

Deploying
Customer Relationship Management (CRM) Applications:
Perceived Value in the
Hygiene Services Industry in Singapore

by

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ABSTRACT

In recent years, the use of information and communication technology for business organisations has expanded from the traditional back office functions like logistics and finance to front office customer-facing functions. Demand thus emerged to automate sales, marketing and customer service functions, leading to the development of information technology software products collectively called CRM (customer relationship management) applications.

CRM applications create value by facilitating efficient company processes and enabling quicker, more flexible and personalised services that could potentially increase customer satisfaction. In business services settings, more satisfied customers see better value with their service providers and consequently make a stronger commitment to their relationship. Keeping customers and even growing their purchases are primary business objectives in today's competitive environment. The perceived value of deploying CRM applications depends on a subjective comparison of benefits derived, costs incurred and availability of alternatives for both service providers and customers. Thus, different needs and contexts play a role in determining the extent of perceived value.

This thesis examines the potential value of CRM applications from the perspectives of both the company and customers in a business services setting-- specifically, the hygiene services industry in Singapore, where CRM applications are yet to take root. Semi-structured in-depth interviews were conducted among staff of the leading service provider company as well as with a broad range of industry customers. The results of the study show that operational and efficiency requirements of sales and service functions, rather than customer-based considerations, make up the providers' motivators. For customers, the main benefit sought was provider preparedness to deliver reliable and responsive service, particularly for exceptional service issues. The level of IT use in the customers' work context appeared to have the most influence on the attractiveness of CRM-enabled service possibilities. Potential for increased commitment to the service provider as a result of introducing CRM services was also noted, and this was particularly evident where no major issues existed with the current service, and with customers who exhibited an efficiency-driven, business-like posture in relating with the service provider. Generalisability of findings, theoretical contributions and implications for further research and management practice are offered.

DECLARATION

“I, Rafael Paguio, declare that the DBA thesis entitled [Deploying Customer Relationship Management (CRM) Applications: Perceived Value in the Hygiene Services Industry in Singapore] is no more than 65,000 words in length, exclusive of tables, figures, appendices, references and footnotes. This thesis contains no material that has been submitted previously, in whole or in part, for the award of any other academic degree or diploma. Except where otherwise indicated, this thesis is my own work”.

Signature:

Date: 29 July 2005

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1. INTRODUCTION

In the last 20 years, the power of information and communications technology has been increasingly used in redefining business processes. This trend has traditionally been motivated by the need to improve operating efficiencies. Today, it is equally driven by the recognised ability of technology-enabled systems to create more value to customers and thus, strengthen commitment to their suppliers.

Up to the late 1980s, information technology for business processes focused primarily on the supply chain. Software programs collectively termed as enterprise resource planning (ERP) have been developed to automate the supply chain's "back-office" functions of logistics, production, distribution and finance. In recent years, however, there has been growing attention on the downstream selling chain, which encompasses aspects of a company's interactions with its customers. These "front-office" functions involving sales, marketing and customer service are now being automated, exploiting the advances in computing and communications technology. With these developments have emerged a variety of software applications known collectively as the acronym CRM, short for customer relationship management (Kalakota and Robinson 2001).

First generation CRM applications, which started entering the market in the late 1980s, were basically focused on internal company processes. Their capabilities were limited to tracking and collating both company and customer information. With the advent of the Internet in the mid 1990s, emergent CRM applications offered more efficient and interactive internal and customer communication modes thus facilitating selling and servicing effectiveness (Xu et al. 2002).

CRM applications fall into three categories, which can be deployed separately or in an integrated combination (Tournier 2003; Brown and Gravely, 2004). These are Sales Force Automation (SFA), Marketing Automation (MA) and Customer Service and Support (CSS).

1. Sales Force Automation (SFA) increases sales force productivity and supports sales management functions.
2. Marketing Automation (MA) maintains customer and company databases, providing information for targeted sales campaigns and servicing needs.
3. Customer Service and Support (CSS) manages contact processes with customers.

CRM potential value-added stems from, on the one hand, enabling the company to operate customer interaction processes in an efficient manner, and on the other hand, for its customers to experience reliable, personalised, customised, flexible and responsive service (Payne and Frow 2004).

1.1 CRM Research Issues for Services

The intensifying competition in many markets prompts large and small organisations alike to increase efficiency while satisfying customers with higher expectations. To address these business needs, CRM software vendors have offered their products as effective solutions. Reports of successful as well as failed CRM early adopters, however, point out that sweeping statements on CRM's beneficial outcomes are unjustified. Still, the interest on CRM products continues to gain momentum, as a result of the IT industry's promotional efforts. Governments promoting business productivity initiatives, as is the case in Singapore, also foster a supportive climate. Given this somewhat ambiguous situation, there is a need to address issues on CRM applicability and success requirements. For specific businesses contemplating CRM, the following specific questions become obvious: *Where could CRM be beneficial in our business, what underpins or moderates its value, and how could these applications or technology tools be best exploited?*

The acronym "CRM" has oftentimes been used to describe the general business strategy of building and strengthening relationships with desirable customers to earn their loyalty. The reference to "CRM" as a customer relationship-centric strategy would have the use of software applications as a major feature. When used in this

research report, the acronym “CRM” (consistent with its original use in the IT industry) refers only to the class of computer software applications, serving any or all of the three purposes described above (i.e., SFA, MA and CSS). Thus “deploying CRM applications” connote only the use of software applications in the context of offering solutions to specific needs. These possible deployments may be discrete initiatives, and therefore not necessarily part of a broad customer relationship-centric strategy.

The research domain of this thesis is business services. In the last two decades, services have increased their share of overall economic output. Additionally, competition has been keen in these sectors. Service providers are constantly finding innovative ways to strengthen their positions by increasing efficiency and creating more valuable propositions to their customers. Service businesses are thus expected to give CRM applications serious consideration. Arguably though, research on the topic of CRM applications for services has been quite limited. The few published works in this area have, by and large, focused on large organisations providing financial services such as banking and insurance (Dotan 2002; Foss et al. 2002).

There are vast numbers of small and medium sized service businesses catering to business customers. To address needs for efficient processes and more satisfied customers, they too have to look at CRM applications. Part of these potential adopters consists of companies providing services to the maintenance of industrial commercial and institutional properties.

1.2 Research Context and Aims

This research project investigated the perceived value that CRM applications could create in a business-to-business services setting – with a specific focus on the hygiene services industry in Singapore. At the time of writing, hygiene services providers *have not* deployed CRM applications, much the same like other property maintenance service businesses, such as security, cleaning, equipment maintenance, landscaping, and pest control.

The hygiene services industry in Singapore serves a wide range of businesses and institutions in the commercial, industrial and government sectors. The services offered by the industry cover the installation, maintenance and refill of hygiene dispensers in washrooms (for instance, soap, paper, air freshening, sanitary disposal), the rental of floor mats, as well as various devices designed to improve air quality for indoor environments.

This research project aimed to identify and evaluate the potential impact of CRM applications from two perspectives:

- The perceived value of CRM from a hygiene service providers' perspective and
- The perceived value of CRM from the hygiene service customers' perspective.

The individual perspectives were interpreted according to factors identified in the literature review and then compared to determine in which aspects of the provider-customer relationship, incremental perceived value of deploying CRM applications could be derived for the hygiene services industry.

In considering the providers' perspectives on the value of CRM applications, the study sought to identify possible motivations for such deployment. While there have been reports providing frequency statistics on such motivations (Reynolds 2002, citing Dataquest 2001 findings; *The Controller's Report* 2002), there is little in-depth discussion of the importance of these factors have been carried out in relation to actual company situations. This study attempted to make this evaluation. Additionally, the relevant organisational and resource factors in the adoption of CRM applications were identified and assessed.

The potential value added with the introduction of CRM was likewise investigated from the customers' perspective. The impact on customer commitment as a result of this innovation was studied. Further, the study looked into particular factors that could moderate or influence the perceived value of CRM service features.

1.3 Research Methodology

By covering both providers' and customers' perspectives, the study sought to demonstrate the use of a balanced approach in evaluating a technology innovation in a services setting. The research project was a modified form of case study research. Case study research can be used for description of phenomenon, development of theory and testing of theory, and often uses a combination of approaches (such as interviews, observation and questionnaires) to develop an understanding of social phenomena in their natural setting (Williamson, 2002). In this instance, the 'case' was the hygiene services industry in Singapore and the phenomena being studied was the potential perceived value of CRM applications. As is typical for case study research, multiple (providers' and customers') perspectives of value creation from benefits derived from CRM applications were investigated.

In addressing the research questions, the basic data collection technique employed was the qualitative technique of in-depth interviews for the service providers and a survey supported by in-depth interviews for customers. To generate the perspective from a service provider's side, eleven key managers and staff of the industry market leader, an international company, were approached. Investigation into the service provider's perspective also involved interviews with managers previously associated with a smaller Singaporean-owned company. This allowed a basis for comparison of two organisations with dissimilar climate and business size.

For the service customers, a purposive sample of 21 participants was surveyed and individual in-depth interviews were later conducted. An effort was made to contact customers representing a wide cross section in terms of the type of business, the specific hygiene services provider contracted, as well as dollar value of the service contract. Participants were asked to fill out a questionnaire, their responses to which together with other related issues were discussed in the subsequent interviews. In summary, the method employed resulted in generating rich information, which was easier to analyse as well.

1.4 Research Contribution and Significance

In a broad sense, the research makes a contribution to knowledge by examining provider-customer relationships and technology-enabled value creation in the business services domain. The specific research setting involving property maintenance services is also an area where there has been sparse scholarly work.

The research findings should be important for researchers. By identifying and evaluating factors affecting value creation from CRM applications, it provides a starting point for further studies to investigate for generalisability in other service sectors. The attempt to identify customer-specific factors that influence perceived added value can lead to investigations to uncover other contributory factors, and quite possibly, other outcomes.

For practitioners, the results of the study provide suggestions of how CRM could be effectively deployed as part of an over-all relationship strategy, with the end view of maximising perceived customer value. The results support the notion that CRM is not a magical marketing or service cure-all, but simply an enabler of delivering better value propositions to customers. For solutions partners who resell CRM products and provide the necessary customisation and implementation support to industry customers, the study provides insights, and hopefully, generates sensitiveness, to the needs of CRM adopters.

1.5 Organisation of Report

This research report is organised as follows:

Chapter 1	Introduction
Chapter 2	Literature Review on CRM
Chapter 3	Service Classifications and Marketing Implications
Chapter 4	The Hygiene Services Industry in Singapore
Chapter 5	Research Questions and Methodology
Chapter 6	Results and Analysis: Service Providers' Perspective

Chapter 7	Results and Analysis: Service Customers' Perspective
Chapter 8	Discussion
Chapter 9	Conclusion

After this introductory chapter, a review of the literature is presented covering the theoretical foundations of Customer Relationship Management as a management philosophy, the origin and evolution of CRM software applications, the promises of CRM innovation for both business firms and their customers and reported implementation results.

Chapter 3 discusses service industries, with an emphasis on classification schemes that allow strategic views of different services. The presented taxonomies are based mainly from the customers' perspective, thus providing good platforms to craft effective marketing programs. Lastly, the provider-customer relationship constructs of service quality, perceived value and commitment were elaborated on. Investigating the impact of CRM applications on these desired outcomes was a major aspect of this research. In Chapter 4, the subject hygiene services industry was discussed and categorised based on these taxonomies, based mostly on the researcher's own 12 years industry experience as a Business Development Manager and Corporate Planning Director. Current marketing practices in the industry were then compared with what the literature suggests.

The research questions from both service provider and customers' perspectives are defined in Chapter 5. The second part of the chapter gives detailed accounts of the research methodology employed and salient experiences during the fieldwork. The various participation invitation letters and questionnaires are presented in Appendices 1 to 3. In Appendix 4, the formulation and construction of the customer questionnaire designed to answer the research questions is explained.

The research results for the service providers' perspective are presented and analysed in Chapter 6. The results for the main subject market leading company were compared with that of a smaller company. The service customer results are presented and analysed in Chapter 7. In Chapter 8, the results are synthesised to study commonalities and differences between the two perspectives. The findings were then

compared with extant knowledge from the literature and generalisations proposed. Finally, Conclusions in Chapter 9 summarises the research project, theoretical contributions, practical implications, limitations of the study and implications for future research.

2. CRM LITERATURE REVIEW

2.1 From Relationship Marketing to CRM Applications

In this section, the foundation of customer relationship management is traced to the relationship marketing paradigm. Premised on the business importance of customer retention, relationship marketing emphasises building customer relationships to develop loyal customers. The value creation principle, which underpins relationship management strategies, is likewise presented. Following is an explanation of how the pursuit of these strategies led to the development and exploitation of CRM applications. The section concludes with a discussion on the importance of information and CRM's role for superior sales, marketing and service functions.

2.1.1 CRM—Theoretical Foundations with Relationship Marketing

CRM systems can trace their theoretical moorings to relationship marketing, a paradigm that has been around since two decades back. Leonard Berry, who coined the term in 1983, defined Relationship Marketing as a process that involves attracting, maintaining and enhancing customer relationships (Berry 1983). Essentially, it represented a shift from an emphasis on customer acquisition to customer retention (Sheth 2002).

The traditional view of business is that of simply acquiring customers and making sales. Hence, customer interactions, however repetitive, are not much more than discrete transactions. The company focus is simply delivering good products or quality outputs (Hennig-Thurau and Hansen 2000). Business growth is pursued by acquiring new customers by either expanding geographically or by offering new products to different target markets (Claycomb and Martin 2002). Eventually, transaction-oriented companies run out of new easy markets or segments to pursue. With intensifying competition, acquiring new customers has become a more difficult and costly option compared with the effort in retaining existing customers. Thus

transaction-oriented companies must make a paradigm shift and put greater attention on keeping their customers, if revenues and profits are to be sustained (Reichheld 1993).

To win existing customers' commitment and loyalty, relationship marketing becomes relevant. Companies need to orchestrate value-laden and satisfying interactions with customers. These interactions build up to enduring relationships, which ensure business stability and long-term profitability (Kotler and Armstrong 1999).

According to Berry (1983), good service provider-customer relationships should involve strategies that ensure the delivery of reliable service outputs that are:

1. Tailored to customer requirements,
2. Augmented by unique features and attributes,
3. Priced attractively, and
4. Delivered through competent and responsive service staff.

Berry proposes that indeed, attracting new customers is merely the first step in the marketing process. Serving customers as clients and reinforcing the relationship are also very much part of marketing. Expanding beyond customer acquisition, the marketing process should be able to transform won-over customers to committed supporters.

2.1.2 Customer Loyalty and Customer Relationship Management

The relationship marketing model has remained *en vogue* up to the present time (Hennig-Thurau and Hansen 2000). Ensuring its continuing relevance is its avowed goal and advocacy of customer loyalty, a powerful concept that has become one of the management mantras from the 1990s.

Reichheld (1993) articulated the tangible benefits of customer loyalty, explaining how profits increase as revenues go up, and costs go down.

1. Revenue grows with repeat purchases and referrals;
2. Costs decline as a result of lower customer acquisition expenses, and from the efficiencies of serving familiar customers.

Customer loyalty has been conceptualised as comprising of both behavioural and attitudinal components. In other words, loyal customers demonstrate consistent patronage and endorsement behaviours. At the same time, they hold strong positive attitudes or convictions that they are receiving good comparative value and possess feelings of attachment to their goods or services provider (Griffin 1993, Diller 2000).

To develop such loyal customers, Reichheld (1993) suggested that the company's entire business system be designed around the achievement of outstanding customer loyalty, in effect instituting a loyalty-based management framework. Kotler and Armstrong (1999) do agree that winning and keeping accounts through relationship marketing requires an integrated, carefully coordinated company wide endeavour. Such a conclusion stands on the notion that numerous departments within a company engage in some sort of interaction with the customer, thus all would in one way or another influence the customer's perception of their relationship with the provider (Storbacka and Lehtinen 2001).

The notion of its encompassing role in a company and its focus on the goal of customer loyalty probably contributed to the renaming of relationship marketing as customer relationship management. Relationship marketing connoted more of a basic concept, whilst customer relationship management alludes to a managerial framework, consisting of strategy and structure, to implement the concept. Sometime around the mid 1990s, various published works started discussing customer relationship management. Stone et al. (1996) is one example. The authors advocated that traditional marketing planning should have a focus on building strong and profitable customer relationships. Thus marketing strategies should really be about

customer management strategies, as appropriately crafted to match customer needs at the various stages of the relationship.

2.1.3 Value Creation and the Emergence of CRM Applications

Customer relationship management as a management strategy has been conceptualised as built on customer value creation (Storbacka and Lehtinen 2001, Brown and Gulycz 2002). Value creation is made possible through (1) appropriate service augmentation or enhancement (Weinstein and Johnson 1999, Meyer and Blumelhuber 2000) and (2) efficient and satisfying relationship processes (Storbacka and Lehtinen 2001, Brown and Gulycz 2002).

The prominent role of value creation in maintaining customer relationships is supported by service marketing scholars, Leonard Berry and A. Parasuraman: “Value is the glue that binds company and customer together” (Berry and Parasuraman 1991: p. 143)

Strategies that increase customer value have been correlated with outcomes that enhance company shareholder value (Woodruff and Flint 2003). The Service Profit Chain, one of the best-known and research-derived strategy models in the service industry, recognises the centrality of increasing customer value in bringing about continuing revenue growth and profitability for the company. (Heskett et al. 1997).

As information and communication technology advanced in the 1990s, marketing companies practicing customer relationship management sought to exploit these developments to realise value creation in increasingly competitive markets. Whilst these companies continued to use the traditional instrument of price, reducing prices has become less effective in producing differential advantage and strengthening customer relationships (Reynolds 2002). Many companies also realised that offering reduced prices put unacceptable pressure on margins, which meant they had to reduce their costs to run a viable business. On the other hand, customers had more demanding expectations and needed more comprehensive support at various stages of the relationship. To deal with these two factors (cost efficiency and increasing

customer demands) pulling in different directions, technology offered potential solutions (Muther 2002).

The business need to reduce costs and at the same time, deliver better service values encouraged the development of software applications for customer related functions involving marketing, sales and customer service. Soon this class of tools that automate or enable customer-contact functions was to be labelled as the acronym, CRM, short for customer relationship management software applications (Tourniaire 2003).

The definition and use of the acronym or term “CRM” has been problematic. Most current publications have referred to “CRM” to denote not only the set of applications that have been developed to enable a customer relationship management strategy, but the whole underlying strategy itself. This is the broad definition. As an example, Kincaid (2003: p. 37) writes, “Customer relationship management (CRM) is a discipline that covers all the elements needed to build successful relationships with customers. CRM includes the following elements:

- The information needed to understand customers better;
- The process management needed to deliver efficient and appropriate experiences to customers;
- The software tools that allow us to use that knowledge; and
- The training and change management elements so our people and organisations understand and are capable of delivering experiences that build stronger relationships and increase loyalty.”

Confusion also arises when “CRM” is used by authors writing on the generic relationships building strategy without a focal reference or detailed discussion of these applications that have claimed the name in the software market (Storbacka and Lehtinen 2001, Peppers and Rogers 2001, Barnes 2001). For clarity, concurring with Tourniaire (2003), whenever “CRM” is used without any qualifier in this report, it is referring primarily to this class of software applications and their deployment within adopting organisations.

The use of information and communication technology has taken an important or increasingly, even central role in services marketing and management. Berry (1983) originally proposed that in crafting relationship marketing strategies, meaningful augmentation or supplementation of services to the core product is key to building stronger customer relationships (Berry 1983). Advances in technology now provide new, exciting possibilities to such end. Lovelock and Wright (2002) graphically present the concept as the Flower of Service, where the flower's centre represents the core product (which may be either goods or a service). The flower's eight petals refer to IT- enabled supplementary services that enhance the core product's value. These supplementary services involve information, consultation, order taking, hospitality or customer preferences, safekeeping, exceptions handling and billing. Examples using the power of IT applications and the use of the Internet for general service businesses are given in Table 2.1.

Table 2.1 Services through IT and Internet

FUNCTION	DESCRIPTION
INFORMATION	Customers can study electronic brochures and download copy Learn about FAQs (frequently asked questions) Review offerings and get directions Check prices
CONSULTATION	Interact with expert system that knows about customer needs and characteristics Conduct email dialogue with an advisor
ORDER-TAKING	Book orders and receive email confirmation Check order delivery status
HOSPITALITY	Keep records of customer preferences
SAFEKEEPING	Track movements of customer orders or possessions Receive notification of completed repairs
EXCEPTIONS HANDLING	Record special requests Email complaints
BILLING	Receive bills electronically Check account status
PAYMENT	Pay by bank card or direct debit

Source: Adapted from Christopher Lovelock and Lauren Wright, *Principles of Service Marketing and Management*, 2nd edn, Pearson Education, Upper Saddle River, NJ, 2002, p. 351.

Tourniaire (2003) describes CRM applications that contain various and growing functionalities that cover the services described in Lovelock and Wright's Flower of Service. Through systematic information management, CRM-enabled systems make

possible flexible and individualised solutions and generally address customer issues responsively. With CRM functionalities, value creation is realised resulting in a solid foundation for the growth of long-term relationships with customers (Muther 2002).

