents. Company X is therefore benchmarked against its competitors and the local Industry Average for each of the questions and for the overall Service Quality dimensions Reliability (five questions) and Responsiveness (four questions).

4.4.1 RELIABILITY

The following five questions comprise the Service Quality dimension, Reliability, which were adapted in the SERVPERF research instrument:
Question 1 (Q1) – “When they promise to do something by a certain time, they do so”.

Question 3 (Q3) – “When I have a problem, the firm shows a sincere interest in solving it”.

Question 5 (Q5) – “The firm performs the service right the first time”.

Question 7 (Q7) – “The firm provides its services at the time they promise to do so”.

Question 9 (Q9) – “The firm insists on error free records”.

The findings and responses to the Service Quality dimensions are discussed.

i.   Question 1 – “When they promise to do something by a certain time, they do so.”

Figure 4.2 illustrates the first set of results of the questionnaire. The competitors are listed on the X-axis and the Gap Scores on the Y-axis.

Company X is perceived on rating it on keeping its promises, to be amongst the top three firms in PE and is 10 per cent above the local Industry Average. The Gap Score of Company X in this case is -1.5. This is calculated by subtracting their average rating of 5.5 from the expected “perfect” score of seven. If Company X is measured in isolation it falls, in theory, approximately 21 per cent short of the perception that the firm will always fulfil its promises. This represents a perfect seven out of seven score, or a Gap Score of zero.

However, since Company X is being benchmarked against its competitors in PE, Company X only has to improve their performance so that the perceptions of clients of the firm increase to a level which signifies a Gap Score smaller than the firm which fared the best – in this case Competitor 8. Hence, to outperform all the other firms, a performance increase (or the improvement of perception) of more than 4 per cent in relation to the other firms will suffice.
Figure 4.2 - Gaps per question for Service Quality dimension Reliability – Question 1, Company X versus Competitors and Industry

Table 4.3 summarises the Gap Scores and the Gaps from the highest ranked firm for Question 1 and the benchmarked Gap Scores and the Gap Scores as rated against the “expected perfection”.

Table 4.3 - Benchmarking firms according to Question 1

<table>
<thead>
<tr>
<th>For Question 1</th>
<th>Gap Score</th>
<th>Gap from Highest Rank</th>
<th>Gap Score benchmarked</th>
<th>Gap Score rated against expected perfection</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Competitor 8</td>
<td>-1.3</td>
<td>0</td>
<td>100%</td>
<td>81%</td>
</tr>
<tr>
<td>2 Competitor 4 &amp; 5</td>
<td>-1.4</td>
<td>-0.1</td>
<td>98%</td>
<td>80%</td>
</tr>
<tr>
<td>3 Company X</td>
<td>-1.5</td>
<td>-0.2</td>
<td>96%</td>
<td>79%</td>
</tr>
<tr>
<td>4 Competitor 1 &amp; 9</td>
<td>-1.7</td>
<td>-0.4</td>
<td>93%</td>
<td>76%</td>
</tr>
<tr>
<td>5 Competitor 10</td>
<td>-1.8</td>
<td>-0.5</td>
<td>91%</td>
<td>74%</td>
</tr>
<tr>
<td>6 Competitor 7</td>
<td>-2.0</td>
<td>-0.7</td>
<td>88%</td>
<td>71%</td>
</tr>
<tr>
<td>7 Industry Average &amp; Competitor 3</td>
<td>-2.2</td>
<td>-0.9</td>
<td>84%</td>
<td>69%</td>
</tr>
<tr>
<td>8 Competitor 2</td>
<td>-2.5</td>
<td>-1.2</td>
<td>79%</td>
<td>64%</td>
</tr>
<tr>
<td>9 Competitor 6</td>
<td>-3.3</td>
<td>-2.0</td>
<td>65%</td>
<td>53%</td>
</tr>
</tbody>
</table>

The results of this question can be summarised that it is perceived by clients that when Company X promise to do something by a certain time, this occurs 79
per cent of the time. This is 4 per cent less than the company in PE that keeps their promises best of all. Clients in PE can expect the average CCEF to keep its promises 69 per cent of the time.

**ii. Question 3 – “When I have a problem, the firm shows a sincere interest in solving it.”**

Figure 4.3 depicts the Gap Scores of the second of five questions that comprise the Service Quality dimension Reliability.

![Figure 4.3 - Gaps per question for Service Quality dimension Reliability – Question 3, Company X versus Competitors and Industry](image)

Table 4.4 summarises the results of Figure 4.3. It is interesting to note that the Gap Score of Competitors 4 and 5 is -1.0, which is the smallest Gap Score for all five questions comprising the Service Quality dimension Reliability.
Table 4.4 - Benchmarking firms according to Question 3

<table>
<thead>
<tr>
<th>For Question 3</th>
<th>Gap from Highest Rank</th>
<th>Gap Score bench-marked</th>
<th>Gap Score rated against expected perfection</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Competitor 4 &amp; 5</td>
<td>-1.0</td>
<td>100%</td>
<td>86%</td>
</tr>
<tr>
<td>2 Competitor 8</td>
<td>-1.3</td>
<td>-0.3</td>
<td>95%</td>
</tr>
<tr>
<td>3 Company X</td>
<td><strong>-1.4</strong></td>
<td><strong>-0.4</strong></td>
<td><strong>93%</strong></td>
</tr>
<tr>
<td>4 Competitor 1</td>
<td>-1.5</td>
<td>-0.5</td>
<td>92%</td>
</tr>
<tr>
<td>5 Competitor 9</td>
<td>-1.7</td>
<td>-0.7</td>
<td>88%</td>
</tr>
<tr>
<td>6 Industry Average &amp; Competitor 3 &amp; 10</td>
<td><strong>-1.8</strong></td>
<td><strong>-0.8</strong></td>
<td><strong>87%</strong></td>
</tr>
<tr>
<td>7 Competitor 2</td>
<td>-1.9</td>
<td>-0.9</td>
<td>85%</td>
</tr>
<tr>
<td>8 Competitor 7</td>
<td>-2.0</td>
<td>-1.0</td>
<td>83%</td>
</tr>
<tr>
<td>9 Competitor 6</td>
<td>-2.3</td>
<td>-1.3</td>
<td>78%</td>
</tr>
</tbody>
</table>

It is perceived by clients that Company X show a sincere interest in solving their problems an average 80 per cent of the time. This is 6 per cent less than the top competitor. Clients in PE can expect the average CCEF to show a sincere interest in solving their problems 74 per cent of the time.

iii. Question 5 – “The firm performs the service right the first time.”

Figure 4.4 illustrates the Gap Scores of the third of five questions that comprise the Service Quality dimension Reliability. It is evident from the results that Company X has not fared as well in this question as with Questions 1 and 3. The perceptions by clients of Company X are that the firm is on par with the “average firm” and that Company X performed the service right the first time 69 per cent of the time. Company X is lagging behind the leading firm by 8 per cent (overall) and 11 per cent (benchmarked).

The results show that there are seven firms ranked higher that Company X and the firm does not perform the service right the first time 31 per cent of the time.
Figure 4.4 - Gaps per question for Service Quality dimension Reliability – Question 5, Company X versus Competitors and Industry

The summary of the Gap Scores and the ranking of the firms are presented in Table 4.5.