2.1.4 Importance of Information and the Role of CRM

The use of customer information for collaborative, operational and management needs underpin CRM systems. Information is vital in making possible efficient and satisfying customer interactions that build up to durable relationships. All too often, however, bits and pieces of customer information are stored separately in different departments or business divisions of one company. The result is what has been termed as the Silo Effect (Siebel 2001) whereby linked, accessible information about each customer is not available. Consequently, the required information could not be called up to facilitate excellent, personalised service, and importantly, potential sales opportunities are not identified. Yet another effect of deficient, disjointed information is that all customers are treated the same (Kalakota and Robinson 2002), despite the fact that there are oftentimes business-critical accounts which deserve more attention due to their impact on profitability and future growth.

Disparate information stems from the usual situation that customers deal with different entities within a company. Moreover, customers do interact with a company through different touch points, for example, the sales force, company distribution partners, the Internet, the telephone and the fax (Shoemaker 2001).

A management strategy that exploits CRM technology characteristically addresses the problem of the Silo Effect. The strategic vision is to put in place an information and communication infrastructure that makes possible a single cohesive view of each individual customer across all customer-facing functions. Whether sales, marketing or customer service-related, data of transactions and contacts made are captured and recorded (Burnett 2001). In its ideal state, Tourniaire (2003) suggests that CRM would be a completely integrated information management tool that performs the functions described below.

1. Collate complete information on each and every customer, linking all front-office functions; provide authorised staff with access to such information in the performance of their customer service tasks;
2. Link seamlessly through a single interface to back-office data (e.g. production, logistics, accounts); and
3. Empower customers with on-line alternative contact points for information and even, self-service to handle sales and service-related tasks.

CRM products may not be the ideal integrated, multi-functional, company-wide tool described by Tournier above. CRM products may be designed to address only particular needs in the three front-office functions of sales, marketing or customer service. Thus, CRM applications fall into three categories according to functional focus: Sales Force Automation, Marketing Automation and Customer Service and Support (Brown and Gravely 2004). Generic value propositions of each CRM product category are given as follows:

1. Sales Force Automation (SFA) applications increase sales productivity by providing sales professionals with the tools to execute administrative and reporting responsibilities efficiently, manage customer contacts and communications, and access real time information. SFA also provides managers the means to monitor performance metrics and can assist with sales forecasting decisions.
2. Marketing Automation (MA) applications facilitate the creation of a systematic database of customers, which can generate information systematically for targeted sales campaigns and smooth customer servicing. Customer data are analysed so that appropriate solutions are offered to customer needs.
3. Customer Service and Support (CSS) applications manage the contact processes with customers including operation of a company call centre. CSS

also helps control and coordinate field service schedules efficiently, and enables the resolution of service needs with the flexibility for automated customer self-service (Xu et al. 2002, Tournier 2003, Reynolds 2002).

All the above-described CRM applications involve the systematic management of information within the company and between the company and its customers. Kincaid (2003) refers to information as the raw material of CRM. Extending this analogy, information management is the key process enabled by CRM applications and the output is stronger customer relationships (Shoemaker 2001).

2.1.5 Summary of Section 2.1

In this section, the theoretical beginnings of customer relationship management were traced to Leonard Berry's relationship marketing paradigm. The model's suggested emphasis on customer retention called for a company-wide system that facilitated enhanced services and the building of strong customer relationships. Value creation has been theorised as the driving force in developing and maintaining loyal customers. Delivering more value to customers while maintaining reasonable prices put the onus on companies to improve selling and service efficiencies. Further, there was a need for good customer information systems to support service delivery processes. From these needs, technologies in the form of CRM applications were commercially developed, firstly to automate selling and marketing processes and those involving after-sales customer service.

2.2 The CRM Industry—History and Developments

A definition of customer relationship management and the theoretical foundations driving the need for CRM applications were discussed in the previous section. In this section, the evolution of CRM applications leading to the harnessing of the Internet is traced. The success and failure of CRM adoption results are likewise presented. The section concludes with a discussion of the recent CRM software industry focus on small and medium businesses.

2.2.1 Genesis in Sales Force Automation (SFA)

As discussed previously, there are CRM products available today which encompass functionalities for Sales Force Automation (SFA), Marketing Automation (MA), and Customer Service and Support (CSS). However, CRM did not begin as a packaged suite of software programs to support the various customer contact activities. Rather, these applications were developed initially as discrete technology solutions. Integration came about only later, around the mid 1990s, spurred by greater connectivity from the establishment of company computer networks and the growth of the Internet (Brown and Gravely 2004).

Many of today's prominent CRM vendors started with Sales Force Automation (SFA) software (Chang 2002). These developers, like market leader Siebel Systems, have now diversified into a broad range of CRM products (Muther 2002). The smaller Front Range Solutions, an aggressive and fairly successful CRM vendor focusing on medium sized businesses, also started in SFA. Among their first products were lower-end sales tools that became popular for introducing opportunity management. These applications incorporated the ability to extract potential sales leads on top of traditional contact information management (Aberdeen Group 2001).

From SFA, two factors drove software developers to branch out into addressing other front-office or customer-facing needs-- Marketing Automation (MA), and Customer Service and Support applications. These factors are:

1. The market acceptance of SFA was unremarkable, and was even reported as a dismal failure (Shoemaker 2001). Therefore, this class of products could not by themselves provide vendors with a good growth platform. It has to be noted though that generally, the suggested reason for SFAs' poor performance was not inferior technology. The common cause of failure has been traced to poor implementation, which underestimated resistance to change of affected salespeople (Speier & Venkatesh 2002).
2. Customer relationship management, an interdepartmental management framework that expanded the focus from mere customer acquisition to

customer retention, gained more supporters. The need therefore arose for solutions beyond selling and sales management functions. Thus, CRM applications emerged that offered broad marketing functionalities that could support information needs of relationship selling and management tasks (Brown and Gravely 2004: 33). Then followed compatible add-on programs, which could support a wider and wider range of customer service interactions that harnessed the power of Internet communications (Muther 2002, Xu et al. 2002).

2.2.2 CRM and the Internet

The explosive growth in the use of the Internet from the early 1990s to its pervasive, even ubiquitous, presence in the conduct of business today has been a major factor in the development of CRM technology. The Internet has provided exciting opportunities to push the CRM concept to new levels of applications. Indeed today, all CRM vendors of note have Internet-enabled their applications (Goldenberg 2002).

Initially, business firms used the Internet mostly as a general public and basically one-way communication medium. Their website contents consisted then of electronic product brochures, company information, announcements and press releases. Soon after, on line transactions became possible, offering customers the flexibility to purchase products or services on the Internet (Kotler et al. 2002).

For business customers, on-line purchasing made possible substantial savings on their procurement costs. For example, General Electric, which bought \$1 billion worth of supplies in 1997 using the Internet, reportedly reduced purchase cycle times by 50% and order processing costs by 30% (Greenstein and Feinman 2000).

Initially, the Internet provided a means for electronic commerce or eCommerce. eCommerce is simply defined as the buying and selling of products and services over the Internet (Siebel 2001). Beyond facilitating transactions or commerce, the Internet was to be increasingly used to distribute information and provide on line customer service and support. Thus, the more encompassing term of eBusiness came

about (Greenstein and Feinman 2000), and eCommerce has now been relegated as one of its subsets (Easton and Araujo 2003).

Siebel (2001: p. 3) defines eBusiness as not simply limited to the Internet. The author described eBusiness as a holistic management approach that “entails the strategic use of information and communications technology ... to interact with customers, prospects and partners through multiple communications and distribution channels”. From Siebel’s perspective, the essential connection of eBusiness to the CRM strategic vision is quite obvious.

CRM software developers incorporated Internet-mediated functionalities in their products. eBusiness companies were enabled to deliver a range of services with increasingly digital forms of service. New business processes came about which were to eventually replace traditional and expensive after-sales, service mechanisms (Taylor and Hunter 2002). For instance, the typical customer service set-up was a call centre with rows of agents fielding phone calls in front of computer terminals. Today, CRM applications, harnessing the Internet and emerging mobile technologies, has turned customer service to a multi-channel framework managing and integrating telephones, websites, emails, text chats and wireless messages (Sharp 2003).

It must be emphasised that the Internet has not changed necessarily what people buy, but in most cases, how people buy. Indeed, as what CRM adopters are banking on, competitive advantage can be derived not only on what they sell, but also in “being able to sell, the way the customers wants to buy” (Tanner 2002). Furthermore, for their service needs, customers going online can interact with their service provider through Internet portals. Typically, these portals could direct customers to one of the following websites that serve various functions as shown in Table 2.2.

Table 2.2 **Customer Service Websites**

Type	Description
Content sites	Provide basic information about the company, its products and its services
FAQ sites	Provide answers to frequently asked questions
Knowledge-base sites	Can be searched for answers, can have knowledge base of service calls and solutions, customers may be able to correct simple problems without initiating a service call
Trouble ticket sites	Allow customers to submit trouble tickets or remedial action requests to initiate a service call
Interactive sites	Facilitates interaction, allows access to corporate databases and systems

Source: Adapted from Deise, M., Nowikow, C., King, P. & Wright, A., *Executive's Guide to E-Business—From Tactics to Strategy*, John Wiley & Sons, New York, 2000, pp. 16-17.

The popularity of mobile devices and the burgeoning of wireless networks are fuelling development of CRM technology. Consequently, novel value propositions are being introduced. New applications provide the capability to communicate instantly to customers using mobile devices as to the status of their orders, relay feedback on problem resolution and create confident expectations through accurate information (Columbus 2000). Wireless CRM enable a higher degree of support to more mobile customers with changing needs. The emergence of wireless or mobile CRM could be considered another step up in the evolution of customer service (Brock 2002).

Customer interactions over the Internet (which provided a new channel to transact business, obtain information or receive service) have been called eCRM. Kincaid (2003) makes the point, however, that eCRM should not be misconstrued as different from traditional off-line CRM. It is just an enhancement of current CRM and an integral part of it, much as telemarketing (contacting customers using the telephone) is a part of marketing. Indeed, while the use of the Internet with CRM applications

has impacted on the range and depth of automated services delivered, the basic input/output customer relationship process involved remains the same—customer or market information as the raw material and optimal company profitability as the end result (Zablah et al. 2004).

2.2.3 CRM—Successes and Failures

Numerous publications have highlighted companies with successful CRM implementations (Siebel 2001, Muther 2002, Swift 2001). These lists of prominent adopters include companies like IBM, Cisco Systems, Amazon.com, Dell Computers, Federal Express, Marriott Hotel and Wal-Mart Stores.

One successful adopter, Cisco Systems has generated quite impressive results with their CRM project called “New World Customer Care” (Goldenberg 2002). Some of the reported benefits are shown in Table 2.3.

Table 2.3 CRM Benefits for CISCO

Benefit	Result
Savings on implementation	US \$ 300 million
Customer satisfaction	Increase from 3.4 to 4.3 rating in a maximum 5-points rating scale
Headcount growth control	1600 jobs avoided, despite doubling of volume. Equivalent to another US\$ 330 mil savings

Source: Adapted from Barton Goldenberg, *CRM Automation*, Prentice Hall, Upper Saddle River, NJ, 2002, p.154.

The cost savings for CISCO have been attributed to CRM applications enabling the use of the Internet to process orders and deliver customer service. Hence even while maintaining the present number of employees at a time of doubling business volume, the company actually registered higher satisfaction ratings from its customers.

Despite the success stories, however, CRM has had a mostly poor record. Various industry studies and research reports have observed relatively high percentages of CRM adopters who gave unsatisfactory ratings for their CRM projects. Ebner et al. (2002) observed that no less than 65 percent of polled participants stated that their expectations have not been met at all. Furthermore, while financial-services firms are among the biggest users of CRM, only 20 percent of the US retail banks that implemented it reported productivity gains. Generally, CRM investments during the CRM initial adoption phase in the 1990s failed to generate the expected returns for the banks that made them. Reasons for CRM's dismal performance are discussed below.

2.2.3.1 CRM Failure Factor: Technology as Panacea Mentality

Many unsuccessful adopters of CRM viewed it as the easy and ready-made cure-all to all their front office or customer contact / interaction problems. Diagnosed as afflicted with a "technology as a panacea" mentality, these adopters implemented CRM projects as a technology, rather than a solution to the problem of facilitating effective and profitable communications with customers (Pockard 2003). Decisions to adopt and implement CRM failed to consider actual business needs (Fletcher 2002). Enticed to join the herd in the growing CRM market, companies have installed CRM products because it is the latest technology without really understanding how these products can make any difference for their companies (Xu et al. 2002).

CRM applications are best deployed as a strategic initiative that supports long-term company needs or aspirations. In particular, these applications need to be considered in the context of achieving customer loyalty and operational excellence. Firstly, customer needs should be identified. To decide the appropriate CRM application and how it is to be deployed to address customer needs, staff from various company functions must be co-opted from the start. Customer-facing staff (those directly interacting with customers) could contribute valuable information and perspective that would point to the optimal CRM decisions (Kincaid 2003).

All too often in the past, the planning and deployment of CRM applications were relegated to or driven by a company's information technology (IT) department. These projects often failed as decisions were made using primarily, technology considerations, rather than the requirements of a customer satisfaction and loyalty-based framework (Vaswani 2003).

To give an example of actual or real company needs not being considered, it is quite possible that CRM adopters may have existing poor service policies or customer-unfriendly processes. On deploying CRM applications, these dysfunctional practices continue to be in place, and are at best, simply automated with the introduction of CRM applications (Kincaid 2003). It is therefore not surprising that customer satisfaction and loyalty would not show any notable improvement.

Internal users' needs ought to be considered too. The choice of an awkward, complicated or even too simple CRM tool could manifest in persistent complaints about poor usability or performance from company staff (Tournier 2003).

2.2.3.2 CRM Failure Factor: Company Politics and Resistance to Change.

CRM entails significant operational changes involving different company functions. Deploying these applications requires organisational change management with strong senior executive sponsorship. In the absence of this fundamental orientation, many unsuccessful adopters experience company politics coming into play, and obstacles inevitably emerge during implementation. Without executive commitment to keep the project in the right direction, affected managers feel threatened by change and may use political ploys to preserve their influence and power (Tournier 2003). Consequently, the project is derailed.

Resistance to changes from company rank and file staff is perhaps a more significant factor. These employees are oftentimes not given sufficient information, assurance or even some participation in discussing the project. Consequently, they develop insecurities. Resistance soon manifests itself in a range of reactions—from simple stalling of the project to outright sabotage. It is therefore not surprising that

employee resistance and lack of buy-in are oft-cited reasons why technology projects fail (Brendler 2003, Xu et.al 2002, *The Economist* 2001).

2.2.3.3 CRM Failure Factor: Complex and Lengthy Implementation

Overly complex CRM programs that require long implementation times also make adoption a difficult and frustrating process (Aslett, 2003). This complexity may be needless or avoidable, and yet result in costs overruns and missed deadlines. The resulting incremental costs would then outweigh any benefits produced (Ebner et al. 2002). Again, this failure factor is related to adopting, or more appropriately, buying technology without considering practical business needs.

Many small and medium businesses (SMBs- companies having less than US \$50 million annual turnover and less than 500 employees) have suffered the effect of adopting these complex CRM applications, which were originally designed for large enterprises. During CRM's initial growth phase, vendors were in a frenzied race to come up with comprehensive feature-rich solutions. These features however were of little, if any, value to the SMB adopter, yet caused expensive and frustrating implementation experiences (Caretsky 2003).

2.2.4 Shifting Focus from Large to Small and Medium Businesses

CRM vendors have traditionally focused on large enterprises to score substantial sales figures quickly and establish market shares. This focus makes logical sense, as large companies have more financial and technical resources to undertake CRM projects (Aberdeen Group 2001).

The economic downturn from the year 2000 had the effect of prompting larger companies to scale back IT investments, including those involving CRM. Interestingly, however, there has been an increasing trend of CRM adoption among the small and medium sized businesses. With increasing demand from this sector,

long time CRM vendors like PeopleSoft, JD Edwards, Oracle and Sage quickly took steps to launch products more suited for small to medium-sized customers (Goldenberg 2002).

Software market leader Microsoft has also taken a determined interest in the mid-market CRM business, with its acquisition of CRM software companies Great Plains and Navision (Microsoft Press Release, July 2002). Under Microsoft Business Solutions, a division organised in July 2002, the company launched its own CRM product in North America in 2003. Described as specifically targeted at the small and medium businesses, an updated version, Microsoft CRM 1.2, soon followed (*Computer Times*, 2004).

Industry practitioners now recognise that SMB customers have different CRM product and service needs from that of large enterprises. Desired attributes of CRM adoption would be simple yet functional software applications making possible reduced purchase costs, shorter implementation times with minimal technical resources. Additionally, the CRM vendor's must arrange for distribution partners to provide close local support to the large number of potential SMB adopters (Aberdeen Group 2001).

Cogent, a multifunctional, cost-effective CRM package manufactured by newcomer J-Curve, has been singled out as designed around SMB needs, rather than just a "dumbed down enterprise edition of a larger package" (Greenberg 2002). Similar comments have been made about Front Range Solutions' modular products consisting of GoldMine for sales and marketing solutions and HEAT for service and support (Aberdeen Group 2001).

Tourniaire (2003) confirms that indeed, useful CRM tools functionalities have been adapted down to smaller, cheaper and more manageable packages that suit those with modest resources. CRM vendors have realised that SMB target customers have a need but have limited IT budgets and in-house technical support. Thus, applications

must be “fast, cheap and ready to run in a couple of months” (*Computer Times* 2004, *Enterprise Solutions Guide Section*: p. 19). How long it would take to see majority of these small and medium businesses adopt these new generation CRM applications remains a question. Judging from their marketing initiatives, however, CRM vendors in Singapore seem convinced that the market potential for SMBs exists. Microsoft launched its new CRM 1.2 version for the Singapore SMB market in February 2004 (*Computer Times*, 2004). Following Microsoft’s entry, vendors like SAP and Oracle have launched their own enterprise solution versions of back-office supply chain eEnterprise resource planning (ERP) systems, as well as front-office selling chain CRM applications (*Computer Times* 2004, *Enterprise Solutions Guide Section*).

2.2.5 Summary of Section 2.2

The evolution of CRM technologies, beginning with applications in Sales Force Automation (SFA) to Marketing Automation (MA) to Customer Service and Support (CSS), has progressed substantially. The exploitation of the Internet was a major development. Thus, most current CRM stand-alone products or packaged systems today are Web-enabled, making possible many interesting and value-laden features. The success stories from CRM’s first adopters have however been limited. The many failures were traced to a technology orientation, rather than one of addressing actual business or customer needs. Additionally, a significant failure factor is the familiar difficulty of effecting wide-scale organisational change. The first generation CRM applications also tended to be complex and involved lengthy implementation times. Medium-scale businesses that adopted CRM earlier also had to struggle more, given their limited resources. There are positive signs though that lessons have been learned. The recent introduction of simpler and less expensive products which can cater to the needs of small and medium businesses hold the promise that CRM can finally deliver on its potential value. In the next section, the impact of CRM for companies as well as the criteria and requirements for implementation are discussed.

2.3 CRM and the Adopting Company's Perspective

Section 2.1 discussed the concept of customer relationship management and its theoretical foundations. CRM applications, consisting of Sales Force Automation, Marketing Automation and Customer Service and Support functionalities, were likewise introduced. In Section 2.2, the evolution of CRM applications was traced. The published reports of CRM adoption, both successes and failures, were presented. Finally, the recent emergence of simpler and less expensive CRM applications for small and medium businesses was highlighted.

The purpose of this research report is to evaluate the perceived value of CRM applications from the perspectives of the adopting company and its customers, with a particular focus on the hygiene services industry in Singapore. A review of the literature to examine the adopting company's perspective is presented here in Section 2.3. The benefits as well as the costs and challenges in adopting CRM systems are discussed. Also reported are the motivators for purchasing CRM applications and observed improvements in company performance measures. Finally, the applicability of CRM systems according to business or organisational profiles is considered. The next section, Section 2.4 discusses the customers' perspective of CRM applications.

2.3.1 Potential Benefits

Karimi et al. (2001) explains how CRM applications can benefit adopting companies through 1) cutting down the cost of selling and service activities, 2) boosting revenue by the identification of selling opportunities, and by 3) enabling better and supplementary services that enhance a company's competitive position.

1. CRM applications cut down selling and service costs through many possibilities:

- On-line publishing of disseminated marketing and technical literature versus hard copy printing and posting. For example, IBM has reportedly saved 10 to 20% for its brochures dissemination costs by making this possible through the Internet (Woodcock et al. 2003).
- Freeing salespeople from the time-consuming demands of reporting and administrative tasks, thereby allowing more productive selling time so that sales costs per unit sales come down (Goldenberg 2002).
- Taking orders online versus from the telephone costs much less, apart from avoiding miscommunication of specifications and troublesome disputes. For example, in General Electric's high-tech businesses, a phoned-in order can cost them as much as \$80, whereas an online order would be around 20 cents (*The Economist* 2001).