Table 4.5 - Benchmarking firms according to Question 5

<table>
<thead>
<tr>
<th>For Question 5</th>
<th>Gap Score</th>
<th>Gap from Highest Rank</th>
<th>Gap Score benchmarked</th>
<th>Gap Score rated against expected perfection</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Competitor 10</td>
<td>-1.6</td>
<td>0</td>
<td>100%</td>
<td>77%</td>
</tr>
<tr>
<td>2 Competitor 4</td>
<td>-1.8</td>
<td>-0.2</td>
<td>96%</td>
<td>74%</td>
</tr>
<tr>
<td>3 Competitor 1, 2, 5 &amp; 8</td>
<td>-2.0</td>
<td>-0.4</td>
<td>93%</td>
<td>71%</td>
</tr>
<tr>
<td>4 Competitor 9</td>
<td>-2.1</td>
<td>-0.5</td>
<td>91%</td>
<td>70%</td>
</tr>
<tr>
<td>5 <strong>Company X &amp; Industry Average</strong></td>
<td><strong>-2.2</strong></td>
<td><strong>-0.6</strong></td>
<td><strong>89%</strong></td>
<td><strong>69%</strong></td>
</tr>
<tr>
<td>6 Competitor 7</td>
<td>-2.3</td>
<td>-0.7</td>
<td>87%</td>
<td>67%</td>
</tr>
<tr>
<td>7 Competitor 3</td>
<td>-2.6</td>
<td>-1.0</td>
<td>81%</td>
<td>63%</td>
</tr>
<tr>
<td>8 Competitor 6</td>
<td>-2.8</td>
<td>-1.2</td>
<td>78%</td>
<td>60%</td>
</tr>
</tbody>
</table>
iv. *Question 7 – “The firm provides its services at the time they promise to do so.”*

Figure 4.5 illustrates the results of Question 7. The apparent similarity between Question 1 and Question 7 is noted, and it is expected that the results of the ratings would be similar. However, Company X rated third in Question 1 (4 per cent behind the top competitor), whilst in Question 7 it was rated equal best, together with Competitors 4, 5 and 10. Clients perceive Company X to provide its service at the time it is promised at 74 per cent of the time. Company X was ranked first, but its Gap Score is the largest of all the firms which fared best in each question about the Service Quality dimension Reliability.

![Gaps per Question for Service Quality Dimension: Reliability](image)

*Figure 4.5 - Gaps per question for Service Quality dimension Reliability – Question 7, Company X versus Competitors and Industry*

The results of Question 7 are presented in Table 4.6.
Table 4.6 - Benchmarking firms according to Question 7

<table>
<thead>
<tr>
<th>For Question 7</th>
<th>Gap Score</th>
<th>Gap from Highest Rank</th>
<th>Gap Score benchmarked</th>
<th>Gap Score rated against expected perfection</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Company X, Competitor 4, 5 &amp; 10</td>
<td><strong>-1.8</strong></td>
<td>0</td>
<td>100%</td>
<td>74%</td>
</tr>
<tr>
<td>2 Competitor 1, 7 &amp; 8</td>
<td>-2.0</td>
<td>-0.2</td>
<td>96%</td>
<td>71%</td>
</tr>
<tr>
<td>3 Competitor 2</td>
<td>-2.1</td>
<td>-0.3</td>
<td>94%</td>
<td>70%</td>
</tr>
<tr>
<td>4 Competitor 3 &amp; 9</td>
<td>-2.2</td>
<td>-0.4</td>
<td>92%</td>
<td>69%</td>
</tr>
<tr>
<td>5 Industry Average</td>
<td>-2.3</td>
<td>-0.5</td>
<td>90%</td>
<td>67%</td>
</tr>
<tr>
<td>6 Competitor 6</td>
<td>-3.0</td>
<td>-1.2</td>
<td>77%</td>
<td>57%</td>
</tr>
</tbody>
</table>

v. **Question 9 – “The firm insists on error free records.”**

Figure 4.6 illustrates the results of the Question 9 of the adapted SERVPERF questionnaire. This question was the only question of the Service Quality dimension, Reliability, in which Company X was rated below the Industry Average. It is clear that the firm needs to place more insistence on error free records and the importance of this to clients need to be communicated to all staff.

![Figure 4.6 - Gaps per question for Service Quality dimension Reliability – Question 9, Company X versus Competitors and Industry](image-url)
The results of this question are presented in Table 4.7. The average firm in PE insists on error free records 69 per cent of the time and Company X at 67 per cent of the time. This signifies Gaps between Company X and the “best firm” and between the expected perfection of 13 per cent and 33 per cent respectively.

Table 4.7 - Benchmarking firms according to Question 9

<table>
<thead>
<tr>
<th>For Question 9</th>
<th>Gap Score</th>
<th>Gap from Highest Rank</th>
<th>Gap Score benchmarked</th>
<th>Gap Score rated against expected perfection</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Competitor 1</td>
<td>-1.5</td>
<td>0</td>
<td>100%</td>
<td>79%</td>
</tr>
<tr>
<td>2 Competitor 5</td>
<td>-1.6</td>
<td>-0.1</td>
<td>98%</td>
<td>77%</td>
</tr>
<tr>
<td>3 Competitor 2, 4, 7, 8 &amp; 10</td>
<td>-2.0</td>
<td>-0.5</td>
<td>91%</td>
<td>71%</td>
</tr>
<tr>
<td>4 Industry Average</td>
<td>-2.2</td>
<td>-0.7</td>
<td>87%</td>
<td>69%</td>
</tr>
<tr>
<td>5 Company X</td>
<td><strong>-2.3</strong></td>
<td><strong>-0.8</strong></td>
<td><strong>85%</strong></td>
<td><strong>67%</strong></td>
</tr>
<tr>
<td>6 Competitor 3</td>
<td>-2.4</td>
<td>-0.9</td>
<td>84%</td>
<td>66%</td>
</tr>
<tr>
<td>7 Competitor 6</td>
<td>-2.8</td>
<td>-1.3</td>
<td>76%</td>
<td>60%</td>
</tr>
</tbody>
</table>

vi. **Overall Service Quality Dimension - Reliability**

The averages of the Gap Scores for Questions 1, 3, 5, 7 and 9 comprise the Gap Scores for the Service Quality dimension Reliability. Company X is rated third, behind a total of four competitors.

Figure 4.7 and Table 4.8 summarises the overall results of the Service Quality dimension Reliability.
The overall Reliability of the firm is 4 per cent higher than the Industry Average in PE. The Gap Score of Company X is -1.8, which indicates that the firm is 26 per cent short of being “totally reliable”. Clients in PE can expect the average CCEF to be 70 per cent reliable.