Similar cost reduction cases can be imagined in the reporting and resolution of service issues. For example, First Service Networks, a facilities maintenance company, using a CRM system with online functionalities, while cutting service response times by 25%, also reduced total paperwork and status update phone calls by 75% (Woodcock et al. 2003). One of the consequences of this innovation is that overburdened call centres or help desks can be relieved of attending to routine issues and focus on more challenging service problems (Zemke and Connellan 2001).

2. CRM applications boost revenues by providing adopters with better information about their customers.

- Opportunities are identified for cross-selling, whereby complementary products or services are marketed to existing customers.

- Another possibility is upselling, in which instances, product upgrades or higher value services are offered.

With these identified opportunities converted to increase revenues, the company increases its share of the customer's total business (Zikmund et al. 2003).

1. CRM applications enhance the company's competitive position by enabling provision of better or supplementary services, mostly through on-line functionalities. These services may be demanded or expected by customers requiring:

- More convenient information access;
- Performance of self-service tasks, offering flexibility and time savings (Goldenberg 2002).

The operational cost savings from CRM applications could be tapped to further enhance its competitive position. For instance, some of these incremental margins can be passed on to customers in terms of lower prices, bundled concessions (such as promotional gifts or rewards for the use of alternative self-service channels) or invested in services that can further delight customers (Bitner et.al. 2002). Executed thoughtfully, these options allow the company to effectively differentiate their service offers further versus competitive alternatives.

CRM Adoption Motivators

As to which of the above-mentioned potential benefits motivate adopters most to purchase CRM systems, the results of a US survey cited in the November 2002 issue of *The Controller's Report* are presented in Table 2.4.

Table 2.4 CRM Adoption Motivation

Primary Reason for Adopting CRM	Percentage of Companies
Increased efficiency	33%
Competitive advantage	22%
Customer demands and requirements	15%
Increased revenue	14%
Cost savings	10%

Source: Adapted from data in 'Purchase Drivers', *The Controller's Report*, New York, November 2002, p. 9.

The information in Table 2.4 suggests that pursuing increased efficiency is the leading motivator in deploying CRM applications. On the other hand, while customer demands and requirements is a factor, it accounts for less than half of those wanting to increase operational efficiency. This insight correlates with the technology, product-centric, inside-out corporate view that is discussed in detail previously in Section 2.3.3.

Observed Performance Improvements with CRM

As to actual benefits resulting from CRM adoption, PwC Consulting prepared a report on best practice cross-industry observations of CRM adopters. Improvement of salient performance measures is given in Table 2.5. The figures are given as percentage ranges as observed by PwC. The actual results of each company, was said to be dependent on the company's starting point and its commitment to CRM (Brown and Gulycz 2002).

Table 2.5**Quantitative Benefits of CRM**

Performance Measures	Range of Improvement Observed
Increase in winning back lost customers	25% - 33%
Increase in prospects and new customers	27% - 45%
Increase in sales to existing customers	3% - 25%
Increase in overall customer retention rate	50% -200%
Mailing cost decrease	10% - 40%
Marketing overhead decrease	8% - 10%

Source: PwC Consulting report, adapted from Stanley Brown and Moosha Gulyck, *Performance Driven CRM—How to Make Your Customer Relationship Management Vision a Reality*, Wiley, New York, 2002, p. 31.

It is noteworthy that the measure with the highest observed improvement is overall customer retention rate increase. This result supports the notion that properly-implemented, CRM enhances relationship-building processes, creating stronger customer bonds and increasing customer retention rate. The information provided by CRM applications (specifically those with Marketing Automation functionalities) could also be wielded effectively in increasing sales to existing customers as demonstrated by the observations of PwC Consulting.

2.3.2 Investments and Implementation Costs

The value of potential benefits from investments in IT is logically discounted by the perceived financial and non-financial costs to be incurred by prospective adopters (Chircu and Kauffman 2000). Companies may find the initiative easy or difficult to implement depending on the investment costs involved and their organisation's change readiness and skills adequacy.

The investment costs to implement CRM can be described as follows:

1. Investment on IT infrastructure

Infrastructure requirements consisting of server-based systems, software licences and updates, firewalls for security, and trained personnel to install and maintain the system need to be provided, (Zikmund et al. 2003).

Soliman (2003) makes the point though that with the Internet, provider-customer electronic communication and transactions are now quite affordable. Before the commercial use of the Internet, these interactions required expensive hardware and software investment in Electronic Data Interchange (EDI) systems. EDI allowed interorganisational computer-to-computer communication of business information, but needed subscription to costly dedicated networks.

Apart from cost savings with the use of the Internet, another development supporting the notion of better affordability of installing CRM systems is the trend of decreasing computer hardware cost with increased storage capacity. In addition, there has been a significant reduction in the cost of storing large amounts of data (Payne and Frow 2004).

Another investment consideration is the fact that oftentimes CRM implementation would involve significant data processing and integration, as a result of customer databases, account records, as well as technical information being in separate, even incompatible systems. The information could be also incomplete (Woodcock et al. 2003) or conflicting, if coming from multiple databases within a large organisation (Krol 2004).

Complete, and necessarily accurate, information is a key factor for CRM's success. Lim (2004) warns that poor data quality introduced into CRM systems can have fatal consequences: operational inefficiency, frustrated customers, and flawed strategic decisions. Thus, the successful deployment of CRM applications requires the assurance of clean or accurate data made possible beforehand by systematic data cleansing and checking procedures.

2. Process and people change management

The implementation of CRM must be preceded by a review of processes to ensure the inefficient and problematic are eliminated, or redesigned to maximise the impact of CRM automation (Kincaid 2003, Kalakota and Robinson 2002). For example, there could be bureaucratic management approval procedures that unreasonably delay customer service. Current work flows may not assure the consistent capturing of customer contact data, perhaps due to non-standardised reporting practices, or because simply, accountability for these tasks has not been established. Such considerations and formulation of corrective action would require management time or external consultants' work.

As deployment of CRM applications requires organisational and individual mindset change, this process also must be planned for and resourced. Communications and training programs to company staff must be rolled out to encourage buy-in and gain critical commitment (Zikmund et al. 2003).

The new demands on staff working on different functions could be substantial (Kotler et al. 2002) or new recruits needed for the positions and respective tasks as shown in Table 2.6.

Table 2.6 CRM-Related Staff Requirements

Role	Function
Application specialists	Design / maintain website
System administrators	Maintain the server and operating systems; Ensure secure and reliable operations
Network operations	Manage internal network, develop firewalls
Date-base Administrators	Create product data bases, support transactions processing, coordinate options
Customer Service	Handle phone/ online support, emails, FAQ pages, customise orders where applicable, personalise customer interaction
Content Specialist	Develop content that supports product information
Marketing consultant	Conduct usability studies; monitor competitors comparative capabilities

Source: Adapted from Kotler, P., Hayes, T. & Bloom, P., *Marketing Professional Services—Forward Thinking Strategies for Boosting Your Business, Your Image and Your Profits*, 2nd edn, Prentice Hall Press, Paramus, NJ, 2002, p.375.

Process, system, people and management preparedness for CRM deployment, as explained above, has been referred to as “organisational readiness”. Such a readiness situation must be achieved prior to CRM implementation if the initiative is to succeed (Gentle 2000).

Given that the overall organisational commitment and investment could be substantial and bear risk, the question arises as to whether CRM applications could benefit all industries or all business operations.

2.3.3 Business Profiles and the Need for CRM

While early adopters of CRM were mostly companies in the information technology, financial services and telecommunications industries, CRM has now been embraced in a wide range of organisations such those in manufacturing, transportation and distribution, medical products and services, consumer package goods and others (Aberdeen Group 2001). Successes have additionally been reported in the retail and entertainment industry (Swift 2001).

Considering the wide range of organisations that have adopted CRM, the question is: Are all businesses, candidates for using and benefiting from CRM? Applegate et al. (1999) suggested several criteria to assess the potential value of IT innovations in a particular business' marketing or operations. Building on this work, Karimi et al. (2001) proposed that for CRM adoption, the beneficial impact for service providers would be more should the following apply:

- An accurate, quick confirmation to customers is essential.
- A large number of routine customer interactions are required per day for receiving orders or information.
- Increase in multiple ordering or service sites would provide value to customers.
- Products can be surrounded by value-added information to customers.
- Customer tastes are potentially volatile.
- Direct and indirect labour levels are high

The amount of information handled by the company seems important in predicting CRM's potential value. Logically, any improvement that automates the processing and communication of heavy information loads and ensure its accuracy would result in more significant impact. Related to the amount of information handled is the size of the organisation. According to Gentle (2002), the size of the

organisation can be used as a criterion for the applicability of CRM. Gentle's research suggests that CRM, particularly those applications that cut through different company departments, is for companies that are of substantial size—where there are say, more than 30 sales and service staff in direct contact with customers, and these customers number upwards of 10,000.

Reynolds (2002) suggests that in industries with low differentiation of core products, CRM-enabled service features can be a differentiator for competitive advantage. Thus, the author singled out financial services, insurance and consumer durables as obvious CRM beneficiaries.

Poirier and Bauer (2000) believe that the needs profiles of the company's customers are a factor too. CRM applications would be of greater utility in cases where high diversity of customers needs exists, as more information is handled in these situations. For instance, to enable customisation schemes, the processing of high volumes of customer information must be automated to identify specific needs and propose customised product packages.

Poirier and Bauer (2000) also suggest that the spread or skewed nature of business revenue across the customer base is another consideration. Where the purchase amounts from a small percentage of customers account for the most of the company's revenue (therefore skewed), then identifying and knowing these critical customers (through CRM applications) would pave the way to appropriately deliver more services and attention to them.

2.3.4 CRM Adoption Viewpoint

Companies adopting CRM applications can either have the traditional product-centric orientation or the now widely prescribed customer-centric orientation. Kincaid (2003: p. 20) defines product-centric as possessing an inside-out view or making "plans and decisions based on an internal perspective". Being customer-centric on the other hand, means taking an outside-in view wherein "plans and decisions are based on the anticipated impact on the customer" (Kincaid 2003: p. 22).

The inside-out view is the traditional perspective characterising most early adopters of CRM applications. The primary focus is on the application of technology to derive higher efficiencies in front office functions (sales, marketing and customer service). However as Harris (2003) points out, existing company processes may not be optimally streamlined so that this approach may be handicapped from the start. Perhaps more importantly, it fails to put the needs and preferences of customers, which could be changing or different from management assumptions, as a key design consideration for adopted CRM applications.

Demanding customers make up today's competitive markets (Seybold 1998). Their needs and expectations change as a result of better competitive offers. It is therefore imperative that companies keep track of customer sentiments—specifically what will influence purchasing behaviours (Harris 2003). Thus, a customer centric viewpoint becomes necessary if valuable customers are to be kept.

Reynolds (2002) prescribes that whatever the adopted CRM application is, whether it is just a point CRM software (with limited functional scope) or an integrated system that is enterprise-wide, it is imperative that a clear business strategy that considers the customers' perspective be the guiding motivator. Reynolds (2002) is also being realistic by saying that 100% customer centricity in running a business may not be feasible with one CRM adoption project, but perhaps a series of carefully planned initiatives would allow a gradual shift of the corporate culture from a product-centric to a customer-centric business model.

The step-wise, strategy-grounded approach to CRM adoption has also been advocated by Rigby and Ledingham (2004). However, the authors' starting point seems to be neither a product nor a customer-centric perspective alone, but a competitive advantage platform combining both. Thus 'strategic pain points', improvements on which would result in increased customer satisfaction and operational efficiencies, were identified and prioritised for CRM initiatives. The authors studied the experience of successful CRM adopters, Kimberley-Clark, Brother and Molex. A common thread is CRM deployment in phases, where success

in each step generates not only new competitive advantage-building opportunities, but also the financial returns to fund subsequent CRM initiatives.

2.3.5 Summary of Section 2.3

The company perspective on the adoption of CRM was considered in Section 2.3—beginning with a discussion on expected benefits derived from reducing costs on the one hand, and increasing revenue on the other. Reports were presented on purchase motivators of CRM applications as well as observed improvements in best-practice adoption cases. The investment and implementation costs to get to a state of organisational readiness were likewise discussed. Towards the end of this section, the business and organisational criteria for companies, which should benefit most from CRM deployment, were presented. Information content in a company's product or service design, and the complexity of selling and service processes needs identify more likely CRM beneficiaries. Organisational size is also a suggested indicator, particularly where labour costs are high and manpower savings would have more impact. The diversity of customers needs and skewed nature of their purchase amounts also impact the demand for information processing requirements thus justifying the adoption of CRM.

Finally, the product-centric or customer-centric viewpoint that adopters take in considering CRM deployment was explained. A recent concept, the step-wise strategic pain point approach focused on competitive advantage, was presented. CRM deployment was suggested to consider both the satisfaction of customers' needs and the increase in the company's operational efficiencies. In the process, competitive advantage is built in phased, but substantial and sustainable, steps.

2.4 CRM and the Customers' Perspective

The previous section discussed the adopting company's perspective on the value of CRM applications. In this section, which is also the last section of the CRM literature review chapter, the customers' perspective on the value of CRM

applications is examined. The section starts with a presentation on the expected benefits of CRM functionalities. The concerns with CRM systems are also explained. Lastly, the section discussed the role of customer needs and context in the perceived value from CRM functionalities.

2.4.1 Benefits from CRM Functionalities

Apart from addressing a company's efficiency problems, the CRM tools of today were designed to augment services and in general, deliver more added value to cater to customer needs.

Patricia Seybold's (1998) book '*Customers.com*' is noteworthy as one of the first publications that clearly articulated what customer relationship management strategy and CRM technology could aim to accomplish for customers. The insights offered provide the guideposts for subsequent developments in the CRM field. Seybold argues that ideally, the initiative should be customer-centric, whereby a company's processes are redesigned from the outside-in, starting from the customers' perspective. Harnessing technology, the key objective is for companies to make it easy and gratifying for customers to do business with them.

Lobbying from the customers' vantage point, Seybold (1998) enumerates in simple statements the fundamental demands that should drive the service strategy:

“Don't waste our time!

Remember who we are!

Make it easy for us to order and procure service!

Make sure your service delights us!

Customise your products and service for me!” (Seybold 1998: p. 11)

The basic customer criteria for evaluating products and services have always been reliable quality and responsive service at reasonable cost. Alter (2002) gives detailed examples how information technology could be exploited to get incremental and superior performance on these expectations and in so doing achieve competitive

advantage for the company. CRM applications, harnessing the power of the Internet and communications technology, could enable services to customers to stand out on the attributes of speed, information and communication, flexibility, personalisation and customisation, as explained below.

2.4.1.1 Speed

The compilation of all customer information in a single database location allows for convenient, complete and accurate retrieval that facilitates customer service. The time needed to reliably respond to customer queries and service issues is dramatically cut down, thus increasing customer satisfaction.

For customer-facing staff, other real-time company information, such as inventory levels and product availability, order status, service personnel availability and product and technical bulletins, are likewise valuable for quicker response times, particularly if leveraging on wireless technology using mobile devices such as personal digital assistants or PDAs (Brock 2002).

2.4.1.2 Information and Communication

Access to a company's extranet (enabled with CRM tools and allowing only restricted entry) can provide customers with required information regarding (1) their purchase and service history, (2) frequently asked questions regarding product and service issues, (3) technical bulletins and materials safety data. The use of search engines in seeking any other relevant company, product or service information is also a common feature (Kotler et al. 2002, Diese et al. 2000).

The resolution of service complaints and requests, or progress on purchase orders placed can also be quickly recorded in the central database for customers to view. Receiving instantaneous confirmations for job completions or developments is also possible using short message service (SMS) to mobile phones and / or emails (Goldenberg 2002).

2.4.1.3 Flexibility

CRM systems allow the efficient completion of several customer tasks using various media or touch points, from traditional methods like phoning the company's contact centre where a service agent can attend to their needs, to customers helping themselves on-line by logging into the extranet. This flexibility makes service access free from being time-bound, so that placing orders, registering queries or complaints can now be done conveniently on a 24 hours / 7 days basis. It is a valuable customer benefit and a source of competitive advantage for the service provider (Tanner 2002).

The availability of on-line procurement for business customers creates value by lowering transaction costs, particularly useful for routine and low dollar orders for goods and services (Lichtenthal and Eliaz 2003). The same observation has been made, however, for customers of Cisco Systems' specialty computer products. These customers experienced a 20% increase in purchasing efficiency while cutting their order lead times by 3 to 7 days by purchasing on-line (Goldenberg 2002).

The process of a customer going online to satisfy a requirement or solve an issue has been called automated self-service. Providing this alternative empowers the customer and increases their sense of control and general satisfaction (Siebel 2001, Lee and Allaway, 2002). Though this transaction is called self-service, in a sense, the technology acts as the customer's servant (Zeithaml et al 1990).

British Telecom (BT), Oracle, Xerox and IBM are among the leading business-to-business companies offering its customers self-service functionalities. Through a combination of personalised websites and contact centres, these companies have enabled their customers to order products or services, obtain information, and initiate and solve problem resolution at the time and place their (the customers') needs dictate (Payne and Frow 2004).

2.4.1.4 Personalisation

One of CRM's value propositions is customer intimacy—or the ability of companies to address customers on one-to-one basis by virtue of the comprehensive

customer information that could be viewed in service interactions. The customer's name, title and position in the organisation, their locations and service arrangements, purchase history and so forth are available to personalise the service and prepare meaningful offers that consider their specific circumstances (Zikmund et al. 2003). Moreover, customers do not have to repeat themselves in resolving ongoing concerns. Thus, customers feel that they are treated as special rather than merely part of a faceless crowd (*The Economist* 2001).

An oft-cited example is hotelier Ritz-Carlton whose employees enter captured guest information in a central database so that guests, on subsequent visits to any Ritz-Carlton hotel, are delighted to be served exactly, smoothly and unprompted, according to their indicated preferences in the past (Muther 2002).

After customers' profiles and preferences are noted, targeted mailing could also be done periodically on topics of customer interest, whether they are about new offerings or industry developments. IBM's customer contact program (called *Focusing on You*) is an example. The company uses customer data, and topics of interest indicated by customers themselves, to send out information using the Internet on a completely individualised basis (Silverstein 2000). Enhanced regular communication, enabled by technology, has been established to have a positive effect on the overall relationship (Boyle 2001).

2.4.1.5 Customisation

Interactions with customers could be personalised with the help of CRM information technology. CRM could also make possible that products or services received by customers are tailored to their specific requirements. The complexity of configuring and processing individual orders from a large customer base constrained companies in the past to make only limited standard offerings (a business model termed as mass marketing). By linking the front office facing CRM functions with back office production and supply chain processes, it is now possible to capture and process customer information systematically to provide customised products and services to sizable numbers of customers (a business model termed as mass customisation). Thus, the message conveyed to customers is not a general, single-

thread statement such as “Here’s what *we* have”, but rather a dynamic, multi-thread invitation such as “Let’s see what we can do for *you*” (Keen and McDonald, 2000: p. 117). The difference in these messages demonstrates that even in the absence of face-to-face interactions, a high technology setting, can incorporate a collaborative atmosphere evoking soft touch feelings.

Recognised successes in this field of online mass-customised businesses are

- Computer company, Dell which allow customers to specify the exact hardware configuration they require; and
- Garments merchandiser, Levis, in whose website, customers are guided and could place orders for items suitable to their body measurements (Muther 2002).

Table 2.7 summarises how specific CRM-enabled service features could address identified customer needs of Information, Communication, Flexibility, Speed, Personalisation and Customisation:

Table 2.7 CRM Features and Customer Needs Addressed

Customer Need Addressed	CRM-Enabled Feature
Information, Communication, Flexibility, Speed	On-line access to comprehensive company as well as their own records
Flexibility, Speed	On-line registration of sales orders and service issues
Information, Communication, Speed	Immediate confirmation of orders/ resolution of service issues by Short Message Service (SMS) or by emails
Personalisation	The company has comprehensive record of customer information and past contacts allowing for satisfying service and attention.
Customisation, Information	The company has comprehensive record of customer information and past contacts allowing for the company to provide customer-specific products and services, including catering to information needs.

If realised, these benefits could be of significant value to customers, which consequently result in favourable outcomes on the company's business performance. Research studies have affirmed customers' appreciation of speed, information and flexibility with the deployment of CRM applications (Dotan 2002). Further, the use of personalisation and customisation schemes have delighted customers and strengthened relationships (Peppers and Rogers 2001, Keen and McDonald 2000).

2.4.2 Concerns with CRM

While the value-creating benefits of deploying CRM applications have been reported, it appears that no sweeping endorsement can be made. Central to this observation are the issues of (1) Weakened relationships and the (2) Value of automated self-service.

2.4.2.1 Weakened Relationships

Barnes (2001) is sceptical that CRM applications could deliver meaningfully on the promise of creating strong relationships. Barnes suggests that the problem stems from CRM information being essentially concerned with historical behaviours such as purchases or transactions. The information system fails to give a true picture of the relationship, the customer's real motivation, relative preferences considering other providers, and loyalty—information that could only be gathered from person-to-person interactions. The company's reliance on a CRM information system would therefore not be conducive to fostering the desired closeness to customers as the soft but more important feedback on the relationship are not taken in. Consequently, genuine relationships, featuring strong emotional bonds between providers and customers, could not be nurtured. Barnes' scepticism is also based on the suspicion that CRM's driving intention is really selling more products and services.