Table 4.8 - Benchmarking firms according to Reliability

<table>
<thead>
<tr>
<th>Overall - Reliability</th>
<th>Gap Score</th>
<th>Gap from Highest Rank</th>
<th>Gap Score benchmarked</th>
<th>Gap Score rated against expected perfection</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Competitor 4 &amp; 5</td>
<td>-1.6</td>
<td>0</td>
<td>100%</td>
<td>77%</td>
</tr>
<tr>
<td>2 Competitor 1 &amp; 8</td>
<td>-1.7</td>
<td>-0.1</td>
<td>98%</td>
<td>76%</td>
</tr>
<tr>
<td>3 <strong>Company X</strong> &amp; Competitor 10</td>
<td><strong>-1.8</strong></td>
<td><strong>-0.2</strong></td>
<td><strong>96%</strong></td>
<td><strong>74%</strong></td>
</tr>
<tr>
<td>4 Competitor 9</td>
<td>-2.0</td>
<td>-0.4</td>
<td>93%</td>
<td>71%</td>
</tr>
<tr>
<td>5 <strong>Industry Average</strong>, Competitor 2 &amp; 7</td>
<td><strong>-2.1</strong></td>
<td><strong>-0.5</strong></td>
<td><strong>91%</strong></td>
<td><strong>70%</strong></td>
</tr>
<tr>
<td>6 Competitor 3</td>
<td>-2.2</td>
<td>-0.6</td>
<td>89%</td>
<td>69%</td>
</tr>
<tr>
<td>7 Competitor 6</td>
<td>-2.8</td>
<td>-1.2</td>
<td>78%</td>
<td>60%</td>
</tr>
</tbody>
</table>
4.4.2 RESPONSIVENESS

The following four questions comprise the Service Quality dimension, Responsiveness, which has been included in the SERVPERF research instrument:

Question 2 (Q2) – “Employees at the firm tell me exactly when services will be performed”.

Question 4 (Q4) – “Employees at the firm give me prompt service”.

Question 6 (Q6) – “Employees at the firm are never too busy to respond to my requests”.

Question 8 (Q8) – “Employees at the firm are always willing to help me”.

The Gap Scores for these questions are illustrated in Figures 4.8 to 4.12 respectively.

i. **Question 2 – “Employees at the firm tell me exactly when services will be performed.”**

Figure 4.8 graphically illustrates the results of the first question of the Service Quality dimension, Responsiveness.

![Figure 4.8 - Gaps per question for Service Quality dimension Responsiveness - Question 2, Company X versus Competitors and Industry](image-url)
Clients have rated Company X with a Gap Score of -1.9, which signifies a shortcoming of 27 per cent. Employees tell clients on average 69 per cent of the time exactly when the services will be performed. It is evident from the data that Company X is rated fourth on this question as presented in Table 4.9.

Table 4.9 - Benchmarking firms according to Question 2

<table>
<thead>
<tr>
<th>For Question 2</th>
<th>Gap Score</th>
<th>Gap from Highest Rank</th>
<th>Gap Score benchmarked</th>
<th>Gap Score rated against expected perfection</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Competitor 4 &amp; 5</td>
<td>-1.4</td>
<td>0</td>
<td>100%</td>
<td>80%</td>
</tr>
<tr>
<td>2 Competitor 1, 8 &amp; 9</td>
<td>-1.7</td>
<td>-0.3</td>
<td>95%</td>
<td>76%</td>
</tr>
<tr>
<td>3 Competitor 10</td>
<td>-1.8</td>
<td>-0.4</td>
<td>93%</td>
<td>74%</td>
</tr>
<tr>
<td>4 Company X</td>
<td><strong>-1.9</strong></td>
<td><strong>-0.5</strong></td>
<td><strong>91%</strong></td>
<td><strong>73%</strong></td>
</tr>
<tr>
<td>5 Competitor 7</td>
<td>-2.0</td>
<td>-0.6</td>
<td>89%</td>
<td>71%</td>
</tr>
<tr>
<td>6 Industry Average</td>
<td>-2.2</td>
<td>-0.8</td>
<td>86%</td>
<td>69%</td>
</tr>
<tr>
<td>7 Competitor 3</td>
<td>-2.4</td>
<td>-1.0</td>
<td>82%</td>
<td>66%</td>
</tr>
<tr>
<td>8 Competitor 2</td>
<td>-2.5</td>
<td>-1.1</td>
<td>80%</td>
<td>64%</td>
</tr>
<tr>
<td>9 Competitor 6</td>
<td>-3.5</td>
<td>-2.1</td>
<td>63%</td>
<td>50%</td>
</tr>
</tbody>
</table>

**ii. Question 4 – “Employees at the firm give me prompt service.”**

The results of the second question pertaining to the Service Quality dimension Responsiveness are presented in Figure 4.9.

The Gap Score of Company X is -1.7, which denotes a percentage Gap Score of 24 per cent from 100 per cent which means always giving prompt service to clients. Company X is ranked fifth by the respondents and lags by 5 per cent behind its top competitor. Table 4.10 provides a comprehensive summary of these results.
Figure 4.9 - Gaps per question for Service Quality dimension Responsiveness – Question 4, Company X versus Competitors and Industry

Table 4.10 - Benchmarking firms according to Question 4

<table>
<thead>
<tr>
<th>For Question 4</th>
<th>Gap Score</th>
<th>Gap from Highest Rank</th>
<th>Gap Score benchmarked</th>
<th>Gap Score rated against expected perfection</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Competitor 8</td>
<td>-1.3</td>
<td>0</td>
<td>100%</td>
<td>81%</td>
</tr>
<tr>
<td>2 Competitor 4 &amp; 10</td>
<td>-1.4</td>
<td>-0.1</td>
<td>98%</td>
<td>80%</td>
</tr>
<tr>
<td>3 Competitor 1</td>
<td>-1.5</td>
<td>-0.2</td>
<td>96%</td>
<td>79%</td>
</tr>
<tr>
<td>4 Competitor 9</td>
<td>-1.6</td>
<td>-0.3</td>
<td>95%</td>
<td>77%</td>
</tr>
<tr>
<td>5 <strong>Company X</strong></td>
<td><strong>-1.7</strong></td>
<td><strong>-0.4</strong></td>
<td><strong>93%</strong></td>
<td><strong>76%</strong></td>
</tr>
<tr>
<td>6 Competitor 5 &amp; 7</td>
<td>-1.8</td>
<td>-0.5</td>
<td>91%</td>
<td>74%</td>
</tr>
<tr>
<td>7 <strong>Industry Average</strong></td>
<td>-1.9</td>
<td>-0.6</td>
<td>89%</td>
<td>73%</td>
</tr>
<tr>
<td>8 Competitor 3</td>
<td>-2.0</td>
<td>-0.7</td>
<td>88%</td>
<td>71%</td>
</tr>
<tr>
<td>9 Competitor 2</td>
<td>-2.4</td>
<td>-1.1</td>
<td>81%</td>
<td>66%</td>
</tr>
<tr>
<td>10 Competitor 6</td>
<td>-3.0</td>
<td>-1.7</td>
<td>70%</td>
<td>57%</td>
</tr>
</tbody>
</table>

iii. **Question 6** – “Employees at the firm are never too busy to respond to my requests.”

Respondents had to rate whether employees at the firm are *never* too busy to respond to the requests of clients. Figure 4.10 illustrates the results of this question. The perception exists that Company X respond 77 per cent of the
time. The firm that fared the best responds at 80 per cent of the time. The Gap Score of Company X of -1.6 represents a percentage Gap of 23 per cent.

Figure 4.10 - Gaps per question for Service Quality dimension Responsiveness – Question 6, Company X versus Competitors and Industry

Table 4.11 summarises and ranks the scores for Question 6. Company X is ranked third and the Industry Average is 71 per cent (Gap Score -2.0).