Various authors (such as Leek et al. 2003, Goldenberg 2002) have also raised the issue of automation with CRM on service quality as perceived by the customer. Specifically, the potential impact on customer satisfaction, as a consequence of the

reduction of human interaction and social bonding, has been highlighted. In most CRM scenarios, the traditional account representative attending singularly to customer needs is replaced for the most part, by the combination of an Internet portal and a call centre, manned by different agents, or perhaps even using computer telephony or automated voice responses.

Social bonds (personal interactions characterised by feelings of liking, acceptance, friendship and social interactivity) are a key determinant of customer commitment and long-term relationships (Berry and Parasuraman 1991, Hennig-Thurau and Hansen, 2000, Gounaris and Benetis 2002). There is therefore the risk that customers would resent the fact that, by adopting a largely automated service model governed by CRM functionalities, the company has in effect, dehumanised the customer service function (Goldenberg 2002).

Callaghan (2002) reported on a case of dealers of technical products, whose supplier shifted to communicating to them through an extranet whereas the supplier's managers previously conveyed information through visits. These dealers were unhappy about this change and were reported to long for relationships "like before" that were more personal, rather than simply having "electronic exchanges of information". They felt that the business relationship had weakened as a result of fewer visits from their principal's managers. In this case, the state of impersonal communication was graphically exemplified by the unsigned bulletins they receive and with no contact person indicated.

Peppers and Rogers (2001) agree on the importance of face-to-face communication, this being particularly vital for the company's interest, in managing large customers. For this requirement, no amount of automation is likely to replace face-to-face communication. The authors go further to propose that for many business-to-business situations, the technology should not be used to replace the people who serve as the channels of interaction, but to empower them with tools and information to push up the quality of interactions with customers.

2.4.2.2 Value of Automated Self-Service

Another recurring concern with CRM automation is the value of self-service functionalities to customers, which on the surface, offers flexibility and speeds up response time. There exists customer resentment that some self-service schemes, particularly if no convenient alternatives exist, are an imposition that benefits the company more than the customer. An example is when customers are constrained to obtain sizable product and technical information from the Internet rather than receiving printed literature from the company. One exasperated customer puts it, “Self-service? Excuse me? I have to pay you to serve myself? Something is seriously wrong here” (Le Blond 2002: p. 50). This problem could result in serious customer dissatisfaction. Hence, in seeking increased efficiencies by introducing new customer self-service electronic channels, CRM adopters are reminded that there should be no net loss in customer perceived value (Pires and Aisbett 2003, Payne and Frow 2004).

2.4.3 ‘Draw’ of CRM: Crucial Role of Needs and Context

The previous discussions pointed out that from the customers’ perspective, there could be advantages as well as potential problems and disagreements with being served using CRM applications. The question raised then, and it is an important and practical one, is— Under what circumstances would customers better appreciate CRM features and functionalities? As Shoemaker (2001) suggested, research is needed to determine the factors that ‘draw’ a customer to CRM.

When would having the possibilities of speed, enhanced communication, information access, self-service flexibility, personalisation and customisation matter to the customer? Seemingly, an answer of “It depends” applies. Callaghan (2002) researched the implementation of CRM-like intranet/extranet systems using case study methodology for three companies. The author concluded that no predictable outcomes could be made; only that there was “the crucial role of context” in determining results.

In the adoption of innovations, the role of factors that may vary from adopter to adopter has been recognised. The influencing power of these factors varies or is contingent upon the perceptions and context of adopters, (Tidd et al. 1997).

Focussing on the business-to-business domain, what could the factors in a customer's particular context be that draw him or her to the provider's CRM-enabled front office systems? Are there particular needs that customers perceive are better served through these applications? Information on available reports on CRM deployment in business-to-business settings and the general services literature were analysed and pieced together. Usefulness and Relative Advantage, Personal Interactions, Perceived Risks, and IT Work Context were identified as possibly important considerations on whether customers would find added value with CRM-enabled interactions.

2.4.3.1 Usefulness and Relative Advantage.

For customers to agree that CRM-enabled features and functionalities that they experience in their interactions with the company are indeed useful, the benefits obtained by this innovation must be more than the perceived costs. Costs in this sense mean the effort and time exerted to get the benefits desired. For example, in getting needed information, or making a transaction through the Internet, the question is asked if the particular flexibility experienced in achieving the task outweighs the effort involved in getting on-line and navigating through the company's website or extranet. A calculation of net additional value for this particular alternative is reached and an evaluation of usefulness (worth the effort) made. Studies have established that the customer's perceived ease of access and use is a major consideration in the willing adoption of technology-enabled service delivery (Walker et al. 2002).

Logically, customers would have favourable impressions of these offered CRM-enabled features and functionalities after comparing them with known or existing alternatives. Comparisons are usually made using one or a combination of the following criteria— ease of use, time saving, and availability when and where needed, and costs involved (Bitner et al. 2002). For instance, conducting transactions

in a bank presents difficulties for the business customer, such as travel and queuing times and restricted hours, whereas possibly doing it on-line is a much more convenient and economical option.

Yet another common situation for business customers is making the choice of using salespeople for information or service issues which take more effort and time versus automated self-service which could conceptually be faster, more accurate and with an added benefit of the customer not having to deal with in-person sales pitches. This choice is however, not quite straightforward. There are limits to electronic self-service problem solving capacity. Some customers may have to resolve non-simple issues on a regular basis, and could often face a brick wall in using the self-service electronic channel. These customers would understandably prefer having knowledgeable and sympathetic human help (Zemke and Connelan 2001).

Customers make choices of alternatives that offer them more advantage. In this case, whether CRM functionalities will appeal to them depends on whether there are existing or other possible means, which are better in their estimation. Making this choice is an affirmation of the concept of relative advantage—a prerequisite for the willing adoption of a new alternative (Tidd et al. 1997).

2.4.3.2 Personal Interactions

The presence of personal interactions with service providers which customers find satisfying make the migration of customers to more technology-based modes less desirable (Alter 2002). Supporting this contention is a study involving 210 Australian inner city and Central Business District service consumers, which investigated whether they preferred to be served by people versus the use of automated means (Walker et al. 2002). Interestingly, the findings showed that 84.2%, indicated preference for being served by people. Of this overwhelming majority of 84.2%, the 17.1% see no benefit with automated methods, just difficulties and risks, while the 67.1 % though cognizant of the benefits of technology-facilitated services, have nevertheless indicated an above average preference for dealing with people. On the extreme side, however, there are also the 15.7% in the survey who do not see the need

for personal contact and would prefer automated service rather than have contact with customer service personnel. The obvious question is whether business services customers exhibit the same preference profiles.

2.4.3.3 Perceived Risks

Business customers view services on a two-dimensional risk scale evaluating the probability of failures in performance of the service provided and the resulting impact on the customer's operations (Boyt and Harvey 1997).

In situations where there is a perception that potential significant service failures (or unsatisfactory service) exist, there is the suggestion that providing customers with automated self-service functionalities is beneficial (Alter 2002). Quick and flexible access to information and task empowerment through automated self-service mitigates risk concerns.

Some customers feel more assured with placing a recorded order via electronic means versus a phone- or fax-placed order, which can be misinterpreted or lost (Zemke and Connellan 2001). A self-service automated functionality therefore offers customers a sense of better control, a basic enhancer of service quality (Gronroos 1990).

Another suggested risk that the customer contends with may have less to do with potential service failures and how serious the consequences are. There could be a longer term concern that the relationship with the provider may not continue to be effective and valuable in satisfying the customer's organisation needs (Zikmund et al. 2003). This probably applies more in situations when there are a limited number of capable service providers in the market or where the product offered is of critical importance to the customer. The tangible evidence of a relationship through a personalised access to a company's Internet portal and the speedy and constant interactions enabled by CRM are proposed as offering some kind of needed assurance. The need for this reassurance implies that the customer has progressed from valuing a particular supplied service to a higher level of valuing the ongoing

relationship that provide tailored and effective solutions to their particular needs (Payne and Frow 2004).

Perceived risks of service failures may increase the customer's desire for more involvement with the service process. More involvement includes being able to initiate and complete tasks, as and when desired. Customers want to be in control (Seybold 1998). Here lies the appeal of CRM service functionalities to customers. As an example, travellers may want to book tickets on the airline's website themselves versus using travel agents with which they hold some fear that not all available schedules are revealed nor the most convenient flight or seats selected. On the other hand, there is also the recognised passivity of insurance customers. Once assured of the reputation of the insurance company, they sign up a policy and from thereon, display a very low level of involvement in the service throughout their relationship with the insurer (Foss et al. 2002). Presumably then, for insurance customers, not bothered by perceived risks of service failure, CRM service functionalities will not be quite as relevant.

2.4.3.4 IT Work Context.

To draw business customers to CRM-enabled service features, their work contexts should support or even encourage these methods. Naturally, they should have the necessary infrastructure to access or experience the CRM Web-based service functionality offered them. In addition, they should have the operating skills. They should be mentally prepared for the technology (Muther 2002) and to interact with suppliers in new ways. The promotion of information technology systems in their company or workplace should also influence their attitude. If these means and motivation are absent, it is unlikely that CRM would be of significant value to these customers.

Compatibility with existing experiences is a supporting factor in innovation adoption (Rogers 1995). Thus, customers who use IT more extensively in their work context should take to new computerised processes more readily, especially so if they have experienced CRM in other service relationships (Caretsky 2003).

Bitner et al. (2002) imply that in the case of Cisco Systems, its success in introducing on-line self-service purchasing could be a result of their customers being typically technology-oriented professionals.

The foregoing discussion suggests that for customers, their willing and appreciative involvement in their providers' CRM system, are influenced by factors such as usefulness and relative advantage, strength of personal interactions, perceived risks in the relationship, and compatibility with their current IT work context.

The degrees of influence of these factors are expected to vary even for customers of the same products or services, there being differences in customers' perceptions, preferences and contexts.

2.4.4 Summary of Section 2.4

The customers' perspective on the adoption of CRM was considered in Section 2.4, which began with a discussion on expected benefits derived from speed, information and communication, flexibility, personalisation and customisation outcomes. There exist however, possible customer issues or concerns with CRM adoption, namely weakened relationships and the value of automated self-service. As most of the discussion drew on the general CRM literature, the question is raised of whether the mentioned factors apply to CRM deployment in the business services domain, particularly the subject hygiene services industry. Another issue is what makes business services (or specifically hygiene services) customers see CRM service features as valuable propositions. Again the general CRM literature was reviewed and the following were identified as possibly important factors—Usefulness and Relative Advantage, Personal Interactions, Perceived Risks, and IT Work Context. The extents these factors influence customers' perceived value of CRM applications, or the question of whether other factors exist, were also examined.

2.5 Summary of Chapter 2

Summarising this chapter, the literature supports the proposition that with certain qualifications, CRM applications can deliver value for companies and their customers, and should strengthen their relationship. For the company considering adoption of CRM technology, it is necessary to have a clear assessment of business needs to be addressed, whether based on customer satisfaction, operational efficiency or both. A realistic and comprehensive list of required investments and implementation needs must then be drawn and resourced adequately. Strong high-level executive support would increase successful implementation to neutralise organisational resistance to change.

For customers, CRM-enabled outcomes of speed, information and communication, flexibility, personalisation and customisation are factors that the literature suggests will bolster perceived value of their relationship with their product providers. The extent these propositions are considered as valuable depend on suggested factors within the customers' contexts, namely, Usefulness and Relative Advantage, Personal Interactions, Perceived Risks, and IT Work Context.

3. SERVICES CLASSIFICATION AND MARKETING IMPLICATIONS

In both developed and developing countries, the remarkable growth of service businesses has been one of the notable economic transformations in recent times. This is evidenced in the increasing share of service versus the agriculture and manufacturing sectors in total economic output and employment generation. For instance, in the United States, the service sector now accounts for more than 80% of total employment, compared with just 30% in the early 1900s. This change can be traced to growth in productivity and incomes, so that society's focus has shifted to quality of life pursuits. With this development, demand increased for services, such as health, education, and recreation (Fitzsimmons and Fitzsimmons 2004).

It is the objective of this chapter to look at services in general, and look at ways they could be categorised for marketing and management needs. Thus Section 3.1 discussed various business services classification schemes. With this classification framework, it would be possible to describe the particular characteristics of hygiene services, as is done in Chapter 4. An example of the marketing and service implication implications of classification analyses was highlighted in Section 3.2. Following that, the widely studied outcomes of service quality, customer perceived value and commitment in service provider-customer relationships were explained in Section 3.2. Understanding these constructs is important, as they are central to the investigation into the customers' perspective in this research. Thus for conceptual and strategic considerations, both service providers and service customers needs in the hygiene services industry could now be better understood and correlated with the potential impact of deploying CRM applications. Understanding these correlations could also be useful in speculating likely effects in similar as well as different service industries.

3.1 Services Classification Schemes

A wide range of businesses falls under the category of services. Service organisations range from large multinational corporations in such areas as financial services, transportation and logistics, telecommunications and hotels to a vast array of small and medium enterprises like restaurants, laundries, professional service practices and numerous business-to-business service operations (Lovelock and Wright 2002:8).

Apart from size, geographical scope or description of generic service activity involved, scholars have attempted to classify services using classification schemes that would identify commonalities as well as differences (Lovelock 1983, Kotler 1988, Boyt and Harvey 1997, Fitzsimmons and Fitzsimmons 2004). The common objective for these attempts at classification is to develop insights that could be useful in understanding customer needs. In so doing, appropriate marketing strategies could be crafted.

The following discussion presents classifications for services based on 1) tangibility, 2) customer type and decision making processes, 3) direct recipient of service, 4) importance 5) service location and 6) purchase mode. Combining criteria could come up with other useful categorisations. Boyt and Harvey's (1997) classification of industrial services using combined characteristics is also presented. The authors' work is considered relevant as it extends into implied prescriptions for service providers' marketing strategies.

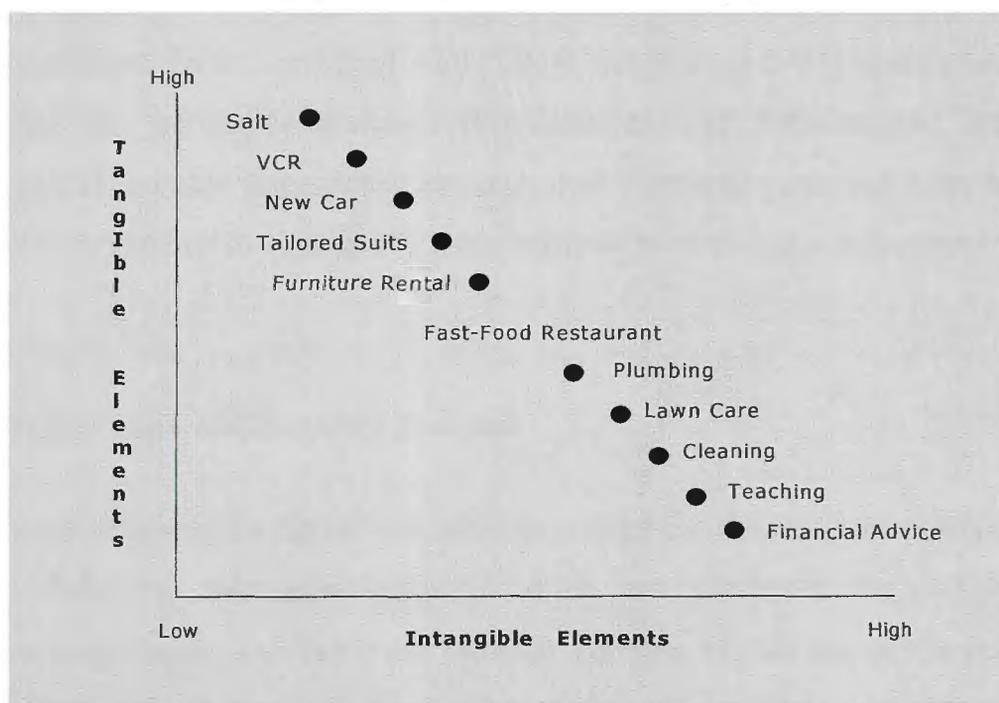
3.1.1 Tangibility

General definitions of a service business were often based on the intangibility of the service product (which is experienced and perishes in time) in contrast with a tangible manufactured goods product (which can be physically measured, held and stored). This classification proved tenuous though as many services though rendered by a provider and experienced by the customer involved tangible things. Kotler's definition of a service (Kotler 1988: p. 477) acknowledges this point.

“Service: A service is any activity or benefits that one party can give to another that is essentially intangible and does not result in the ownership of anything. Its production may or may not be tied to a physical product.”

The degree of intangibility of a service is another difficult issue, as arguably tangible things could comprise a significant component of the service offer, e.g. the type and quality of the food served in a catering business. Thus, Lovelock (1983), expanding on the earlier work of Shostack in 1977, seconded that products are not just either purely physical items or purely experienced service activities. As illustrated below in Figure 3.1, products are actually situated somewhere within a continuum reflecting the amount of tangibility / intangibility elements in the product offered.

Figure 3.1 Tangible versus Intangible Elements in Goods and Services



Source: Adapted from Christopher Lovelock and Lauren Wright, *Principles of Service Marketing and Management*, 2nd edn, Pearson Education, Upper Saddle River, NJ, 2002, p. 11.

The pressure on companies to develop competitive advantage is expected to make the business classification indicated in Fig 3.1 less precise in the near future. For

instance, to differentiate themselves, more and more goods manufacturers are coming up with supplementary services in their proposals, one of the generic competitive advantage strategies prescribed by Porter (1980). Further, according to a recent polling (Grove et al. 2003) involving ten prominent services scholars, the line between manufacturing and services is blurring, particularly so in the business-to-business realm. Manufacturing firms, positioning themselves as “solution providers” have come up with various combinations of products and/or services packages to meet customer needs. In personal computers for example, Dell had gained a considerable upper hand in the industry by offering a customisation service feature as contrasted versus selling a limited range of standard models.

Many service businesses on the other hand, are offering more visual cues and/or provide tangible items to create better impressions with its customers. Most customers of intangible services have difficulty in evaluating the quality of the service even after experiencing such. These so-called credence services, like for instance, medical diagnostics services could benefit from having very professional looking report presentations or clean, modern-looking equipment. Such actions tend to increase confidence in the service provider (Boyt and Harvey 1997) or enhance the impression of the service experience (Fitzsimmons and Fitzsimmons 2004). Confidence and favourable impressions are important customer outcomes since there are no obvious parameters to objectively judge the quality of the service received.

3.1.2 Customer Type and Decision Process

A most basic criterion for classifying services will be the nature of the purchasing party—thus there are consumer services, which are purchased by individual consumers or households, and there are business services, which are purchased on behalf of and consumed by businesses, institutions and organisations. Business services were previously labeled as industrial services (Boyt and Harvey 1997) or before that, producer services. However in recent years, perhaps reflecting the increasing proportion of commercial and other organisations versus traditional manufacturing customers, there was a growing preference to use the term business services in the literature (for example, Fitzsimmons et. Al 1998). Furthermore,

reflecting the increasing predominance of relationships theories and paradigms in analysing commercial interactions between supplier and customer, the term business-to-business emerged (for example, Parasuraman 1998). Where such relationships are significantly facilitated by electronic systems such as an EDI (electronic data interface) or a company's extranet system, the term B2B became rapidly in vogue by the late 1990s.

The differentiation according to service end-user classification is important from a strategic marketing standpoint. Consumers in general have different buying criteria and decision-making processes than business customers. Understanding these differences lead to more effective marketing strategies.

Purchase decisions in business settings are often not made in a simple manner. Business customers purchase services for different organisational requirements and must usually satisfy the needs of various departments. As such, they tend to be more systematic in choosing suppliers. They use economic evaluation decision methods comparing alternative providers based on price, quality, supplementary services, stability and even, business reciprocity (Hutt and Speh 1985).

Yet for the recognised primacy of rationality, emotional motives may still be in play in choosing providers. Decision makers may be looking out for opportunities to enhance their personal image or advance their status within the organisation. Also, there is the perceived risk of purchase decisions going wrong, so that the familiar and safer choice is favoured. Finally, there could be friendship, so that a purchaser's friend is given preferential even unfair advantages (Hutt and Speh 1985).

3.1.3 Direct Recipient of Service.

Lovelock (1983) built on an earlier work of Hill in 1977 and came out with a four-way classification of services. The resulting taxonomy is another standout in service marketing, from which further conceptual analysis and strategic planning

were to be based on. Lovelock classified services according to the service act and who or what is the direct recipient of the service performed as shown in Table 3.1.