Table 4.11 - Benchmarking firms according to Question 6

<table>
<thead>
<tr>
<th>For Question 6</th>
<th>Gap Score</th>
<th>Gap from Highest Rank</th>
<th>Gap Score benchmarked</th>
<th>Gap Score rated against expected perfection</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Competitor 5 &amp; 10</td>
<td>-1.4</td>
<td>0</td>
<td>100%</td>
<td>80%</td>
</tr>
<tr>
<td>2 Competitor 8</td>
<td>-1.5</td>
<td>-0.1</td>
<td>98%</td>
<td>79%</td>
</tr>
<tr>
<td>3 <strong>Company X</strong> &amp; Competitor 9</td>
<td><strong>-1.6</strong></td>
<td><strong>-0.2</strong></td>
<td><strong>96%</strong></td>
<td><strong>77%</strong></td>
</tr>
<tr>
<td>4 Competitor 1</td>
<td>-1.7</td>
<td>-0.3</td>
<td>95%</td>
<td>76%</td>
</tr>
<tr>
<td>5 Industry Average &amp; Competitor 3 &amp; 7</td>
<td>-2.0</td>
<td>-0.6</td>
<td>89%</td>
<td>71%</td>
</tr>
<tr>
<td>6 Competitor 2</td>
<td>-2.1</td>
<td>-0.7</td>
<td>88%</td>
<td>70%</td>
</tr>
<tr>
<td>7 Competitor 4</td>
<td>-2.4</td>
<td>-1.0</td>
<td>82%</td>
<td>66%</td>
</tr>
<tr>
<td>8 Competitor 6</td>
<td>-2.5</td>
<td>-1.1</td>
<td>80%</td>
<td>64%</td>
</tr>
</tbody>
</table>
iv. **Question 8 – “Employees at the firm are always willing to help me.”**

Company X scored the best on the question about whether the employees at the firm are *always* willing to help the clients. Figure 4.11 graphically illustrates that the Gap Scores of most of the competitors are smaller than for the other questions. This indicates that the perception exists that employees in general are willing to help clients. The Industry Average, a Gap Score of -1.5, is higher than those of the other questions which confirms this. The Gap Score is of Company X is -1.2 which represents a percentage Gap of only 17 per cent.

![Figure 4.11 - Gaps per question for Service Quality dimension Responsiveness – Question 8, Company X versus Competitors and Industry](image)

The data which was analysed for Question 8 is benchmarked and summarised in Table 4.12.
Table 4.12 - Benchmarking firms according to Question 8

<table>
<thead>
<tr>
<th>For Question 8</th>
<th>Gap Score</th>
<th>Gap from Highest Rank</th>
<th>Gap Score benchmarked</th>
<th>Gap Score rated against expected perfection</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Company X &amp; Competitor 4, 5 &amp; 8</td>
<td>-1.2</td>
<td>0</td>
<td>100%</td>
<td>83%</td>
</tr>
<tr>
<td>2 Competitor 1</td>
<td>-1.3</td>
<td>-0.1</td>
<td>98%</td>
<td>81%</td>
</tr>
<tr>
<td>3 Competitor 3, 9 &amp; 10</td>
<td>-1.4</td>
<td>-0.2</td>
<td>97%</td>
<td>80%</td>
</tr>
<tr>
<td>4 Industry Average</td>
<td>-1.5</td>
<td>-0.3</td>
<td>95%</td>
<td>79%</td>
</tr>
<tr>
<td>5 Competitor 2 &amp; 7</td>
<td>-2.0</td>
<td>-0.8</td>
<td>86%</td>
<td>71%</td>
</tr>
<tr>
<td>6 Competitor 6</td>
<td>-3.0</td>
<td>-1.8</td>
<td>69%</td>
<td>57%</td>
</tr>
</tbody>
</table>

v. Overall Service Quality Dimension - Responsiveness

The averages of the Gap Scores for Questions 2, 4, 6 and 8 result in the Gap Scores for the Service Quality dimension Responsiveness. These are depicted in Figure 4.12. Company X rated third behind a total of four competitors with a Gap Score of -1.6.
The overall Responsiveness of Company X is perceived to be 77 per cent, which is a shortfall of 23 per cent from the expected perfection. The overall Responsiveness of Company X is 3 per cent less than that of Competitor 8, which is perceived to offer the best overall Responsiveness of those surveyed. This is presented in Table 4.13.

**Table 4.13 - Benchmarking firms according to Responsiveness**

<table>
<thead>
<tr>
<th>Overall Responsiveness</th>
<th>Gap Score</th>
<th>Gap from Highest Rank</th>
<th>Gap Score benchmarked</th>
<th>Gap Score rated against expected perfection</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Competitor 8</td>
<td>-1.4</td>
<td>0</td>
<td>100%</td>
<td>80%</td>
</tr>
<tr>
<td>2 Competitor 1, 5 &amp; 10</td>
<td>-1.5</td>
<td>-0.1</td>
<td>98%</td>
<td>79%</td>
</tr>
<tr>
<td><strong>Company X &amp; Competitor 4 &amp; 9</strong></td>
<td><strong>-1.6</strong></td>
<td><strong>-0.2</strong></td>
<td><strong>96%</strong></td>
<td><strong>77%</strong></td>
</tr>
<tr>
<td>4 Industry Average &amp; Competitor 7</td>
<td>-1.9</td>
<td>-0.5</td>
<td>91%</td>
<td>73%</td>
</tr>
<tr>
<td>5 Competitor 3</td>
<td>-2.0</td>
<td>-0.6</td>
<td>89%</td>
<td>71%</td>
</tr>
<tr>
<td>6 Competitor 2</td>
<td>-2.3</td>
<td>-0.9</td>
<td>84%</td>
<td>67%</td>
</tr>
<tr>
<td>7 Competitor 6</td>
<td>-3.0</td>
<td>-1.6</td>
<td>71%</td>
<td>57%</td>
</tr>
</tbody>
</table>

**4.5 SERVICE RECOVERY**

The tenth and final quantitative question of the questionnaire does not form part of the recognised SERVPERF research instrument. Hence, it is not part of a Service Quality dimension. However, the question was formulated in the same manner as the other nine questions to address the secondary research hypothesis and the sub-problem statement and objectives.

Question 10 (Q10) – “When someone at the firm makes a mistake, they take corrective action.”

The results of this question are illustrated in Figure 4.13. The majority of firms scored between -1.5 and -2.0, with the average score -1.8. The rating of Company X is -1.7, which denotes that corrective action is perceived to be taken 76 per cent of the time.
The Service Recovery of Company X is perceived to be 76 per cent, which is a shortfall of 24 per cent from the expected perfection. It is ten per cent less than that of the top competitor. Table 4.14 summarises the results of Question 10.

### Table 4.14 - Benchmarking firms according to Service Recovery

<table>
<thead>
<tr>
<th>Service Recovery</th>
<th>Gap Score</th>
<th>Gap from Highest Rank</th>
<th>Gap Score benchmarked</th>
<th>Gap Score rated against expected perfection</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Competitor 5</td>
<td>-1.0</td>
<td>0</td>
<td>100%</td>
<td>86%</td>
</tr>
<tr>
<td>2 Competitor 1</td>
<td>-1.5</td>
<td>-0.5</td>
<td>92%</td>
<td>79%</td>
</tr>
<tr>
<td>3 Competitor 3, 4 &amp; 10</td>
<td>-1.6</td>
<td>-0.6</td>
<td>90%</td>
<td>77%</td>
</tr>
<tr>
<td>4 Company X &amp; Competitor 8 &amp; 9</td>
<td>-1.7</td>
<td>-0.7</td>
<td>88%</td>
<td>76%</td>
</tr>
<tr>
<td>5 Industry Average &amp; Competitor 2</td>
<td>-1.8</td>
<td>-0.8</td>
<td>87%</td>
<td>74%</td>
</tr>
<tr>
<td>6 Competitor 7</td>
<td>-2.0</td>
<td>-1.0</td>
<td>83%</td>
<td>71%</td>
</tr>
<tr>
<td>7 Competitor 6</td>
<td>-2.8</td>
<td>-1.8</td>
<td>70%</td>
<td>60%</td>
</tr>
</tbody>
</table>
4.6 COMPARISON OF GAP SCORES FOR EACH QUESTION AND DIMENSION

Each Service Quality dimension is made up of a number of questions and it is interesting to note how Company X fared in relation to the Industry for each of these questions. It is evident from the data in Figure 4.14 that the smallest Gap Scores for both Company X and the Industry were for Question 8 – “Employees at the firm are always willing to help me”.

![Gaps per Question for Company X and Industry](image)

Figure 4.14 – Gaps per question for Company X and Industry

Company X was rated with bigger Gap Scores than the Industry on Questions 5 and 9. The firm was rated lower than the Industry Average on the other eight questions. The biggest Gap Score was found in the perceptions of clients of Question 9 – “The firm insists on error free records”.

Figure 4.15 illustrates the overall results of the benchmarking of the Service Quality dimensions, Reliability and Responsiveness, and the Service Recovery and the Overall Service Quality between Company X and the Industry.
Figure 4.15 – Overall comparison of Service Quality dimensions and Service Recovery

4.7 COMMENTS BY RESPONDENTS

Section A of the questionnaire contained the following two questions posed at the respondents:

1. “What improvements would you like to see in the service quality of consulting engineers?”

2. “General comments (ANY feedback will be appreciated)”.

The following section contains extracts from the questionnaires received. These were presented as open-ended questions to elicit further information from the respondents.

4.7.1 PROPOSED IMPROVEMENTS BY RESPONDENTS TO SERVICE QUALITY

The following are a sample of answers to the first question – “What improvements would you like to see in the service quality of consulting engineers?”:

- Improved communication with clients
- Faster response times
- Enhanced project management skills
- Greater transparency in billing
- More personalized service
• “Consistent, reliable, dependable and accurate professional service throughout the project cycle required. From formulation of brief through design process, tender evaluation, construction administration to final account. More accurate estimates of project costs and fees. Collaboration between consulting firms to ensure that client gets the best possible advice and end product. Better control of project costs. Meet deadlines set by client. Innovative and cost effective solutions.”

• “Innovative designs and methods to deal with the realities of this country. Expensive ways of dealing with an engineering problem is not always the best for our long term goals of job creation and poverty alleviation. A lot of pressure is placed on the industry to speed up service delivery - we need to find ways of creating employment and doing it to the satisfaction of our Clients. In general the quality of service delivered is still of an acceptable standard, but delays during the planning phase due to a lack of co-ordination between the various Consultant disciplines could improve.”

• “General improved quality control on all aspects of work. Too many blatant errors and omissions are identified by my staff - my section’s capacity is already severely limited.”

• “Too much work is done by inexperienced staff with insufficient guidance and supervision from their seniors.”

The responses indicate that clients need firms to improve their Service Quality and technical skills and to be innovative.

4.7.2 GENERAL COMMENTS BY RESPONDENTS

The following are a sample of responses to the second question – “General comments (ANY feedback will be appreciated)”:

• “Quality of service provided by consulting engineers has steadily deteriorated over the years in both the quality of designs and management of projects. It appears that this is due to firms being able to sustain adequate experienced professional staff. Existing staff are running between projects trying to satisfy several clients and deadlines.”
• “There is a general perception in Government that Consultants are always interested in increasing the value of projects in order to increase fees. We would like to see from the side of Government that private firms join hands with us to empower the young professionals in the public sector. In other words not to take advantage of a young inexperienced Government employee but to help us to grow dependable and solid officials for the future. (The importance of career minded Public Sector). The checks and balances and importance of mutual respect should be paramount for future growth and service delivery to the peoples of this country.”

• “It is a known fact that most consultants are also struggling with capacity and that they are relying on young inexperienced technicians and engineers to perform most tasks - the end result is poor service and mistakes that cost the NMBM money and it put an unnecessary strain on my limited resources i.e., manpower and funding.”

• “We all know that the Civil Engineering game is under extreme pressure to perform with a lack of suitably qualified staff coming through the ranks. It is therefore very important that engineers should strive for a "right first time" scenario. Mistakes are bound to creep in.”

The responses confirm the lack of staff in the civil consulting engineering industry and the effect it has on Service Quality.

4.8 TRIANGULATION

Two types of triangulation are used in this research, namely data triangulation and methodological triangulation to verify its validity and reliability.

4.8.1 DATA TRIANGULATION

Data is triangulated, in this research, with that obtained from the research done by Gardiner (2004). Gardiner (2004: 52) indicates that each of the five questions of the SERVQUAL dimension Reliability received a negative Gap Score, the perceptions never exceeded the expectations, and three of these comprise the biggest negative Gaps identified.
The average Gap Score of the research by Gardiner (2004: 50-51) for the Service Quality dimension Responsiveness was negative, reflecting the perceptions by clients that firms need to be more responsive. The findings of this research indicate that a relatively large Gap exists between the expectations and perceptions of the clients and that the Industry Average Gap Score is -1.9.

4.8.2 METHODOLOGICAL TRIANGULATION

Both qualitative and quantitative methods of data collection are used in this research. Section A of the questionnaire is qualitative and Section B is quantitative. The Gap Scores of the clients, quantitative data, confirms their comments, qualitative feedback, on the Service Quality of CCEF.

4.8.3 TRIANGULATION RESULTS SUMMARY

The results of the data triangulation, methodological triangulation together with Cronbach’s Alpha reliability analysis, indicate that the research findings are of high validity and reliability.

4.9 IMPORTANCE–PERFORMANCE MATRIX

The Importance–Performance Matrix is a method which is used in this research to reflect perceived relationships between importance, performance and priority for improvement. The Gap Scores for the two Service Quality dimensions under consideration, namely Reliability and Responsiveness, are plotted on Figures 4.16 and 4.17 respectively.

Figure 4.16 illustrates the Gap Scores for the Service Quality dimension Reliability. Gardiner (2004: 43) states that its importance to clients is at 37 per cent.
Figure 4.16 - Importance–Performance Matrix, Reliability versus Gap Scores

Competitors 6 and 9 are the only firms that need to take “urgent action”. The Reliability of Company X and the Service Quality of the other competitors all need to “improve” because Reliability is an order-winner (Davis & Heineke, 2005: 278). The performances of these firms are perceived to be the same as those for everyone else.

Figure 4.17 illustrates the Gap Scores for the Service Quality dimension Responsiveness. Gardiner (2004: 43) observed that its importance to clients is at 19 per cent.
Two firms need to improve their service for the Service Quality dimension Responsiveness. Company X and the other firms are in the “appropriate” zone. However, every effort needs to be made to outperform competitors in this regard should a firm wish to distinguish itself as the market leader.

4.10 EVALUATING THE RESEARCH OBJECTIVES AND HYPOTHESES

The main objective of this research is to benchmark the perceptions of the clients of Company X about its Service Quality in relation to its competitors. The data revealed that Company X has shortfalls in terms of their Service Quality, but rates amongst the top firms in PE.
The secondary objective of this research was to benchmark the perceptions of clients to the Service Recovery efforts of Company X. The data revealed that the Service Recovery efforts of CCEF in PE are not at the desired levels as yet. Company X was rated near average in comparison to firms in PE and strategies to improve Service Recovery need to be implemented as a matter of urgency.