Table 3.1 Services Classification Based on the Service Act and Direct Recipient of Service Performed

Service Type	Description	Examples
Service Type 1	Tangible actions to people's bodies	Passenger, transportation, health care, restaurants
Service Type 2	Tangible actions to goods and other physical possessions or properties	Freight transportation, repair and maintenance, laundry, janitorial services, waste disposal
Service Type 3	Intangible actions directed at people's minds	Advertising, entertainment, education
Service Type 4	Intangible actions directed at intangible assets	Accounting, banking, securities investment, consulting

Source: Adapted from Christopher Lovelock, 'Classifying Services to Gain Strategic Marketing Insight', *Journal of Marketing*, vol. 47, Summer 1983, p. 12.

In a recent textbook, Lovelock and Wright (2002) further qualified each service type, firstly by giving it a name that identified the object or item processed in the act of performing the service. This change in effect, underscored the established notion of service as a process. Secondly, the authors described the extent of the customer's presence or involvement.

Service Type 1 (Tangible actions to people's bodies) can also be referred to as People Processing, where customers have to be physically present throughout service delivery to receive the expected results.

Service Type 2 (Tangible actions to goods and other physical possessions or properties) can be briefly called Possession Processing, where the object requiring processing must be present, but the customer need not be.

Service Type 3 (Intangible actions directed at people's minds) can be termed Mental Stimulus Processing, where the customer can be located in a specific facility or in a remote location connected by broadcast or telecommunication linkages.

Service Type 4 (Intangible actions directed at intangible assets) can be conceptualised as Information Processing, where little direct customer may be necessary after the service request has been given.

3.1.4 Importance of Service

Services may be classified according to how important or critical they are to the business customer's operations. In the above scheme, importance or criticality of the service is defined based on its relationship to the customer's core business activity. Thus those services that (1) impact directly the organisation's performance (such as product testing services for a semiconductor company, or advertising for a consumer goods manufacturer) and (2) where failure risks and consequences are substantial (such as legal services), can be considered of higher importance.

For business services, Fitzsimmons and Fitzsimmons (2004) expanded on Lovelock's service recipient classification by adding Process as an additional focus of service, aside from People and Possessions. A further useful breakdown for these three items is the degree of importance of the service (either low or high) to the business customer. The scheme is illustrated in a three by two, or six cell matrix, as shown in Table 3.2. Some of the high importance services were mentioned previously whose outcomes either have a significant impact on business performance or result in substantial financial losses.

Table 3.2**Classification of Purchasing Business Services**

		Importance of Service	
		Low	High
Focus of Service	Property	Facility Support: <ul style="list-style-type: none"> • Laundry • Janitorial • Waste disposal 	Equipment Support: <ul style="list-style-type: none"> • Repairs • Maintenance • Product testing
	People	Employment Support: <ul style="list-style-type: none"> • Food service • Plant security • Temporary staff 	Employees Development: <ul style="list-style-type: none"> • Training • Education • Medical Care
	Process	Facilitator: <ul style="list-style-type: none"> • Bookkeeping • Travel booking • Packaged software 	Professional: <ul style="list-style-type: none"> • Advertising • Public relations • Legal

Source: Adapted from James Fitzsimmons and Mona Fitzsimmons, *Service Management—Operations, Strategy and Information Technology*, 4th edn, Mc-Graw Hill-Irwin, Boston, 2004, p. 336.

Boyt and Harvey (1997) described two separate classification criteria- essentiality and risk level for business services; when combined, these two criteria had similarities to the described concept of importance as defined in the Fitzsimmons' classification. Essentiality, defined as the necessity of the subject service relative to a company's production operation, seems very close to importance except that it does not invoke risk elements. The second criterion is risk level, which pertains to the likelihood of failure of the service and the resulting impact on the customer's business operations.

3.1.5 Service Location.

Services can be classified according to where the service is performed. Agnihothri et al. (2002) describe two main categories—facility-based and field-based. For facility-based services, customers travel to the provider's service facility. In contrast, for field-based services, it is the provider's responsibility to provide service at the customer's site. The authors further segments field-based services to those involving

- 1) Pick-up and delivery such as courier or garbage collection; or
- 2) Emergency services such as police, fire and ambulance; and
- 3) After-sales service support of equipment such as installation, maintenance and repair.

The third suggested category, which Agnihothri et al. (2002) termed simply as field service, involves maintenance services of customer-purchased equipment. These are rendered as needed in cases of malfunctions. It is noteworthy that the authors' definition left out those field-based services that include not only breakdown repair maintenance service but also, routine equipment servicing on a pre-specified schedule. Further for these services, if there are equipment involved, these could be provided on loan or leased to the customer and thus remains the property of the service provider. Common examples of these services involve the provision of photocopiers, water coolers, washroom and industrial hygiene equipment, and even potted plants.

In contrast with facility-based services, field services pose challenges of responding quickly to exceptional or unanticipated customer requests. Additionally, as Agnihothri et al. (2002) points out, an adequate level of preparedness in terms of required skills and equipment of service staff responding to every case must be provided for. For those services that also involve routine visits to customers, coping simultaneously with fixed schedules and responding to exceptional service situations could be quite problematic at times.

3.1.5 Purchase Mode.

Yet another relevant classification could be the mode by which the customer purchases and uses the service. Kotler (1994), in Boyt and Harvey (1997), classified services into two categories—1) Maintenance and Repair Services and 2) Business Advisor Services. In the first category, purchasing the service are normally by way of a contract (covering a specific time period) as in the case of most property or equipment maintenance services. In the second case, separate job orders (involving different scopes of work as and when required) are typical of professional and business advisory services.

How the service is purchased may have important implications on the customer attention given to the service. For ongoing routine services, imaginably, the customer may have high involvement with the service provider only at the initiation of the contract, particularly if as discussed earlier, the service ranks low in terms of perceived business importance.

3.1.6 Intricacy of the Service (Combined Criteria)

Boyt and Harvey (1997) present an example of a general classification of business services based on a more complex set of criteria, reflecting the intricacy of the service rendered. Their work is discussed here as it proposes detailed implications on marketing strategies as illustrated in the following Section 3.2. The authors proposed a general taxonomy of industrial (or business) services where three possibilities are possible: Elementary, Intermediate or Intricate. To classify a particular service, it needs to be measured on the following characteristics:

Replacement rate: How often is the service used?

Essentiality: Is it relatively unimportant, moderately important or absolutely critical?

- Risk level:** What are the probabilities for service failure and what would the impact be on the customer's operations? On the supply side, are there limited or numerous suppliers for the service or service level desired?
- Complexity:** How easy is it to understand the service? What kind of technical training is involved in the service delivery?
- Personal delivery:** Is the service to be delivered in-person, or are impersonal means employed?
- Credence properties:** How difficult is it for the customer to understand or judge service quality, even after the process of acquiring and making use of the service?

Table 3.3 identifies the three categories of business services based on the presence (high, medium or low) of the service characteristics mentioned above.

Table 3.3 Business Service Categories

Service Characteristics	Elementary Service	Intermediate Service	Intricate Service
Replacement rate	High	Medium	Low
Essentiality	Low	Medium	High
Complexity	Low	Medium	High
Personal delivery	Low	Medium	High
Credence properties	Low	Medium	High

Source: Adapted from Tom Boyt and Michael Harvey, 'Classification of Industrial Services, A Model with Strategic Implications', *Industrial Marketing Management*, 1997, vol. 26, p. 295.

Utility services are good examples of elementary services, which are generic and commonly understood. On the other end of the scale are intricate services, which require an intensive level of service and customer attention. Intricate services are

rendered for example by consultants, surveyors and architects who deliver their complex services in a personalised manner. They often expose customers to higher risks in the event of failure or non-performance.

At the middle of the spectrum are Intermediate services, which have a medium rating on all service characteristics. Examples given in this category are equipment repair, equipment leasing, transportation and basically maintenance-related services. From Lovelock and Wright's (2002) classification, all these examples fall under the Possession Processing category.

3.1.7 Service Marketing Implications

In the previous subsections, the discussion of various classification schemes for business services took on essentially the customer's point of view. For these classification exercises to be of practical value, however, the implications on service providers need to be also considered. The last classification discussed in the previous subsections was Boyt and Harvey's (1997) service intricacy (combined criteria set) which categorised services as either elementary, intermediate or intricate. The authors' work is particularly useful as it extends into the marketing implications for service providers' strategies. Specifically, suggestions on the marketing mix practices of promotion, price and customer service are submitted for each category. The intermediate services category was highlighted in particular in the following discussion of these suggestions; some property maintenance services similar in many ways to the subject hygiene services industry are categorised as intermediate services. It was useful to look into these marketing practice suggestions so as to compare later in this report with research findings on practices of the hygiene services industry, and consider whether CRM applications have a role in these marketing practices.

3.1.7.1 Promotion

Recommendations on the appropriate promotion or selling method based on service classification are summarised in t Table 3.4.

Table 3.4 Promotional Strategies According to Type of Business Services

Promotion Method	Elementary Services	Intermediate Services	Intricate Services
Personal Selling	No	No	Yes
Mass Media	Yes	Yes	No
Sales Promotion	No	Yes	Yes
Public Relations	Yes	Yes	Yes

Source: Adapted from Tom Boyt and Michael Harvey, 'Classification of Industrial Services, A Model with Strategic Implications', *Industrial Marketing Management*, 1997, vol. 26, p. 296.

Boyt and Harvey (1997) suggest that for intermediate services, personal selling is not the best promotional method. Providers of intermediate services should rely more on the use of mass media, sales promotion and public relations to acquire customers. The argument against the deployment of individual salespersons assumes that this method could be cost-inefficient. Personal selling could be replaced with less costly methods as the service promoted is not complex and therefore easily comprehended. Further for customers, who feel that the service is relatively non-essential or non-critical, the buying decision may depend on

1. Convenience factors (no need to spend time for searching and evaluation, just decide simply on available information);
2. Price considerations (lowest quote gets the job).

Fitzsimmons and Fitzsimmons (2004) agree that for non-critical property maintenance services, such as janitorial, industrial laundry and waste disposal, purchasers place great importance on price. The authors qualify these services as 1) being of low importance to the basic operation of the customer's business and 2) result in outcomes that are quite tangible and therefore easy to evaluate (such as dirty-to-clean laundry or dirty-to-clean premises).

3.1.7.2 Pricing

Differential pricing (different prices for different customer segments or skimming pricing (high price levels in exchange presumably for greater profitability) are deemed inappropriate for Intermediate Services by Boyt and Harvey (1997). Low service complexity, low credence and the fact that most of these services are not new in the market justify this position. Moreover, customers of these services are expected to exhibit some price-sensitiveness.

3.1.7.3 Customer Service

For customer service, the level provided could be defined in terms of the position seniority of employees in the provider's organisation dealing with customers in ongoing interactions. For Intermediate Services, second level staff, who are doing sales follow-ups, technical support or customer relations, are normally deployed apart from the basic first level staff who deliver the core service. Senior management may not be involved directly with customers of intermediate services, whereas their involvement is vital with intricate services where fewer but high revenue target customers need more assurance, higher service levels and coordinated organisational attention.

3.1.8 Summary of Section 3.1

In this section, various classification schemes of service businesses were presented. Discussed service classification criteria consisted of tangibility, type of customer, direct recipient, importance, service location, purchase mode, and finally, intricacy (based on combined criteria). The objective of these classification exercises was to build a foundation to understand service businesses. Through the different classifications, service customer and provider needs and relationship expectations are expressly defined or intuitively deduced. The last subsection also presented the marketing implications of service classifications based on a combination of criteria. The marketing suggestions for "intermediate services" were highlighted as this category apparently encompasses the subject hygiene services industry. The

analysis in this section is used to discuss the findings on the hygiene services industry as presented in Chapter 5. Further, the discussion of research findings on CRM's perceived value, as presented in Chapter 6, refers to this analysis.

3.2 Relationship Marketing Outcomes

In this section, the three relationship marketing outcomes of commitment, service quality and perceived value are discussed. A good understanding of these constructs is necessary as one of the aims set forth for this study is to investigate the potential impact of CRM applications in improving these desired outcomes.

In Chapter 2, the importance of having loyal customers for business success has been repeatedly stated. In the 1990s, research on services blossomed, investigating many facets on the basic question of how loyal customers are created and kept. These loyal customers, as described in Chapter 2, are characterised by their behaviours (for instance, repeat purchases, word-of-mouth endorsements) and their attitudes (for instance, strong preference arising from confidence and trust with the supplier's competence and good intentions) (Griffin 1993). For contracted ongoing maintenance services such as hygiene services, it is proposed that commitment stands as an apt substitute of customer loyalty in studying provider-customer relationships. The concept of commitment plays a central role in relationship marketing literature (Wetzels et al. 1998) and has appeared regularly as a consequence construct in business relationship models.

Tellefsen (2002) has suggested that in business-to-business relationships, customer commitment results from antecedents representing provider performance and satisfaction of customer needs. In this study of relationships in business services, supplier performance is operationalised by service quality (as assessed by the customer), whilst satisfaction of customer needs is operationalised by perceived value of the service. From Berry and Parasuraman (1991), the basic relationship is postulated as service quality leads to perceived value of the service which in turn, results in customer commitment to the service provider:

Service Quality → Perceived Value → Commitment

3.2.1 Commitment

Commitment, an attitudinal dimension of customer loyalty, has been defined as the “enduring desire to maintain a valued relationship” (Moorman, et al., in Garbarino and Johnson, 1999). To have such commitment from its customers is a key business objective for a company to thrive. Not only do committed customers provide continuance of income streams over the longer term, they are also logical prospects for increased revenues with complementary or new service offers (Kalakota and Robinson 2002). Thus, marketing and service efforts are employed by the industrial service provider to secure customer commitment to the relationship (Claycomb and Martin, 2002).

The short definition of commitment is nevertheless profound. “Enduring desire” qualifies it not as a short-lived but a longer-term attitudinal concept. Furthermore, the part of “to maintain a valued relationship” connotes perceptions of significant beneficial effects in the relationship that the customer seems genuinely inclined to preserve it. To this definition, Wetzels et al. (1998) add that the presence of commitment implies that no alternatives to the relationship partner are considered.

For marketing practitioners, commitment is important to measure. Being based on customers’ intention and future plans (Naude and Buttle 2002), it assesses the potential for customers to stay in or give up the relationship with the service provider (Zeithaml and Bitner 1996). A dimension of commitment, intention to repurchase (the service) is a very strong indicator of future behaviour (Jones and Sasser 1995).

3.2.2 Customer Perceived Value

Customer perceived value has been described as a result of “the benefits versus costs comparison that customers make” for services received (Berry and Parasuraman 1991: p. 148). Perceived value has been researched as a significant determinant of such loyalty-related outcomes as commitment in business markets (Eggert and Ulaga 2002).

Zeithaml's earlier definition of perceived value is more expansive: "an over-all assessment of the utility of a product based on the perception of what is received and what is given" (Zeithaml 1988). The implied calculative dimension of perceived value in Zeithaml's definition explains its use in evaluating purchasing alternatives. As described earlier, purchasing decisions are by and large driven by rationality (Hutt and Speh 1985).

Ulaga and Chacour (2001) operationalised customer perceived value by comparing quality (a perceived benefit) versus price (a cost) for industrial goods. For services, a similar comparison is made with service quality as the benefit, but the calculated cost includes not just the price, but also times involved, and the transaction as well as switching costs relevant to the relationship (Lee and Cunningham 2001).

A literature review of perceived value led Eggert and Ulaga (2002) to identify three main points in various definitions of perceived value: 1) that it involves a benefits less costs or sacrifices assessment, 2) that it is a subjectively perceived construct, and 3) that it is a judgment made in relation to competitive alternatives.

3.2.3 Service Quality

Service quality refers to an assessment of the quality a customer perceives of a particular service rendered to him. Thus, service quality is a measure of supplier performance. As such, it becomes a logical and important antecedent of customer loyalty-related outcomes, as concluded by numerous studies (Parasuraman et al. 1998).

Service quality is a multidimensional construct. A classic description proposed by Gronroos in 1982, states that customers judge quality using both technical and functional quality attributes of the delivered service (Gronroos 1990). Put simply, customers evaluate not only the outcome of the core service product (technical quality) but also the way the service is experienced in interaction processes with the provider (functional quality).

Gronroos' theory can be illustrated in the evaluation of a pest control service. Service outcome quality is measured, in terms of the provider's performance in consistently maintaining a specified area, free of certain pests. Outcome or technical service quality therefore refers to the core benefit that the customer sought in contracting the service provider. On the other hand, Gronroos theorised that service quality also has a dimension he termed as process or functional service quality, or the manner in which the core service is delivered. Here the customer's impressions of his interactions with the service provider come into play, for example, the courtesy and attitude displayed by pest control technicians, the ease with which any problems that arise can be resolved, and trustworthiness and understanding demonstrated by the pest control provider.

Which aspect of service quality, technical or functional, is more important in satisfying customers? It may come as a surprise that in the given example of pest control service, functional service quality actually, mattered more according to a 1990 research conducted by Bowen (Hausman 2003).

Exploratory research published in 1985 by Parasuraman, Zeithaml and Berry validated the importance of process attributes of service quality, defined as those criteria associated with service delivery processes. Subsequently, the authors developed and refined a multi-item scale SERVQUAL to measure this process aspect of service quality, (Parasuraman et al. 1988). In many ways, the authors' concept of process service quality has many similarities to that of Gronroos' functional service quality, a fact that Gronroos himself pointed out (Gronroos 1990).

With SERVQUAL, the construct of process service quality has been operationalised using disconfirmation-based scales, where customers evaluate various aspects of service delivery performance against their expectations. The level of service process quality achieved is dependent on how big the gap is between expectations and performance. The items in the SERVQUAL scale covered five generic dimensions:

1. Reliability: Dependable and accurate service performance as promised

2. Responsiveness: Willingness to help customers and give prompt service
3. Assurance: Trustworthiness and credibility of provider's staff
4. Empathy: Providing caring and individualised attention
5. Tangibility: Appearance of facilities, equipment, staff and distributed materials (Parasuraman et. Al 1988).

While SERVQUAL has been exploited extensively in consumer services research, there has been far less use in business settings. One of the few studies was conducted by Parasuraman and his SERVQUAL co-developers (Parasuraman, Zeithaml and Berry 1998). The report gave strong evidence on the importance of service process quality in business-to-business service markets, particularly for situations when customers experience problems.

An interesting issue is in which types of services will process quality attributes matter more in building customer loyalty. Mittal and Lassar's (1998) research suggested an answer. From the findings, it seems that in low contact services (where direct contact with service providers is minimal, such as with services on possessions), and as long as fair outcome results are perceived, it is having good levels of service process quality that produce more loyal customers. This generalisation seems to be supported by Hausman (2003) who reports findings from various studies, that functional or process-related quality attributes seem more important to customers in low to moderate contact services (e.g. banking, hotel, retail and pest control). These findings are interesting as CRM applications enhance and have impact on service delivery processes rather than the core service output (Lovelock and Wright 2002). Extending the analysis, CRM applications can therefore be predicted to have more influence on producing more loyal customers for low to moderate contact services.

3.2.4 Summary of Section 3.2

Section 3.2 explained three important constructs in service provider-customer relationships—commitment, perceived value and service quality. The literature has supported the notion that service quality and perceived value, measured from the

customer's perspective, are important antecedents to bring about commitment in business-to-business service settings. In discussing service quality, the importance of functional or service process-related quality has been highlighted, particularly for low to moderate customer contact services.

3.3 Summary of Chapter 3

In this chapter, the discussion of classification schemes allowed a multi-faceted characterisation of business services. Different services have been shown to have some similarities in terms of how they are viewed by customers and their characteristic business and service practices. Applying the theory behind these classifications was an important foundation in analysing the research findings. An appreciation of these classifications is important to understanding how a specific industry operates, like the subject hygiene services industry. Understanding how the service business works or functions would then allows predictions in which similar industries the findings of this research may apply.

Implied marketing strategies based on a particular industry's classifications have also been discussed. Finally, important service relationship constructs of commitment, perceived value and service quality were explained. These three relationship outcomes have been part of many studies on customer loyalty or commitment to providers. This research investigated the impact of CRM applications on these outcomes in the hygiene services industry, the results of which are presented later in Chapter 7.

4. THE HYGIENE SERVICES INDUSTRY IN SINGAPORE

As a Doctor of Business Administration (DBA) dissertation, this research report aims to present practical insights and suggestions for a real business situation—the adoption of CRM applications in the Hygiene Services Industry in Singapore. To achieve this objective, it is important to have a comprehensive understanding of the subject industry. The services classification discussions in the previous chapter could form a solid foundation to describing the industry as was done in this chapter. It must be qualified that most of the specific industry practices reported below were based on the researcher's observations coming from employment in various marketing and business development positions with two major service providers spanning a total of 10 years (1993 to 2002). These observations were later verified and supplemented during the field research portion of this study.

As described in Chapter 1, the industry provides contracted hygiene maintenance services to businesses or institutions in the commercial, industrial and government sectors. The services offered by the industry cover the installation, maintenance and refill of hygiene dispensers in washrooms (for instance, soap, paper, air freshening, sanitary disposal), the rental of floor mats, as well as various devices designed to improve air quality for indoor environments.

Section 4.1 below describes the hygiene services industry based on various classification criteria discussed in Section 3.1. The following section, Section 4.2 compares the marketing and service practices in the industry with what was prescribed by Boyt and Harvey (1997) as applicable for this type of business services.

4.1 Classifying Hygiene Services

4.1.1 Tangibility

For tangibility, there are basically two very visible components to the hygiene services customer. Firstly, there are the various dispensers and equipment, which the

service provider installs and maintains at the customer premises to deliver the desired services.

Secondly, there is the routine service carried out by the provider's personnel on a fortnightly or monthly basis. During these service visits, replacement of consumable materials on the dispensers and/or the delivery of a pre-determined quantity of fresh stock to the customer are carried out. Inspections of the dispensers are also carried out and batteries replaced where applicable to ensure proper functioning. In the case of dust control mats, soiled mats are replaced with freshly washed mats. Similarly for the sanitary disposal bins, used units are taken back while clean empty bins are put in place. The customer or his or her assistant also gets to see the service personnel at the start and end of the service visit. It is a common, if not specified, practice for the serviceman to report to a designated staff in the customer organisation prior to doing his work. At this moment, any item that the customer needs attending to would be raised. When the servicing has been completed, the customer staff would also sign off on a service record prepared by the service provider.

Despite the tangible things and cues mentioned above, the intangibility of hygiene services is still significant and this has to do mostly with the evaluation of service quality. Companies in the industry, for example, offer the promise of improved environmental hygiene conditions or standards. However, measuring such an outcome could be difficult and subjective for customers. The provision of a pleasant and hygienic environment is more of an intangible concept and therefore difficult to measure. As for the service received from the provider personnel being adequate or not, there are no established standards for precise evaluations.

4.1.2 Customer Type and Decision Process.

The hygiene services industry caters solely to business customers, unlike related services like pest control, which serve individual household consumers as well. Based on marketing materials of service providers, the customers purchasing criteria are evidently built on functional, convenient and aesthetically appealing equipment, high quality service materials, good service (reliable and responsive) and cost-

effective offers. Other motivational pitches made are enhancement of customer company image with well-maintained and pleasant facilities, and cost savings with preservation of property assets.

Similar to other business purchasing scenarios, decisions are oftentimes not made solely but shared according to organisational policies (Hutt and Speh 1985). It is quite common though to have a principal contact person who has primary recommendatory power. For example, in a hotel, the primary contact is normally the executive housekeeper who makes the recommendation for the choice of a service provider, while the purchasing manager executes the service agreement after ensuring that the prices are reasonable.

4.1.3 Direct Recipient of the Service

Based on the criterion of direct recipient of the service process, hygiene services obviously falls under the cell of Possession Processing in Lovelock’s matrix (Table 3.1, which is reproduced here).

Table 3.1 Services Classification Based on the Service Act and Direct Recipient of Service Performed

Service Type	Description	Examples
Service Type 1	Tangible actions to people’s bodies	Passenger, transportation, health care, restaurants
Service Type 2	Tangible actions to goods and other physical possessions or properties	Freight transportation, repair and maintenance, laundry, janitorial services, waste disposal
Service Type 3	Intangible actions directed at people’s minds	Advertising, entertainment, education
Service Type 4	Intangible actions directed at intangible assets	Accounting, banking, securities investment, consulting

Source: Adapted from Christopher Lovelock, ‘Classifying Services to Gain Strategic Marketing Insight’, *Journal of Marketing*, vol. 47, Summer 1983, p. 12.

The premises, specifically washrooms, hallways or offices are properties that could be said form part of the customer's possessions. Being a possession processing service, the customer may or may not be present all the time to witness or experience the service delivery.

4.1.4 Location of Service

Hygiene services are field-based as the service provider goes to each individual customer in the course of the service process. Thus, the customer normally does not see the service provider's offices or other facilities.

4.1.5 Importance of the Service

Based on the criterion of importance of the service to the customer, and going by the classification suggested by Table 3.2 (reproduced below) hygiene services, obviously falls under the category of Facility Support and would be described as being of low importance. Service providers would take issue with this, but Fitzsimmons and Fitzsimmons (2004) also qualified their categorisations by stating that these are relative viewpoints dependent on customer circumstances. Perhaps a good example is the issue of hygienic washrooms may not be so important in public transportation terminals as they can be for food processing facilities or five star hospitality settings.

Table 3.2

Classification of Purchasing Business Services

		Importance of Service	
		Low	High
Focus of Service	Property	Facility Support: <ul style="list-style-type: none"> • Laundry • Janitorial • Waste disposal 	Equipment Support: <ul style="list-style-type: none"> • Repairs • Maintenance • Product testing
	People	Employment Support: <ul style="list-style-type: none"> • Food service • Plant security • Temporary staff 	Employees Development: <ul style="list-style-type: none"> • Training • Education • Medical Care
	Process	Facilitator: <ul style="list-style-type: none"> • Bookkeeping • Travel booking • Packaged software 	Professional: <ul style="list-style-type: none"> • Advertising • Public relations • Legal

Source: Adapted from Fitzsimmons and Fitzsimmons, *Service Management—Operations, Strategy and Information Technology*, 4th edn, Mc-Graw Hill-Irwin, Boston, 2004, p. 336.

Importance can also be related to compliance with legal regulations. In Singapore, the existing regulations affecting the industry require only the basic provision of hand soaps and some means of hand drying in non-residential washrooms. All other services are therefore optional to get on the part of service customers.

4.1.6 Service Purchase Mode

Like most facility support services (namely, janitorial, pest control or waste disposal) hygiene services can be generally categorised as contracted services. The services are continuing, as these are part and parcel of maintaining a certain working or commercial environment standard.

Most hygiene services contracts start with one to three year terms, after which there can be automatic extensions in the absence of notice from either the provider or customer. Customers, who are unhappy with their provider or believe that they could secure better terms with the current provider or its competitors, could go for tender and/or renegotiate the expiring contract.

In contrast with other facility support services (such as janitorial) there can be variations in hygiene services contracts resulting from variable demand for consumable items (such as hand soap) during the duration of the contract. These variations are brought about by possible fluctuations in the number of users of the serviced facilities, depending on the customer's circumstances. To compensate for this fact, there are two popular industry practices. First, there is the usual contract with the provision of a specified quantity of hand soap per period. Should customers run out of the item at any time, they could call for an extra delivery, which would be billed them over and above the contract payments. The other practice is having a supply agreement whereby the provider installs the relevant dispensers on an on loan, no fee basis, and the customer shall then order consumable items as needed. This supply agreement normally requires that the provider, with no extra charges, conduct regular service visits to ensure the dispensers are always in good working order.

4.1.7 Summary of Section 4.1

The hygiene services industry was discussed and classified using various services classification schemes from the literature. Specifically, the relevant criteria of service intangibility, direct recipient of service process, importance (combining essentiality and risk level) and the service acquisition mode were examined. Unique, as well as similar characteristics relative to other facility support services were identified. Further, the industry's position within the broad domain of business services was established.

4.2 Service Marketing Implications

The discussion in the previous section of business services classification criteria and their applications to the hygiene services industry took on essentially the customer's point of view. For these segmentation exercises to be of practical value, the implications on service providers' marketing strategies need to be considered.

According to descriptions in the combined criteria services taxonomy presented by Boyt and Harvey (1997) as discussed previously in Section 3.1, together with typical examples provided, hygiene services would be classified as Intermediate Services. Making the classification is important as the authors have extended their analysis to include suggestions on provider strategies for each classification, specifically on the marketing mix variables of promotion, price and customer service. Points of agreement or differences to the current practices in the hygiene services industry are pointed out below.

4.2.1 Promotion

For promotion, Boyt and Harvey (1997) suggest that for Intermediate Services, personal selling is not quite applicable, and should rely more on the use of mass media, sales promotion and public relations to acquire customers. The hygiene services industry in fact does the opposite. Personal selling or the use of company salespersons is the primary means of obtaining business, whereas the employment of mass media, sales promotion (i.e., publicised special offers) and public relations initiatives are not at all practiced, or are at best, insignificant, haphazard efforts.

The argument for not relying on the deployment of individual salespersons assumes that this method could be cost-inefficient as the service is not complex and therefore easily comprehended. Further for customers, who feel that the service is relatively non-essential or non-critical, the buying decision may depend on

1. Convenience factors (no need to spend time for evaluation, just decide simply on known information);

2. The provider's company image (can not go wrong with an established company); and/or quite likely,
3. Price considerations (lowest quote gets the job).

The fact is the hygiene services industry relies on personal selling to obtain business. This puts a high productivity expectation of salespeople, considering that they are an expensive resource and the contract values of the service tend to be low. With each salesperson costing some S\$ 3500 a month (salaries and allowances), salespeople are normally required to bring in at least ten new contracts every month, amounting to some S\$ 15,000 in annual value. (This information was gleaned from an interview with the Sales Manager of the market leading Service Provider).

4.2.2 Pricing

Differential pricing (different prices for different customer segments or skimming pricing (high price levels in exchange presumably for greater profitability) are deemed inappropriate for Intermediate Services by Boyt and Harvey (1997). Low service complexity, low credence and the fact that most of these services are not new in the market justify this position. Moreover, customers of these services are expected to exhibit some price-sensitiveness.

For the hygiene services industry in Singapore, consistent with what Boyt and Harvey (1997) recommend, competitive pricing (pricing to meet relevant competition) is practiced extensively. Most providers are forced to price competitively to secure contract renewals. Similarly, prospective providers resort to penetration pricing (pricing at substantial discounts to current levels) to dislodge the present service supplier.

4.2.3 Customer Service

For customer service, the level provided could be defined in terms of the position seniority of employees in the provider's organisation dealing with customers in

ongoing interactions. For Intermediate Services, second level staff, who are doing sales follow-ups, technical support or customer relations, are normally deployed apart from the basic first level staff who deliver the core service. Senior management may not be involved directly with customers of intermediate services, whereas their involvement is vital with Intricate services where fewer but high revenue target customers need more assurance, higher service levels and coordinated organisational attention (Boyt and Harvey 1997).

The customer service scenario described in the previous paragraph resembles essentially what can be observed in the hygiene services industry. Ancillary first level staff (performing core services) are involved in basic equipment installation, routine services and delivery roles, while second level staff, consisting of sales and / or service representatives, coordinate consumable purchases, resolution of service and billings issues, as well as facilitate contract renewal and other documentation requirements. More often than not, senior managers do not meet or interact with customers. As the service providers generally have a sizable number of customers (exceeding a thousand) and with the business quite spread out and not disproportionately concentrated in a very small number of this customer base, these managers become more concerned with issues like operational efficiency, human resources and growth strategies.

4.2.4 Summary of Section 4.2

Boyt and Harvey's (1997) classification based on service intricacy places the hygiene services as Intermediate Services. The authors offer suggestions for implied promotion, pricing and customer service strategies for the Intermediate Services category and these were compared with practices in the hygiene services industry. There was a congruence found for both pricing and customer service. However, Boyt and Harvey's recommendation is to have minimal dependence on personal selling, and instead use sales promotions, public relations and mass media. This is not consistent with the industry's primary use of field salespeople in acquiring new business. Personal selling could be a less cost-effective promotional means for services that are also offered by similar competitors, not complex and where contract

values are not large. To address this reality, management sets high monthly productivity targets for its sales force.

4.3 Summary of Chapter 4

In this chapter, a description of the hygiene services industry was made using various characteristics that are also used as classification criteria in studying other services. Hygiene services falls under the category of facility support services and shares with other services in this category commonalities and differences in various degrees as to intangibility, direct recipient of service process, importance to customers (combining essentiality and risk level) and the service acquisition mode. As an intermediate service in Boyt and Harvey's taxonomy (1997), the hygiene services industry has marketing and customer service practices consistent with the category with the exception of promotional method. The industry principally employs salespeople, who in the face of justifying their costs, must be consistently productive and secure a number of relatively low valued contracts month in and month out.

5. RESEARCH QUESTIONS AND METHODOLOGY

5.1 The Literature Review, Knowledge Gaps and Research Questions

The literature recognises the potential of CRM applications to create substantial value to the company and its customers, and in the process, build and strengthen their relationship. The discussion in Chapter 2 however underscores that the CRM value proposition depends on certain qualifications.

For the company considering adoption of CRM technology, the literature suggests that a clear assessment of business needs to be addressed, whether based on operational efficiency, customer satisfaction or possibly a combination of both to build competitive advantage. A realistic and comprehensive list of required investments and implementation needs should then be drawn and resourced adequately. Finally, strong high-level executive support is important for successful implementation to neutralise organisational resistance to change. For hygiene services companies in Singapore considering the adoption of CRM applications in the future, there is little specific guidance from the literature, however, on whether such an initiative makes business sense for them. Research should address this gap in knowledge, point out priorities and also identify the relevant factors and constraints that affect the adoption process.

The literature also suggests that CRM-enabled outcomes of speed, information and communication, flexibility, personalisation and customisation bolster customers' perceived value of their relationship with their product providers. There has been limited research though on the generalisability of this suggestion. Recognising too that there are various types of services according to classification schemes discussed in Chapter 3, research needs to confirm the general notion of CRM's value-adding capabilities with specific service categories or industries. And then in the services marketing literature, there are some indications that the extent that these propositions are considered as valuable depends on factors within the customers' contexts, such as Usefulness and Relative Advantage, Personal Interactions, Perceived Risks, and IT

Work Context. Do these factors really play a role in customers' appreciation of CRM?

Will CRM result in higher perceived value and will this lead to higher commitment to the relationship with the service provider? There has been little research on these issues for service businesses in general, more so of the hygiene services industry context.

The potential value of CRM applications is investigated in the hygiene services industry in Singapore, and both the perspectives of the company (the service provider) and the customers (the service customers) are considered for this research project. The following sections present the research questions addressed in this study. Subsequent sections discuss the general methodology employed, salient features of the methods used, and relevant experiences during the course of the field research. A discussion of the data analysis procedures is then presented. Finally, the chapter concludes by comparing the use of semi-structured interviews as was done in this project with the other alternative qualitative research data collection technique of focus groups.

5.2 Research Questions: Service Providers' Perspective

The service providers' perspective of the value of deploying CRM applications is conceptualised as an evaluation of the potential benefits versus perceived implementation costs. Thus, perceived value for the service provider exists, if expected benefits exceed the cost of investment and overall implementation difficulty involved.

There were three main categories of provider benefits with CRM applications discussed in Chapter 2:

- 1) Cutting down the cost of selling and service activities,
- 2) Boosting revenue through exploitation of uncovered selling opportunities, and

3) Enhancing a company's competitive position through serving customer needs more effectively.

The attractiveness of these benefits is conceivably dependent on the presence of underlying business needs and issues pertaining to customer-related functions of sales, marketing and customer service.

While beneficial outcomes exist, there could be negative factors that bear on the attractiveness of deploying CRM applications. These disincentives are the amount of investment needed and the difficulty of having a successful implementation. According to the literature, funding needs are not limited to the hardware and CRM software costs, but also to getting reliable customer data, streamlining processes, and recruiting or training required staff. Furthermore, behind all this effort is the demand for strong senior management commitment and attention to drive the project. Considering all these costs, an organisation that is used to functioning in a certain manner, particularly if experiencing some degree of success, might not be attracted to adopting CRM applications.

Thus in investigating the service providers' perspective in the subject hygiene services industry, the research questions posed are:

1. What are the business issues (sales, marketing and customer service) that can be addressed by CRM applications?
2. Are there, and to what extent present, resource and organisational considerations that could affect the adoption of CRM applications?
3. Considering benefits and costs, what is the service provider's perceived value of CRM applications?

5.3 Research Questions: the Customer's Perspective

The three concepts of service quality, perceived value and commitment were explained in Chapter 3. In this research, these concepts from the service customers' perspective were studied in the hygiene services industry. Their basic relationship, proposed by services scholars Berry and Parasuraman (1990) was investigated, that is—

Service Quality → Perceived Value → Commitment

CRM applications enable delivery of potential outcomes that better serve customer needs. These needs have been identified as related to information and communication, flexibility and efficiency, customisation and personalisation. Better needs satisfaction results in an increase of customer perceived value in the service relationship with the provider.

The value to customers of experiencing CRM-enabled services is dependent to a certain extent on the presence of unmet or poorly met needs where CRM applications can make a difference. Thus, this research looked first into current assessments of service quality and perceived value. Current commitment was likewise assessed. Against this backdrop, the research questions posed for hygiene service customers are:

1. What are current assessments of service quality? Does process service quality (where CRM applications can play a part) really matter more than output or core service quality in the perceived value of the service?
2. Will CRM-enabled possibilities create additional value for the customer? Which of these possibilities are rated higher? What are the reasons behind these ratings?

From previous discussions in Section 2.4.3, the attraction of CRM applications is expected to be dependent on hygiene services customer needs, preferences and work context. The study therefore investigated whether the factors characterising individual customers, as described in Table 5.1, are relevant, and in what way. Note

that the consideration of relative advantage for customers evaluating CRM services is now put specifically as the satisfaction level with the quality of current service processes.

Table 5.1 Possible Factors Influencing Perceived Customer Added-Value from CRM-enabled Outcomes

Description of Factor	Suggested Influence
<i>Current rating of process service quality</i>	Negative or inverse: High values of process service quality would result in low perceived value. There would be lower relative advantage with experiencing CRM service features.
<i>Current level of personal interactions</i>	Negative or inverse: The presence of friendly, valued interactions between provider and customer would result in lower perceived value. Customers would rather keep to current modes of interactions.
<i>Risk level</i>	Positive or direct: High assessments of the perceived risk of service failure and the consequent impact for the customer would result in higher perceived value, as the customer is provided more information, access and control.
<i>IT use in work context</i>	Positive or direct: High assessments of the use of IT in the work context would result in higher perceived value, due to compatibility with current customer practices.

The third question posed for the hygiene services customers' perspective is therefore:

3. Do ratings of these factors—process service quality, current level of personal interactions, perceived risk level, and IT use in the work context, influence the perceived additional value from CRM-enabled possibilities? Do these factors influence the same way as suggested from the literature review (as presented in Table 5.1)?

Finally, a question most important to service providers investing in CRM:

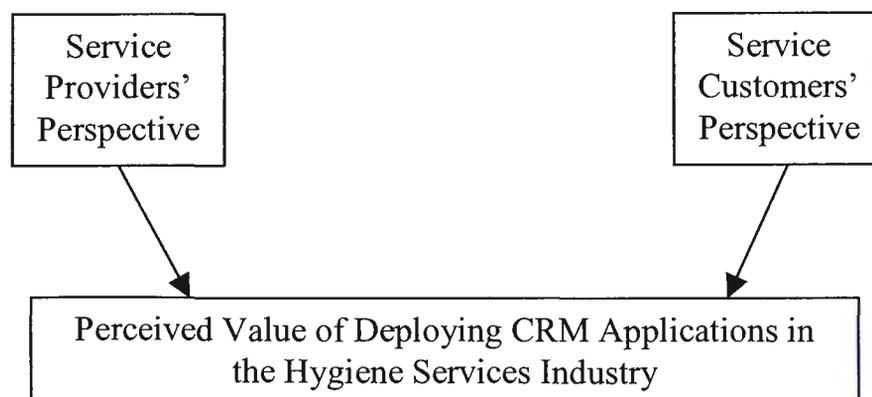
4. Will providing CRM-enabled service increase commitment to the service provider?

In the previous sections, research questions in this study were raised to describe the service providers' and customers' perspectives of perceived value created from deploying CRM applications. The following sections reports on the methodology followed in the conduct of the research.

5.4 Research Methodology: Case Study Approach

As mentioned in the Introduction, a case study approach was adopted as the research methodology. The subject "case" was the hygiene services industry in Singapore and the phenomenon studied was the perceived value of CRM applications. Case study research typically investigates multiple perspectives and a variety of different techniques (Williamson 2002, White 2000). In this research, the service providers and service customers were investigated and while data collection basically involved the qualitative technique of semi-structured interviews, a quantitative technique in the form of a survey was also conducted among service customer participants. The case study research approach is illustrated in Figure 5.1.

Figure 5.1 Multiple Perspectives in Hygiene Services Industry: Case Study Investigation



5.5 Investigating the Service Providers' Perspective

5.5.1 Use of Semi-Structured Interviews

In order to generate a service providers' perspective on the potential value of CRM applications, data collection was done through the qualitative technique of semi-structured interviews. These interviews have a standard list of questions, but also allow the researcher to follow up on points provided by the participant for each of the standard question raised. Thus, the participant's perspective on a particular issue is captured (Williamson 2002). Another advantage with semi-structured interviews is that it, by virtue of using the same standard questions, it facilitates the collection of comparable data across participants. But as pointed out, it also provides for the probing of responses in greater detail (Willis 1990). Used effectively, the semi-structured interview is the most important form of interviewing in case study research (Gillham 2000).

Eleven key managers and staff involved in policy setting or front office functions of the leading company in the hygiene services industry were approached, named hereon as Company A. For the participants, cooperation in the research was facilitated by the endorsement of the project by the Regional Asia Pacific Chief Executive Officer. This endorsement was in exchange for a promise made by the researcher to share general findings of the project and any published material in the future.