It was found that only a few of the larger and/or more established CCEF assess or benchmark their Service Quality in relation to other firms. Some of these firms have their Service Quality benchmarked by independent firms on an annual basis. The firms participating in such surveys are benchmarked anonymously and the ratings of each particular firm are revealed to that firm only. These benchmarking surveys include the percentages spent on marketing, administration, technical staff salaries and the like.

Research indicated that none of the CCEF in PE has formally identified Service Recovery as a factor that contributes to the overall experience of the quality of the service by the client. None appear to have any procedures established.

The three hypotheses of this research have been confirmed by the results of the data. There are positive relationships between the three independent variables Reliability, Responsiveness and Service Recovery and the dependent variable perceived Service Quality.

4.11 SUMMARY

This chapter benchmarked the Service Quality and Service Recovery of Company X against its competitors. The data collected is analysed comprehensively and the objectives and problem statements of this research are addressed. The next chapter concludes the research with suggestions and strategies to improve the Service Quality and Service Recovery of Company X to gain a competitive advantage.
CHAPTER 5

RECOMMENDATIONS AND CONCLUSION

5.1 INTRODUCTION

The findings of the research may prove to be invaluable to CCEF, and in particular Company X. This chapter presents recommendations and strategies for Company X to close the Gaps between the expectations and perceptions of their clients to become the market leaders.

The standard SERVPERF research instrument proved to be a useful tool to assist with the objectives of this research. The use of this research instrument to the advantage of other firms is suggested.

5.2 THE SERVQUAL/SERVPERF RESEARCH INSTRUMENT

The SERVQUAL/SERVPERF research instrument can be used in a number of other ways to improve the Service Quality of CCEF through benchmarking and these are discussed.

5.2.1 COMPARING EXPECTATIONS AND PERCEPTIONS OF CLIENTS OVER TIME

The research instrument as a questionnaire provides valuable feedback, however Company X can benefit from its repeated use. It is suggested that similar research is conducted annually or bi-annually to measure and compare the Service Quality of Company X against its competitors. These comparisons of expectations and perceptions over time will reveal how the Gap between the two changes and any changes as a result of changing expectations, changing perceptions, or both (Zeithaml et al, 1990: 177). Figure 5.1 illustrates the tracking of client perceptions along a Service Quality dimension over time.
5.2.2 COMPARING THE SERVPERF SCORES OF COMPANY X AGAINST COMPETITORS OVER TIME

The relative strengths and weaknesses of Company X can be measured over time in relation to its main competitors. This graphical method will reveal trends and provide Company X with valuable data to remedy any problems (Zeithaml et al, 1990: 178). Figure 5.2 provides typical results when SERVPERF Gap Scores are tracked along a Service Quality dimension.

Linear trend lines can be used for each firm, which will reveal whether Gaps are changing, converging or remaining constant over time.
5.2.3 CATEGORISE CLIENTS INTO SEGMENTS OF DIFFERENT QUALITY PERCEPTIONS

Clients can be categorised into various Perceived Quality segments on the basis of their individual SERVQUAL/SERVPERF scores. These segments can be analysed based on job title, seniority, the reasons why the perceptions exist, length of association with Company X, willingness to recommend the firm and the like. These will provide Company X with a better understanding of how to improve its Service Quality, or how to improve the perception of the substandard service (Zeithaml et al, 1990: 178).

5.2.4 ASSESSING SERVICE QUALITY PERCEPTIONS OF INTERNAL CLIENTS

The SERVQUAL/SERVPERF research instrument can be used by divisions and departments within Company X to assess the perceptions of Service Quality provided to fellow employees in other divisions and departments (Zeithaml et al, 1990: 180).
5.2.5 ASCERTAIN THE SERVICE QUALITY PERCEPTIONS OF CONTRACTORS

A typical civil engineering project has a team of stakeholders which comprise the client, the CCEF and the contractor. Company X can ascertain the Service Quality perceptions of the various contractors that the consulting engineers have dealings with. CCEF would naturally service a client better than a contractor. Hence, it is fair to state that the Gap Scores of the Service Quality perceptions of contractors will, in general, be greater than those of clients. This “exaggeration” of Gap Scores can be very insightful, as it will more readily reveal the areas where the firm could improve its Service Quality to clients and contractor alike.

5.2.6 ASCERTAIN THE SERVICE QUALITY PERCEPTIONS OF OTHER PROFESSIONALS

Many projects comprise various disciplines, and include professionals such as architects, quantity surveyors, electrical engineers, mechanical engineers, structural engineers, and the like. As everyone works together towards a common goal, team members will inevitably need to give good service to each other. Valuable information could be obtained from a peer review by using the SERVQUAL/SERVPERF research instrument.

5.2.7 ASSESSING THE SERVICE QUALITY OF CONTRACT WORKERS

Many firms use retired engineers or otherwise freelance contract workers as their representatives on construction sites. These engineers often simultaneously contract to multiple firms and their Service Quality perceptions can be ascertained using the SERVQUAL/SERVPERF research instrument. These contract workers get exposure to a variety of quality assurance systems, the Service Quality received, and the like. Hence, their feedback can provide valuable, objective information and highlight Gaps in the Service Quality that may exist.
5.3 RECOMMENDATIONS

Strategies and practical examples on how to improve Service Quality, Service Recovery and TQM of Company X are recommended in the following sections.

5.3.1 IMPROVING SERVICE QUALITY

Executives who are committed to Service Quality need to institute a continuous process for the following (Zeithaml et al, 1990: 35):

- Monitoring perceptions by clients of Service Quality;
- Identifying the course of Service Quality shortfalls;
- Taking the necessary action to improve the Service Quality.

The following procedure needs to be followed when firms want to make decisions about their clients (Maister, 2003: 75):

- Call the client;
- Give the alternatives in the form of pros and cons;
- Make a recommendation;
- Request the opinion of and instruction from the client.

These steps will ensure that clients are satisfied and that direct responsibility is taken for specific expenditures and time-consuming activities.

The following are practical examples of things that can be done to create the experience of client satisfaction (Maister, 2003: 76-80):

- Client meetings to be followed up with brief notes/minutes summarising the discussion, points agreed to and an action-responsibility plan;
- Explain in advance the format of complex invoices so that the client is aware of what to expect;
- Follow up referrals with letters of thanks even if the referral has not resulted in business;
- Find out what the real deadlines of the clients are and ensure that these are met.
In addition, according to Maister (2003: 78-80), Company X needs to:

- Demonstrate its trustworthiness and integrity by advising clients on how to avoid fees by doing some things themselves;
- Demonstrate its trustworthiness and integrity by admitting areas of weakness and recommend other professionals;
- Demonstrate its trustworthiness and integrity by refusing work when it is too busy;
- Make it their business to understand what is special and unique about the client;
- Listen carefully to what the clients have to say, rather than substitute their own judgement for that of the clients;
- Give good explanations of what it is doing and why;
- Keep clients sufficiently informed on progress;
- Document their work activities well;
- Make their staff accessible and available when needed;
- Notify their clients of any changes in scope, and seek the approval of the client;
- Make the clients feel important;
- Show an interest in their clients beyond the specifics of their tasks;
- Make an attempt to be helpful beyond the specifics of the project.