Nine participants from various functions in Company A were formally interviewed. Their positions are listed in Table 5.2. During the period when the company interviews were being conducted, the researcher had short conversations with the Regional Asia Pacific CEO and the Regional IT manager in charge of the software development. As they had a busy travel and work schedule mostly outside of Singapore, they could not sit for a formal interview, so that the researcher resorted to asking questions during opportune occasions when he caught up with them for brief conversations. Their statements were recorded and constitute part of the research results.

Table 5.2 Service Provider Participants

Function	Position
Senior management	General Manager
Sales	Sales Manager
Sales	Key Account Manager
Sales	Key Account Manager
Sales	Sales Consultant
Customer service	Customer Care Executive
Customer service	Customer Care Executive
Service operations	Service Operations Manager
Service operations	Service Technician

Two of the 11 participants referred to above were previously associated with a smaller Singaporean-owned company in the industry. These two participants occupied the positions of Sales Manager and Service Manager respectively in the smaller company. They are now in the employ of the subject service provider, Company A, in other capacities. Asked to speak from the perspective of their previous appointments in the smaller company, which shall, from hereon, be referred to as Company B, these participants provided information, which allowed a basis for comparison of Company A with another organisation in the same industry, but with a different climate and smaller business base. With this approach, while the focus of the research was the industry market leader, the service providers' perspective in this industry case study was actually generated from data from a large as well as a small business organisation.

The providers' interviews followed a semi-structured format, focusing on investigating the research questions enumerated in the aims of the project section for the service providers' perspective. The objective was to uncover and discuss internal, marketing and service issues that could be addressed with the use of CRM, the assessment of the potential benefits that CRM could bring to their business, and the factors they consider as important for the successful implementation of the CRM system.

Another objective of the interviews with service providers was to solicit comments on the proposed attractiveness or perceived value of CRM applications from the customers' perspective. This exercise served two purposes: firstly, to gather information that could be used in planning and preparing for the customer interviews, and secondly, on hearing customer views, to evaluate how accurately providers read their customers' needs and expectations and pinpoint areas of divergence.

As well-thought-of responses and specific examples from the interviewees would be important, a brief on the background of the subject and the topics to be discussed was sent to the interviewees at least three days prior to the interview. Appendix 1 contains a template invitation letter sent to the participants and the different lists of interview topics for various participants. The list of topics given each participant was matched to his or her job position. An interview consent form was also enclosed which was to be handed to the researcher prior to the start of the interview.

The interviews were conducted during the period May to June 2004. The interviews lasted from 60 to 90 minutes and were conducted at the office of the subject service provider. It was decided not to use a tape recorder for the interview based on advice received that the participants would probably not be at ease sitting through a taped interview. The researcher decided that the tape recorder could be dispensed with, going by the argument that a more relaxed setting could generate better responses.

There was a deliberate effort to do the interviews of the managers first, followed by the office staff and finally the sales personnel. The idea with this sequence was to develop an overview of the company and its directions before talking to staff involved in business systems and those directly interacting with customers. Such an approach should be more effective in understanding the company situation whereby management pronouncements can be used to develop prompting questions to get operational details, or even verification of such statements.

All of the interviews started with conversations dealing with the participant's background, years employed with the company and his or her job responsibilities and work context. To put the participants further at ease, the researcher reiterated the

background of the project—that this is basically an academic exercise in fulfilment of a doctorate degree and that their individual comments are going to be treated confidentially.

5.5.2 Data Analysis

The posed research questions served as a guide in systematically analysing the data collected through the semi-structured interviews and meetings with the Chief Executive Officer and Information Technology Manager. As the current front-office software was built in-house and evolved over a few years, the development history was pieced together. Thus, a background was established to better understand the current situation. To come out with the answers for each specific research question, all pertinent data were identified and drawn out to start the process of providing evidence-based answers. The data were then grouped into categories, such as functional areas (sales, marketing or service) or other common denominator such as perceived value of CRM functionalities for customers. Based on these groupings, insights, as to what the data was revealing, were formulated. The findings were then presented in tables to provide helpful summaries.

5.6 Investigating the Service Customers' Perspective

5.6.1 Data Collection and Participants

To formulate the service customers' perspective on the value of CRM applications, a survey was conducted, followed by the individual in-depth interviews. A total of 21 customers participated in the research during the period May to August 2004. Participants were the principal recommender and / or primary decision-maker as to which hygiene services provider is contracted by their organisation. To generate a good cross section sampling of the industry's customers, attention was made to end up with a purposive sample comprised of customers from various types of businesses or activities, service provider contracted, as well as dollar value of service business given. In doing so, the methodology followed Greenhalgh's (2001) prescription for recruiting qualitative research participants by firstly identifying particular segments

of interest to the research and seeking representatives out. A more detailed report on the field research experience is presented later in Section 5.5.6.

Mariampolski (2001) prescribed a guideline of no less than ten and preferably between 15-30 interviews to effectively address research objectives for studies using the interview data collection technique. This number is believed to support comparability (having enough numbers for meaningful comparisons) and comprehensiveness (covering all relevant groups). With 21 participants, this aspect of the research complies with the guideline.

5.6.2 Participant Recruitment and Participation Incentives

Identifying potential interviewees based on the set criteria was not difficult. The researcher prepared a short list of 30 names, with the help of different industry contacts. To get these relatively busy officers to participate in a meaningful interview, that would have involved an average of one and half hours of their time and attention, was, however, a much bigger challenge. Incentives in the form of dining vouchers plus a donation to a publicised charitable cause were deemed appropriate and effective in generating participation. Funding for this incentive was provided from the student research support budget of Victoria University's School of Information Systems. The use of incentives for this research was justified to and approved by the Human Research Ethics Committee of Victoria University's Faculty and Business and Law.

There was a conscious effort to instil confidence in participants on this research being a legitimate academic project, and also importantly, that their participation and research results would be handled in a discrete, confidential and professional manner. To convey the desired assurance, all documents received by the prospective participant were on the Victoria University letterhead, with complete contact details of the School of Information Systems, the researcher as well as the research supervisor. Further, the project approval code from the Faculty of Business and Law's Human Research Ethics Committee was cited.

It was also deemed important that a local contact address be provided. Fortunately, Victoria University has a partner in Singapore, Summershire Educational Consultants Pte Ltd. Permission was consequently secured from Summershire to receive any posted responses or correspondences at their registered address.

For simplicity, the research project was labelled as **eBusiness for Services Research Project**. Using the term CRM would have necessitated some lengthy if not awkward explanations, whereas eBusiness has a familiar and easily recognisable quality to it. Moreover, the Singapore government has been actively promoting the benefits of eBusiness for some time now, so that an invitation to participate and contribute to knowledge in this area should be favourably considered.

5.6.3 Interview Preparation and Process

The process followed for the industry customer interviews involved the steps described below:

1. Contacting prospective participants individually with a mailed-out participation invitation pack (Appendix 2) consisting of the following:
 - a) A covering letter explaining the background of the research and the terms of their involvement; and
 - b) A seven page questionnaire with a request to complete prior to the interview
2. Contacting by telephone three days after posting invitation pack. Confirming that the prospective participant has received the mailing, clarify any questions, and if appropriate, agree on an interview appointment. End by thanking the participant and give a gentle reminder to complete the questionnaire.
3. At the start of the interview, getting the Interview Consent Form and the completed questionnaire, which would be the basic reference for the interview

discussion. Spare forms were ready, just in case the participant did not have the form.

4. Thanking the participant at the end of the interview and confirming that a donation to the nominated charity would be made for his or her participation and handing over the promised dining vouchers.

It should be noted that the interviewee recruitment process mentioned above was a streamlined version of what was originally planned and actually used with the first three participants. In the original process, the Participation Pack sent to prospective participants did not have the Questionnaire, but contained a Reply Form that the contacted participant was supposed to post or fax indicating his or her decision to participate. For the convenience of participants, a self-addressed reply envelope complete with a postage stamp was provided should they elect to reply by mail. Upon receiving an affirmative participation reply, the researcher would then contact the participant to agree a convenient interview schedule. An appointment confirmation letter would then be sent to these participants, together with the questionnaire.

The researcher contacted by telephone, the first three participants a week after the initial posting of the invitation letter, having received no replies. From these telephone conversations, the researcher concluded that actual voice communications were important with participants before they could agree to participate. In the original procedure, only written correspondence was used to invite participation and the expectation was participants would straightaway indicate commitment for an interview through a posted or faxed document. This expectation turned out to be unrealistic. Some clarification and even persuasion were required for participation (as what had turned out in almost all cases for this research phase). Also seeing the questionnaire was important for participants to assess the effort required. Thus, it was decided to send the questionnaire from the outset as mentioned in Step 1 of the Interview Process described above, dispense with the Reply Form and then simply call the prospective participant as described in Step 2.

5.6.4 The Use of the Questionnaire

Instead of simply informing prospective interviewees about the topics to be discussed with them, a seven-page questionnaire was sent out as part of the Invitation Pack. To be filled out prior to the interview, the questionnaire was designed for several purposes:

1. Firstly, the questionnaire was printed in light blue paper, which enabled it to stand out in a pile of normally white stationery. For the participant, this not only served as a means for easy retrieval. It was also a visible reminder of some work that needed to be attended to.
2. As there were a number of context and service relationship factors to be investigated, a completed questionnaire would have captured information more accurately and the investigated factors efficiently studied versus the alternative of relying on what the participant said during the interview.
3. Asking the participant questions beforehand would have forced them to focus thoughtfully on the topics and better formulate their opinions. For the same reason, other open-ended questions to be raised during the interview were included in separate sections of the questionnaire.
4. The questionnaire employed scales extensively to measure attitudes. This feature not only offered a more accurate means to assess degree of response, it also made possible workable comparison of one measured factor with another (obviously, not in strictly statistical terms, but useful nonetheless for indicative patterns). In addition, it was possible to compare responses between participants and even classify participants based on their views or attitudes.

Filling up the questionnaire prior to the actual interview was akin to a pre-tasking activity as proposed by Mariampolski (2001). Pre-tasking involves a sensitising activity, which hopefully introduces a level of excitement and depth to the interview that in turn assures better oriented and more involved participants.

Ratnasingam (2003) described a similar approach to the methodology employed in this research, that is, using a questionnaire instrument to be filled out prior to an in-depth face-to-face interview. Ratnasingam employed this technique for his case study research project, which investigated E-commerce issues in business-to-business dyads. A questionnaire provided a means to indicate or record degrees of attitudinal responses from the interviewees. As what was also followed in this study, the questionnaire responses were clarified and probed further during the interviews in the Ratnasingam (2003) research.

5.6.5 Formulation of the Questionnaire

The questionnaire used in the customers' perspective research was constructed by balancing the need for good information versus the need for reasonable length, so as not to be burdensome to the participant. The reasonable length objective seemed to have been achieved as no complaints were received from participants that it was troublesome to fill. Furthermore, some commented that the questions were straightforward and clear.

A sample of the questionnaire is included in Appendix 2. Customer information and attitudes related to the relationship factors of service quality, perceived value and commitment are investigated. The impact of CRM-enabled service outcomes is also explored. The purpose behind the different sections of the questionnaire is given in a page-by-page analysis in Appendix 3.

5.6.6 Field Research Experience (Service Customers)

Consistent with the research approach of employing semi-structured in-depth interviews, 30 potential service customer participants were contacted. These potential participants were identified using the general guideline of having representatives according to service providers used, the value of their hygiene services contracts and their type of business or activity. At the end of the field research, 21 participants were actually interviewed. Nine declined the invitation to participate citing the reasons given in Table 5.3.

Despite this non-participation, the number of participants, totaling 21, provided an acceptable in-depth interview sample size (Mariampolski 2001). Further, the researcher felt that additional interviews would have just contributed marginally to the quality of the research data actually obtained.

Table 5.3 Reason for Non-Participation

Reason Given	Number
Too busy with current work schedule	4
Against company policy / Management does not agree	3
Have already terminated hygiene services contract; using substitute means to contracted service	2
Total Non-Participants	9

Groupings of the interview participants according to earlier described criteria are presented in Tables 5.4 and 5.5 below. The range of participant types and the number of participants should satisfy the criteria of comparability (having enough numbers for meaningful comparisons) and comprehensiveness (covering all relevant groups) as advised by Mariampolski (2001). Thus rich information could be generated.

Table 5.4 Service Customer Participants According to Service Provider Used and Hygiene Services Contract Size

Service Provider	Major Contract	Large Contract	Medium Sized Contract	Small Sized Contract	Total Participants
Company A		3	1	1	5
Company B	2	3	1		6
Company C	1		1	1	3
Others	1	2	3	1	7
Total Participants	4	8	6	3	21

Table 5.5 Service Customer Participants According to Type of Business / Activity

Business / Activity	Participants
Manufacturing	3
Property Management	2
Luxury Hotel (4-5 star)	2
Regular Hotel (3 star and below)	3
Food and Beverage	2
Healthcare	1
Retail and Commercial Centre	1
Recreation	3
Education	2
Government	1
Childcare	1
Total Participants	21

Interviews with participating service customers were carried out using the plan described in Section 5.4.3 above. Consistent with the in-depth semi-structured interview approach, and as explained in Appendix 4, a questionnaire was used to investigate the defined research questions. The research results and analysis are presented in Chapter 7.

5.6.7 Data Analysis Procedure

Similar to the investigation of service providers, the posed research questions served as a guide in systematically analysing the data from the service customers. Pertinent data were drawn out from each interview to start the process of providing evidence-based answers to the research questions. Firstly, replies recorded in the questionnaire were tabulated for each participant in an Excel spreadsheet and the

minimum, maximum and average values were then determined. Correlation computations were also done in examining the relationships of service quality dimensions and perceived value. The findings were then presented in tables to provide helpful summaries. The quantitative information was put alongside notes taken during the face-to-face interviews. These notes were the participants' responses to a list of probing and prompting questions which were asked to clarify and make sense of their answers in the questionnaire. Based on these comparisons, insights, as to what the data was revealing, were formulated. These insights comprised of patterns, frequencies, similarities or differences pointed out by the data analysis so that generalisations could be made (Miles and Huberman 1994).

5.7 Qualitative Research and the Alternative of Focus Groups

A qualitative research method was appropriate considering the research aim of explaining the perceived value of CRM applications from both provider and customer sides of the hygiene services industry. While a survey was conducted for the customers' perspective, this was followed up with in-depth interviews where probing questions were discussed. A quantitative research method by itself (which would have involved statistically analysing limited choice responses from a systematically constituted sample) could not have satisfactorily explained different aspects surrounding CRM's perceived value from multiple perspectives. Goodyear (1990) points out that whereas quantitative research is concerned with describing and measuring, qualitative research is all about explaining and understanding. Qualitative research therefore is more appropriate in investigating the reasons behind specific attitudes and behaviours. This is particularly true in the hygiene services industry research context, which like its general services category, facility support, has seen limited research effort and therefore limited understanding of what is going on and why.

While the qualitative research method and analysis technique were primarily employed in this project, some quantitative analysis was used particularly in processing the data from the customer questionnaire responses. Descriptive statistics, (frequency, mean and min / max values) and simple correlation analysis were

employed and discussed with the results of the in-depth interviews. The outcome was hopefully, more descriptive and convincing findings that make easier sense of the substantial data gathered.

The chosen qualitative research methodology, semi-structured in-depth interviews, was demanding considering 11 service provider staff and 21 service customer participants. The effort involved in recruiting, interviewing these participants and the subsequent analysis of individual results was substantial. Systematic planning and resource support however resulted in satisfactory achievement of the amount and quality of obtained data.

An alternative qualitative data collection technique that could have been employed was focus groups, where appropriate groups of participants could be assembled for a discussion of the research topics under the guidance of a moderator. Focus group size should normally be limited to not more than seven participants (Berg 1998) and Mariampolski (2001) suggests a minimum number of four focus groups to effectively achieve research objectives. The following discussion compares the use of focus group versus one-on-one interviewing.

1. Feasibility: While off-hand, individual interviews can take more time, focus groups can be more difficult to organise considering that the participants are busy working professionals. Finding a common convenient meeting time can be a major hurdle. Costs are also not necessarily lower as the meeting venue and catered refreshments have to be arranged.

2. Acceptability: The idea of firstly going out of one's way and then joining a group of strangers and voicing out frankly one's opinions, practices and the reasoning behind them can be a difficult proposition in the Singaporean context. Target participants would have perceived a focus group methodology as inconvenient and disconcerting.

3. Effectiveness: The literature review gave clues on several factors to investigate in pursuing the research aims. The research is therefore not completely exploratory where open discussion as in a focus group could help identify general

themes on the problem area quite effectively. What the research questions called for was an in-depth understanding of the attitudes and behaviours of participants, thus providing multiple perspectives. In-depth one-on-one interviews were deemed more appropriate in this case as it was possible to probe participants and uncover insights from different job positions or work contexts. Further, the one-on-one interviews, with sufficient written confidentiality declarations, offered an assuring setting where participants could more openly talk about many sensitive issues that were critical for the validity of the research findings.

5.8 Summary of Chapter 5

The research aim of investigating the perceived value of deploying CRM applications in the hygiene services industry in Singapore required describing and explaining multiple perspectives from both service providers and service customers. The literature review in Chapter 2 indicated issues and relevant factors regarding the research topic that needed explanation for the subject industry case. From these, specific research questions were formulated to achieve elaboration and understanding of both providers' and customers' perspectives and the underlying factors that characterise their relationship. The qualitative research method of in-depth interviews, while effectively delivering the sought research findings, posed challenges in generating the required participation, particularly for the service customers group. Hence, systematic planning, well-designed, research-based materials and appropriate incentives were employed to successfully generate participation in the allotted time period. The analysis of the substantial data generated from the field research was guided by approaches prescribed by qualitative research scholars. Themes, patterns, commonalities as well as differences were identified and constituted findings that answered research questions. While a survey was conducted for customer participants, the subsequent in-depth interviews explained customer attitudes, thus allowing a confident understanding of the survey results. Thus qualitative research is the primary methodology and is appropriate considering the research aim. Further, the use of in-depth one-on-one interviews versus focus groups was also seen as posing fewer difficulties. The method offered the advantage of effectively explaining individual attitudes and behaviours.

6. RESEARCH RESULTS AND ANALYSIS (SERVICE PROVIDERS' PERSPECTIVE)

This study investigated the perceived value of deploying CRM applications in the hygiene services industry in Singapore, from the perspectives of both service providers and service customers. In this chapter, research results from the interviews are presented and analysed for the service providers' perspective. The first section describes the subject company's situation and salient market and industry information. Also discussed is the background concerning the in-house development of the customer contract, interaction and service software (which includes a few basic functionalities associated with CRM applications). Section 6.2 answers the research questions on the business needs, potential implementation issues and perceived value of CRM applications. Subsequently, the results for the smaller hygiene services company are presented and compared with that of subject service provider. Their perceived values for adopting CRM applications are explained.

6.1 Company Situation Analysis

6.1.1 Company and Industry Background Information

The subject service provider company under investigation is currently the hygiene services market leader in Singapore. In consideration of the company's preference as indicated when they agreed to cooperate with this research, the company name has been withheld and will be simply referred to as Company A henceforth. Company A is wholly owned by a large, private corporation, which has substantial industrial distribution, as well as service, businesses in Asia. The holding company has a regional office in Singapore from where it directs and supports the local service business and five other operating companies in the Asia-Pacific region.

The following market and competitor information were disclosed by Company A's management. The current hygiene services market in Singapore is estimated to be approximately S\$ 22 million (or A\$ 18 million). Company A competes with three other significant players, Companies C, D and E, which are similarly foreign-owned

and also active in other Asian, if not international, markets. Together, these four service providers account for 90% of the industry's revenues. Some five or six other players share the remaining 10%. These are small locally owned companies that are only operating in Singapore. The market share estimates are as shown in Table 6.1.

Table 6.1 Singapore Hygiene Services Market Shares

Company	% Market Share
Company A	35%
Company C	30%
Company D	15%
Company E	10%
Others	10%

While all four leading industry companies (A, C, D and E) offer the two basic hygiene services of washroom hygiene and floor mats service, Company A's three leading competitors are also offering other types of services beyond the hygiene services range as defined in this study. For instance, Company C has a substantial pest control business; Company D offers industrial laundry services, while Company E is into contract cleaning as well as other property maintenance services.

In the past five years, Company A has demonstrated the most commitment to aggressive growth and in the process successfully established itself as the industry market leader, when it used to lag behind Company B. The strategy adopted was growth through acquisition and aggressive pricing. Company A has acquired three competitors in hygiene services—two were primarily in washroom hygiene, while the third was in floor mats service alone. It also does not hesitate in undercutting competitors with lower prices to secure business. Company A's parent company's cash-rich financial situation and their market dominance philosophy support these strategies.

There is not much difference in business models for all hygiene services industry players in terms of marketing or service operations. All companies are basically

offering the same types of equipment, and mostly provide services on contract arrangements. On the supply side, the only difference that could be said would be on the sourcing of equipment and consumables used for services. Companies A and C have been actively developing their own service materials, a policy seen more with Company A. Through this initiative that requires investment and management attention, Company A shows its serious intention to achieve some differentiation in terms of quality; another sought benefit disclosed is to have increased control of service material costs. Companies D, E and the other industry players are sourcing similar and or most often, the same products from original equipment manufacturers.