The achievement of excellence in Service Quality is not an “educational” issue. A full programme to differentiate the firm through Service Quality requires action in the following order (Maister, 2003: 83):

- Measurement;
- Management;
- Tips and tools;
- Training;
- Rewards.
Figure 5.3 presents a process model for the continuous measurement and improvement of Service Quality developed by Zeithaml et al (1990: 47).

![Diagram of the Process Model for Continuous Measurement and Improvement of Service Quality]

**Figure 5.3 - Process Model for Continuous Measurement and Improvement of Service Quality**
Source: Zeithaml et al (1990: 47)

### i. Closing the Service Quality Model Gaps

The Conceptual Model of Service Quality has five Gaps. The factors contributing to the first four Gaps and the suggested methods of closing these Gaps are summarised in Table 5.1, as Gap 5 is the assessment of the client about Service Quality.
Table 5.1 - Summary of Gap problems and methods of closing the Gaps

<table>
<thead>
<tr>
<th>Gap</th>
<th>Problem</th>
<th>Closing the gap</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Insufficient marketing research.</td>
<td></td>
</tr>
</tbody>
</table>
Inadequate use of marketing research findings.  
Lack of interaction between management and clients.  
Insufficient upward communication from contact personnel to management.  
Too many levels between contact personnel and management.  
Researching clients’ expectations:  
- Using complaints strategically;  
- Researching what clients want in similar industries;  
- Researching intermediate clients;  
- Conducting key-client studies;  
- Creating client panels;  
- Tracking satisfaction with individual transactions.  
Use marketing research findings effectively.  
Increasing interaction between management and clients.  
Improving upward communication from contact personnel to management.  
Reduce the number of levels between contact personnel and management.  
|
| 2   | Inadequate management commitment to Service Quality. |  
Perception of infeasibility.  
Inadequate standardisation of tasks.  
Absence of goal setting.  
Committing to quality.  
Commitment to middle management.  
Creating possibilities.  
Standardising tasks.  
Setting Service Quality goals.  
|
| 3   | Employee role ambiguity.  
Role conflict.  
Poor employee-job fit.  
Poor technology-job fit.  
Inappropriate supervisory control systems.  
| Providing role clarity.  
Eliminating role conflict.  
Improving employee-technology-job fit.  
Measuring and rewarding service performance.  
Empowering service employees.  
Building teamwork.  
Managing external customers.  
|
| 4   | Inadequate horizontal communications.  
Differences in policies and procedures across branches or departments.  
Propensity to over-promise.  
| Opening channels of communication between advertising and operations.  
Opening channels of communication between sales and operations.  
Opening channels of communication between human resources, marketing, and operations.  
Providing consistent service across branches or outlets.  
Developing appropriate and effective communications about Service Quality.  
|

Source: Zeithaml et al (1990: 35-133)
5.3.2 IMPROVING SERVICE RECOVERY

The following actions need to occur to minimise or eradicate the effect of mistakes and serve as a plan to improve Service Recovery (Van Bennekom, 2006):

- **Not charging for incorrect service or products.** The only ‘product’ the consulting engineer can sell, is intellectual property such as construction drawings. The correctness of the only tangible product needs to be ensured at all cost;

- **Client complaint solicitation systems.** The existence of systems to solicit failure situations is critical;

- **Act on the solicited information.** It is imperative that solicited feedback from a client complaint is not ignored. A sure way to turn a client into a lost client is to request feedback, promise a response, and ignore it;

- **Act promptly.** It is meaningless to fix a problem long after it had happened. The faster a firm responds to poor service, the more likely that the Service Recovery effort will result in a positive outcome. An organisation will typically retain up to 95 per cent of its unhappy clients, should it act promptly. In contrast, if the service is recovered at all, only 64 per cent of its dissatisfied clients are retained;

- **Compensate appropriately.** If the firm is to attempt Service Recovery by offering some form of compensation (for example free advice, designs, and the like), it needs to be something that is truly useful to the client. The firm that devises compensation schemes based on minimising the direct cost of the compensation is bound to offer little value to the client;

- **True programmes that build client loyalty.** Reward programmes that provide rebates for frequent use do not secure client loyalty. Client loyalty is secured by delivering true value in quality products and services, cultivating client relationships that demonstrate concern and empathy, rather than providing rewards of value.
Firms need to establish Service Recovery as a priority and develop recovery skills, using the following strategies (Hoffman & Bateson, 2002: 335-339):

- **Measure the cost.** The costs of obtaining new clients are up to five times more expensive than those of keeping existing clients. Existing clients are more receptive to marketing efforts and are a valuable source of profit for the firm. Existing clients ask fewer questions and are familiar with the procedures and employees of the firm, and are willing to pay for service;

- **Actively encourage complaints.** Clients complain to their friends and families, rather than to the firm concerned. The average firm does not hear from 96 per cent of its unhappy clients. An unhappy client voices displeasure with a firm to an average of 11 other people. The firm needs to adopt strategies to encourage complaints before a client leaves the offices. These strategies include client surveys, focus groups, and active monitoring of the service delivery process to ensure client satisfaction throughout the process;

- **Anticipate needs for Service Recovery.** Firms that are most effective in Service Recovery anticipate in advance the areas where it is most likely to fail. Special attention needs to be given to areas where staff turnover is high. Many of these high-turnover jobs are low-paying client contact positions, and these staff members often lack the necessary Service Recovery skills;

- **Train employees.** Employee training in Service Recovery should ideally take place on two levels. First, the employee needs to be made aware of the concerns of the clients and develop an appreciation of client needs. Second, expectations of management towards Service Recovery efforts need to be defined. Management needs to release employees to take risks, an action which often leads to the empowerment of front-line staff;

- **Empower the front line.** Employees need to be empowered to make their own decisions about poor Service Quality to the client. Managers are often busy with other duties, which inherently delays the Service Recovery time and escalates the frustration for both client and employee;

- **Close the loop.** The client needs to receive feedback on how the complaint made a difference;
• **Acknowledge the problem.** Clients need to know that their complaints are being heard;

• **Make the client feel special.** Inform the client that their opinions are valued and that their business is important to the firm;

• **Apologise when appropriate.** A sincere apology is an effective form of Service Recovery;

• **Explain what happened.** Events that led to the failure need to be conveyed to the client. This extra information will make the client feel valued and important;

• **Offer to compensate.** Clients often insist on compensation, but firms need to be aware of the hidden costs associated with service failure, such as time and frustration.

### 5.3.3 IMPROVING TOTAL QUALITY MANAGEMENT

The following are fundamental requirements of TQM and possible actions CCEF can take (BVQI, 2000: 2.12-2.14):

• CCEF need to know their clients, both internal and external. Target markets are segmented and their needs identified. Possible actions include client surveys, functional analysis, quality cost analysis and quality function deployment;

• Firms need to know their competitors. Possible actions include client surveys, competitor analysis and benchmarking;

• Firms need to be aware of the cost of non-conformance. Possible actions are quality cost analysis and functional analysis;

• Firms need to measure their performance against key client-driven parameters. Possible actions include client surveys, competitor analysis and benchmarking;

• Firms need to ensure that each employee fully understands and is committed to the organisational quality objectives. Possible actions include functional analysis, education and training and communication;

• The management of the firm needs to be committed to the continuous improvement of quality. Possible action include quality cost analysis, functional analysis, education and training and communication;
Firms need to define the purpose of each department and activity in terms of satisfying internal and external client requirements. A possible action is to perform a functional analysis;

Firms need to empower their employees to fulfil their commitment to quality by influencing the programme of continuous improvement. Possible action include education and training, communication, corrective action task forces/groups, error cause removal schemes, quality circles, statistical process control, recognition of performance, suggestion programmes and self-inspection programmes;

Inspection and correction techniques of quality control need to be replaced with preventative actions. Possible actions include functional analysis, quality cost analysis, QMS, error cause removal schemes, quality circles and suggestion programmes;

Non-conforming output is unacceptable. Possible actions include quality cost analysis, education and training, functional analysis and communication;

Firms need to plan effectively before any actions are undertaken. A possible action is the forming a quality improvement team.

5.3.4 IMPROVEMENTS SUGGESTED BY CLIENTS FOR COMPANY X

The clients of CCEF in PE suggested the following improvements:

- **Develop “turnkey” engineers.** Focus is needed on training engineers in project management and continuously improving the technical abilities of staff. A need exists for engineers to be generalists and to be able to take a project from inception to completion;

- **Innovation.** Civil consulting engineering firms need to challenge the status quo and suggest innovative solutions to the problems facing South Africa;

- **Quality Control.** Firms need to improve the quality control during the design stages and during the construction monitoring phases of projects;

- **Reduce staff turnover.** The shortage of professional engineers coupled with the increase in demand has resulted in high staff turnover. This resulted in poor service and the loss of continuity in projects and
relationships with clients. Firms need to implement strategies to reduce staff turnover.

5.4 SUGGESTED IMPLEMENTATION PLAN

The Project Management Institute (PMI, 2004: 5) defines a project as “… a temporary endeavour undertaken to create a unique product, service, or result”. This implies that the best method for implementing the recommended improvements will be as a project which will be implemented through the application and integration of five project management processes, namely initiation, planning, executing, monitoring and controlling, and closing (PMI, 2004: 8). There are ten project management knowledge areas, illustrated in Figure 5.4, that need to be identified and managed to ensure the timeous improvement of the Service Quality of the firm.

![Figure 5.4 – Overview of Project Management Knowledge Areas](source: PMI (2004: 11))

The sooner the firm can recover poor service and improve Service Quality, the sooner it will gain a competitive advantage. Therefore, the most important factor to manage as part of the implementation plan is time. The suggested tasks and timeframes, which form part of the implementation plan of Company X for 2008, are presented in Figure 5.5. It is suggested that Company X compile a longer term (two to three year) strategic plan in a similar manner which can be used as a management tool.
The main factors affecting Service Quality need to form part of the implementation plan and include the following (as discussed in previous chapters):

- Service Leadership;
- TQM;
- The Service Satisfaction Framework;
- The Conceptual Model of service failure and recovery strategies;
- The Process Model for continuous measurement and improvement of Service Quality.

### 5.5 SUGGESTIONS FOR FUTURE RESEARCH PROJECTS

It is suggested that this research is repeated annually in conjunction with either the South African Association of Consulting Engineers (SAACE) or the South African Institution of Civil Engineering (SAICE). This will eliminate the scepticisms of some of the respondents to divulge information about other consulting firms. The results of such survey data need to be made known and each firm needs to be rated against its competitors anonymously. A report...
needs to be compiled for each firm about how it ranked against its peers and the ranking of the other firms by company name need not to be divulged.

It is suggested for future research projects that the anonymity of the questionnaires are guaranteed. The details of the poorer performing companies will be kept anonymous, because it may have a detrimental effect on their current and future dealings. It may be discouraging to those firms as opposed to serving as an encouragement to better the Service Quality should the results of these poorer performing firms be revealed.

Feedback of the outcome of the survey is to be given to each respondent to encourage respondent participation in the short and long-term. Each respondent will receive a comprehensive summary of the results of the survey.

Possible strategies on how to improve Service Quality, effective Service Recovery procedures, and other information on what clients typically expect from consultants need to be included as part of the feedback. The improvement of the Service Quality of even a few firms will contribute to the Gross Domestic Product of South Africa and contribute to building a better country.

The research can be conducted nationally. Its results can be used to benchmark Company X against its competitors in each region and to benchmark each office of Company X against each other.

The technique of Perceptual Mapping can be used to benchmark Company X against its competitors with regard to the following:

- Services offered, for example whether the firm is perceived to be geotechnical experts, and the like;
- Its image in relation to competitors;
- The company characteristics;
- Its general performance;
- Other relevant attributes.
Perceptions can be mapped over time and any changes to the Gap Scores can be tracked and depicted on the same graph. Figure 5.6 illustrates how this is achieved.

![Perceptual Mapping](image)

**Figure 5.6 – Illustrative Perceptual Mapping of Attributes**

Figure 5.6 illustrates how one attribute is mapped in relation to another and the arrows indicate the changes to the Gap Scores over time. The directions of the arrows indicate whether the Gap Scores increase or decrease over time.

### 5.6 CONCLUSION

This research has confirmed that the steady decline in the number of professionals during the last few decades and the increase in the demand for firms to produce more, in a shorter space of time, and with fewer human resources have had a negative effect on Service Quality. Firms need to currently focus on gaining a competitive advantage by consistently providing Service Excellence. One way of achieving this is through continuous improvement through benchmarking.
This research has benchmarked the Service Quality and Service Recovery of Company X against its competitors. The data collected was analysed comprehensively and the objectives and problem statements of this research have been addressed. The results of this research proved to be most valuable to Company X. The implementation of the suggested strategies and improvement plans will improve its Service Quality and Service Recovery and help it gain a competitive advantage.
REFERENCE LIST


Annexure A
Section A: Respondent Information & Comments

The purpose of this questionnaire is to gather information that would assist in the statistical processing and interpretation of the survey results. Please be so kind and answer all the questions - it should take only 10 minutes.

1. What improvements would you like to see in the service quality of consulting engineers?

2. General comments (ANY feedback will be appreciated):

Name & Surname: ..............................................................

Position/ Job Title (Optional): ...........................................

Contact Number (Optional): .............................................

Please return the completed questionnaire by Fri 10 Nov 06.
Section B: Service Quality

This section deals with your experience with the various consultants you have been dealing with. Please provide a rating for each of the consultants according to the following scale:

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<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
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<tbody>
<tr>
<td>(Strongly Disagree)</td>
<td>Competitor 1</td>
<td>Competitor 2</td>
<td>Competitor 3</td>
<td>Competitor 4</td>
<td>Competitor 5</td>
<td>Competitor 6</td>
<td>Competitor 7</td>
</tr>
<tr>
<td>(Strongly Agree)</td>
<td>Competitor 8</td>
<td>Competitor 9</td>
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<td>Competitor 11</td>
<td>Competitor 12</td>
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<tr>
<th>Competitor 15</th>
<th>Competitor 16</th>
<th>Competitor 17</th>
<th>Competitor 18</th>
<th>Company X</th>
</tr>
</thead>
</table>

Q1. When they promise to do something by a certain time, they do so.
Q2. Employees at the firm tell me exactly when services will be performed.
Q3. When I have a problem, the firm shows a sincere interest in solving it.
Q4. Employees at the firm give me prompt service.
Q5. The firm performs the service right the first time.
Q6. Employees at the firm are never too busy to respond to my requests.
Q7. The firm provides its services at the time they promise to do so.
Q8. Employees at the firm are always willing to help me.
Q9. The firm insists on error free records.
Q10. When someone at the firm makes a mistake, they take corrective action.