6.1.2 Front Office Automation Project

Company A has been working on front office automation since 1999. Most of this effort has been on automating the service scheduling function from the customer contracts database (or generating the daily service schedules of technicians based on service contract commitments). The task involved is not simple, considering that on a daily basis, the availability of service technicians and service van capacities have to be matched with customer contract requirements through a wide range of services. What further complicates the task is there could be changes on past schedules due to having new customers recently obtained and therefore have to be added to the service load; some customers may also terminate their contracts so that they have to be taken off the service load. Traditionally, a few operations assistants who come out with daily routes for each service technician and his van carried out the service scheduling function. These assistants, using past knowledge and familiarity with the city streets and traffic conditions, aim to come out with schedules that maximise productivity while ensuring all service requirements are met. The initial attempt at service schedule automation was done by outsourcing the project, but the contractor was unable to come out with an acceptable solution so Company A decided to terminate their contract.

Company A pursued service schedule automation despite the initial setback. The pressure to carry on was due to the addition of new customers with the acquisition of competitive businesses that brought the contract service customer base to around

4,500. Management concluded that the service automation goal would be more feasible if they modified present processes related to service scheduling and achieve better efficiencies over-all. The approach taken was to introduce new automation-friendly and efficiency-generating internal processes and to develop a software program in-house to manage these processes. It was at this point in year 2001 that an information technology professional was employed to handle the project and introduce and support the software in other affiliate companies overseas as well. A history of the changes from this point is provided in the following paragraphs.

To simplify programming service demand, intervals of routine services rendered to customers were denominated in terms of weeks rather than in months. Thus a monthly service visit schedule was reclassified as a four-weekly service schedule, while a twice-a-month schedule was reclassified as every two weeks schedule. This meant that Company A had to perform more service visits than before. For instance, a monthly schedule would be covered by 12 visits a year, whereas a four-weekly schedule would entail 13 visits a year (52 weeks divided into four-weekly intervals). It was a trade off that Company A was willing to undertake as it meant easier programming of service visits as the factor of varying number of days in a month were no longer coming into the equation.

A Customer Care Centre (CCC) within the company was organised. The CCC department's function is to be the entity around which service operations schedules and customer service requirements were centralised. CCC managed a call centre wherein all incoming calls are handled. Using the customer contracts database, customer inquiries and requests were either resolved or fielded to concerned departments. CCC took over all interaction needs of existing customers from the sales staff pertaining to contract renewals, service complaints and requests, and billing issues. Conceptually, efficiencies are generated with this centralised set-up. Furthermore, sales people are focused solely on generating new business in line with the company's aggressive business growth objective.

In the meantime, the development of the in-house contract management and customer service software was proceeding in steps, wherein progressive versions were introduced and further modified. The software was developed from Microsoft's

database management program, ACCESS and operated on a client-server architecture. The implementation was not smooth as staff had to get used to new procedures, and the software program would inevitably have some shortcomings attempting as it did to incorporate more functionalities with each introduced version. The inclusion of the preparation of billing statements using the software with the process now managed by CCC (previously done by the Finance Department) was a major milestone in the project.

During the period of change when the new software versions and modified processes were being introduced, the required organisational stability was not there. Apart from the demands to integrate the businesses of the three newly acquired companies, the organisation was saddled with a very unstable management set-up. In the period 2001 to 2003, there were at least two changes in the key positions of General Manager, Sales Manager and Service Operations Manager. This instability in the management ranks was exacerbated by a constant turnover of salespeople. Senior management admitted that there were mistakes made in the hiring of the previous middle management personnel, who generally demonstrated a detached, hands-off policy and lack of commitment to the vision for the software under development. The software implementation was also hampered by non-cooperation if not open conflicts of these managers with the program developer, who was described by colleagues as, at least work-wise, a person not easy to get along with. Thus in early 2004, when the researcher started visiting the company to conduct interviews, the General Manager, Sales Manager and Service Operations manager were barely two months in their new jobs. Furthermore, only three salespeople remained and the company still had to get another five on board to complete the sales force.

6.2 Addressing the Service Provider Research Questions

In this section, the interview data for the subject service provider (the large market leading company) were sorted and crystallised into themes relevant to the three key research questions. Thus, specific answers for each question are provided from the research results. Note that in presenting the data, individual remarks cited as evidence for the research findings are not attributed to specific participants, as part of

the commitment made to obtain their cooperation. At the end of each section, a summation of the results, analysis and implications is presented for each research question.

6.2.1 Research Question 1: Business Needs

Research Question 1: What are the business needs and issues that can be addressed by CRM applications?

The findings are presented according to different aspects of front office functional areas, namely sales and marketing management, sales force activities, routine customer service and operations.

6.2.1.1 Sales and Marketing Management:

All of the interviewed company staff strongly recognised the value of information management to achieve higher efficiencies in increasing company business. With a strong mandate for market penetration and dominance, management needed effective information tools support to plan, lead and control business growth. At the time of the interviews in the second quarter of 2004, the current software program was however still undergoing substantial development work. From a very operational or process function (that is, facilitating customer service scheduling and invoicing), management saw the need to upgrade so as to incorporate sales management and marketing functionalities. As gleaned from the interviews, there were some recurring desired features that are presented in the following discussion.

- a. Identifying additional opportunities with existing customers that could be the focus of marketing plans and selling effort.**

a.1 Cross Selling

The first opportunity involves cross-selling, or selling more services than currently contracted by existing customers. These opportunities have been

recently prioritised in marketing plans. As an example, a question being raised by management refers to customer penetration—“Which customers only take up one or two services when all could ideally take up at least another five?” The value of this information could be seen in the case that if 50% of existing customers contract only one service (which is roughly how the company’s business profile is), adding another service of the same value to each of these customers could increase total revenues by 50%; adding another two services could double the current revenues. Senior management has identified customer penetration as a performance indicator for business managers and their selling effort must focus on continuously improving on this measure. However, one manager observed that the current system was not formatted to store and process information according to sales and marketing management needs. Hence, mining the data for revenue opportunities is not easily done as it takes time and effort and the present staff are quite stretched with routine duties.

a.2 Upselling

Apart from cross-selling, there are opportunities for more revenue through upselling, or promoting newer, higher value services to replace older service versions. However, the current software system, had limitations that do not allow easy extraction of required information to upsell according to special benefits that could be attractive to one segment. According to one manager, the system only had fields like customer name, services taken, and sales staff looking after the account, without finer segmentation details, as for instance, customer group types. Further, the specific models of dispenser used are not specified in the database.

Comparing the potential impact of cross-selling and upselling, the company saw the latter as more significant as a result of the relatively low penetration of existing customers in relation to possible services available from the company.

a.3 Grouping customers into meaningful segments for marketing use

Segmentation of the customer base into specific groups has been very basic. Thus use of different service products offerings, marketing approaches or service levels to different customer segments has not been systematically pursued. Perhaps the only example of the application of segmentation is the newly introduced key account management concept. With its unusually high rates of customer contract terminations, management has realised the importance to take more steps to retain their customers, particularly those that have higher contract values. To this end, the customer base has been sorted to identify larger accounts which have been called key accounts. In terms of treatment, key accounts are no different from the normal accounts except that more senior salespeople called key account managers handle them, and that they receive more visits a year.

Identification of customers according to the customer group they belong to has been started. For example, there were plans disclosed of categorising customers as part of either one of the customer groups listed in Table 6.3.

The use of customer information for specific marketing plans was not apparent, but there were indicated future plans of having separate service offers, salespeople and marketing materials for the different customer groups. It should be noted that there were mixed opinions whether finer segmentation would be of value among the participants. Some believe that generic hygiene service benefits or propositions are already sufficient and cut across all customer groups.

Table 6.3 Customer Group Categories

Customer Group	Examples
Manufacturing – Clean	Food processing, electronics, pharmaceutical plants
Manufacturing – Industrial	Metal processing, chemical factories
Facility Management	Commercial properties
Retail Complex	Shopping malls, commercial buildings
Food & Beverage	Restaurants, cafes
Recreation	Country clubs, spas, gyms
Government	Government buildings, facilities
Hotel (4star or above)	Luxury hotels
Hotel (others)	Regular and budget hotels
Worship	Churches, temples, mosques
Healthcare	Hospitals, clinics
Small to Medium Sized Enterprise (SME)	Small offices, shops
Education	Schools, universities
Child Care	Crèches, pre-school centres

b. Keeping track of and winning back lost customers

Customers terminating their service agreements with the company are taken off the database. A new manager revealed that no attempts are made to formally identify, record and analyse the reasons for their terminating. The need to incorporate these as part of work processes and the information system was said to gaining support in the company. Two reasons for this suggestion have been suggested by a senior manager: firstly, considering the impact on profitability of lost customers, there could be lessons learned from their ending their patronage and the company could adopt remedial actions

accordingly; secondly, these lost customers could be approached again in the future (particularly if the contract details like expiration date with the new service provider are recorded) and new competitive proposals could be more easily drawn up as customer premises and preferences information are in the database.

c. Keeping track of salespeople's activities and outstanding proposals.

The company spends a significant amount for sales force-related expenditures, a reality management accepted as necessary, as personal selling is the main business development strategy. With ten field sales staff, their monthly fixed costs, excluding variable remuneration like commissions and incentives, come up to some S\$ 40,000 (or A\$ 32,000). This amount represents around 7-8% of gross turnover. Senior management is concerned that this investment could amount to naught if their sales prospecting activities and submitted proposals are not tracked. Firstly for sales force supervision, senior managers agree on the importance to know how many and what proposals are outstanding so that the previous six or twelve month's work can be viewed in perspective and exploited, rather than relying only on recent developments. As pointed out to the researcher, data to get this information were not captured. Secondly, as the company has experienced, the high turnover in salespeople poses a problem for business development continuity if sales consultants in charge of particular territories or market segments have to be replaced and records of their previous activities are not properly recorded and handed over to their replacements.

In early 2004, three months prior to the interviews, the company adopted new forms for salespeople to use to report on their daily activities on a weekly basis. While this was a step forward in keeping some kind of record on prospecting activities, management readily pointed out that it has certain limitations. As the reports are done manually on hard copies, processing the data into useful information can be time-consuming (whether to profile a particular salesperson's work or looking at the whole sales force's activities in general). Furthermore, since the written records are on a chronological rather

than on a per prospect basis, the progression of business development for each prospect is difficult to follow. The hardware and architecture needed for salespeople to input data and keep electronic records of their work has not yet been planned for then.

d. Having information translated into performance measures

Management is convinced of the need to have information on performance of each salespeople not only on the amount of new business obtained on a monthly basis, but likewise the number of sales calls made, the number of proposals sent out, the number of visits to existing customers, and the maintenance of business value with these customers assigned to the salesperson. These measures are to be monitored on a regular basis to check whether the required activities to obtaining business are sufficient. Individual efficiency calculations can also be made as in computing the ratio of the number of contracts secured by a salesperson in relation to the number of proposals that were sent out. This information can be derived from the weekly written reports handed in by the salespeople. However, the process can be tedious and error prone. As one manager commented, the state of applications support is demonstrated by the fact that cumulative sales for the current financial year of each salesperson are still manually computed.

e. Capturing Competitor Activities and Account Information

One theme that emerged was that information on competitors' activities and marketing actions ought to be captured to guide management decisions. A sales staff thought that it would be useful in coming up with winning proposals if records were kept of how competitors quote on their services for tenders of hygiene services in the past. Another example given is a process of recording information obtained on every competitor's customer visited by salespeople. What competitor services are provided, pricing indications if possible, level of customer satisfaction and very importantly, contract expiration date are information that present opportunities for competitive proposals at the appropriate time. If the information is not captured or

systematically stored, the company can be giving up on some potential return on its investment for salespeople's activities, a concern voiced out by senior management.

f. Links to Inventory Situation

A need brought up by both management and staff alike is that of having access to updated information on equipment and consumable materials available from stock. Reportedly, problems have occurred where particular equipment models or items were agreed with customers, but these materials were out of stock. Not being apprised of the inventory situation also hinders management from promoting with higher priority, slow-moving items.

6.2.1.2 Sales Force Activities

Management sees salespeople as a costly expenditure and they must therefore be consistently productive to justify the investment in them. The low value of obtained hygiene services contracts in relation to sales force costs led to the set target of each salesperson bringing in at least 10 contracts every month. To achieve this set target, the salesperson must visit a high number of new and old prospects consistently, submit proposals and keep track of outstanding ones. For instance, the norm is to make eight to ten customer visits on a daily basis. Management felt that only with these levels of activities can even well trained salespeople meet their sales targets.

The high activity levels expected of salespeople results in the substantial amount of information that they have to keep—customer contacts, customer requirements and the progress of outstanding proposals. The number of customers and prospects is not the only factor contributing to the complexity of a salesperson's work. As was pointed by a participant who was previously employed by a goods selling company, services selling also takes longer to close and involves more procedures. Another specific factor adding to the amount of information handled by salespeople is that for hygiene services, particularly for this market leading service provider, there are a range of services that could be offered, and that these services need to be matched to

particular customer requirements. Each of these service has a variant in terms of equipment model, consumable item and service visit schedule. To prepare a proper proposal, salespeople are required to do a comprehensive survey of customer needs, involving recording condition of premises and existing services.

Apart from actual selling activities involving visiting and contacting customers, the salesperson's job includes having to put together sales proposals. Activity reports are also another management requirement and these take time to write, submit and file accordingly.

The following needs that could be addressed by technology were uncovered. These needs relate to the demands and complexity of a salesperson's job.

a. Online access to the customer database

To serve the needs of existing customers and propose new services to them, suggestions were made for salespeople to have online access to an up-to-date contracts database. Considering that they are out of the office at least 80% of the time (to maximise field selling activities, management instructions are for salespeople to be in the office only one day in a week, their so-called plan day), sales staff participants commented that it would be difficult and inefficient for them to rely on phoning someone in the office for information every time this is required. Thus with proper equipment, remote on-line access would make salespeople work easier, allowing them to get information efficiently to plan their activities and respond to customer needs.

b. Online access to service technicians calendars

There is currently a capacity constraint with the service equipment installation team. Thus salespeople who are closing new service contracts would be uncertain when the equipment installation can be promised. This weakness is a drawback particularly if the customer insists that an equipment installation be carried out by a certain date and time. These requests are familiar occurrences as in when the services (such as soap dispensers and cloth towels services) have to be available

in time for an event with the customer's company. A sales staff who brought up this problem thought that online access to the installation team's calendars was a useful idea. With this feature, they can commit to a schedule and finalise the contracts more readily. It has also been suggested that showing this capability to customers also creates a strong professional image differentiating the service provider from competitors; customers view instant responses very positively.

For both suggestions on online access, apart from convenience on the part of salespeople, there is added advantage, a sales staff admitted that they do not have to resort to calls that eat up their telephone allowance benefit.

c. Online reporting and proposal preparation

Preparing, handling and storing written reports could be quite inconvenient and take productive time off salespeople. Also, for salespeople's use and that of their management, written reports take significant effort in processing information content. Senior management thus envisions that eventually these reports are electronically produced, submitted and stored. Another benefit seen with this innovation is having less paper to handle, generating cost savings in various ways. Paper-less as much as possible has been a management guideline for processes under development.

Proposals are another document that reportedly could be better managed electronically. The current process was described as follows. Salespeople dictate the proposal details to a clerk in the office who prepares the proposals and faxes these through to prospects. As the clerk could be busy attending to other tasks, there could be some delay in conveying the proposal details and preparing the actual proposal. Should templates be provided on salespeople's computers, proposals can straightaway be prepared, and either electronically mailed or faxed to the customer or preferably submitted by hand. Salespeople see that most customers who enquire about hygiene services appreciate receiving proposals quickly.

6.2.1.3 Routine Customer Service and Support

In Chapter 4, the usual service and support rendered to hygiene services customers was described as consisting of 1) routine and breakdown maintenance service on hygiene equipment by technicians and 2) responses by salespeople or office staff to customer requests on service issues, documentation needs and billing enquiries. On both levels, management had admitted they had done quite badly in recent years.

On the routine and maintenance service aspect, there was a high incidence of missed service schedules, a situation brought about by a service force occasionally stretched to above capacity due to staff turnover. New service technicians were also not familiar with equipment locations at customer premises, so that productivity suffered and backlogs file up. Another reported factor for missed services was scheduling errors with the software program under development, so that required services were not scheduled, therefore missed.

The loss of experienced service technicians has resulted not only in lower productivity with their replacements, but also mistakes in servicing. An example given was there could have been changes with the services details, such as service equipment being moved to new locations at the customer premises that were not recorded, and the information were just in the previous technicians' memories. Obviously, unfamiliar new technicians would miss some requirements leading to customer dissatisfaction.

But perhaps more significantly affecting service quality was that the responses to customer requests and raised issues have been poor, as disclosed by a few interviewees. There were some background factors that could be related to this situation. Firstly, it was noted that the company (till very recently) did not have an account management style of servicing customers. Salespeople were only focused on getting new business, and they tended to see new prospects rather than existing customers. No specific staff had been designated to take care of particular customers. Instead all customer issues were directed to the Customer Care Centre and it was hoped that the department as a group would responsibly resolve these issues. In this

set-up, a few interviewees pointed out that there was a lack of personal accountability for serving and maintaining customers and this manifested in customers being lost without much fuss or blame raised. It also did not help that the company then had an unstable management, with reportedly, low commitment. Secondly, there was poor handling of customer concerns communicated to the company. While all phone calls to office lines went through the Customer Care Centre, requests made by customers, if needing action by other company staff, were recorded in slips of paper that were forwarded to concerned company staff accordingly. Customers could also contact salespeople they met but these customer requests were passed on to other staff in the office. Unfortunately, these requests were not tracked so that a high percentage was not acted on.

Interviewees have admitted to the company having a bad service reputation, with one estimating that as high as two out of three customers were unhappy with the service received. What was certain was that the rate of defecting customers was unacceptably high to the new management and has become a priority concern. From the described background, there were indicated needs that could be addressed by a CRM application:

a. Systematic capturing of customer and service-related information.

Several participants have articulated the need for a system that captures and stores salient customer and service-related information. The system should provide for mandatory and efficient input of all defined, relevant customer information so that this information could be shared, or accessed for service functions. Thus the suggested system should contain not only standard contract details data but likewise records of all customer conveyed issues and their resolution and all other initiatives undertaken by the company on its own accord (such as equipment replacement or model upgrading). The value of this system is highlighted by the need for secure and up to date customer information so that the business continues performing well despite any staff resignations and that business development efforts are recorded for further action.

b. Systematic tracking of customer complaints and requests

Poor handling if not outright non-response to customer complaints and requests were a major concern. Firstly, these should be captured centrally regardless of communication mode used by the customer (phone, email, fax, service technicians, salespeople), assigned a tracking number, endorsed to concerned staff and the progress of resolution recorded. Any unresolved issue by a previously established date should raise an alert notice for management action. Secondly, the system should be able to analyse the customer complaints (description and frequencies) and the company's overall response performance for a specified time period. The information could prompt appropriate preventive and correction action so that service issues are progressively reduced.

6.2.1.4 Business Needs: Summation and Analysis

The previous discussion identified and explained the various business needs and issues that could be addressed by deploying CRM applications from a service providers' perspective. These needs were uncovered from different front office functional areas, such as sales and marketing management, sales force activities, and customer services operations and support. These needs are summarised in Table 6.4 and the type(s) of benefit each presents (efficiency, increased revenue, and customer satisfaction) are shown. An assessment of the urgency to address these needs, based on over-all responses and its importance to achieve the company objectives, is also presented. Thus a high urgency issue would be a recurring voiced out need or an important success factor to increase the company's market penetration and growth performance. A low urgency issue though identified in some responses may not need immediate attention considering other priorities. Those in between these ratings are classified as moderate or having second tier urgency.

Table 6.4

Service Providers' Perspective: Business Needs and Issues that could be Addressed by CRM Applications

Area / Description of Need	Benefit Sought	Urgency
<u>Sales and Marketing Management</u>		
Existing Customers		
▪ Cross-selling requirements	Efficiency and Increased revenue	High
▪ Upselling requirements	Efficiency and Increased revenue	Moderate
▪ Segmentation requirements	Increased revenue	Low
Lost Customers		
▪ Recovering lost customers	Increased revenue	Moderate
Salespeople		
▪ Tracking salespeople activities	Efficiency and Increased revenue	High
▪ Performance measures system	Efficiency and Increased revenue	High
Competitors information		
▪ Tracking competitors and their customers	Efficiency and Increased revenue	High
Link to Inventory Situation		
▪ Up to date inventory access	Efficiency	Low
<u>Sales Force Activities</u>		
▪ Online access to customer database	Efficiency	High
▪ Online access to technicians calendars	Efficiency	Moderate
▪ Online reporting and proposal preparation	Efficiency	High
<u>Customer Service and Service Operations</u>		
▪ Centralised capturing of customer data	Efficiency and Customer satisfaction	High
▪ Systematic tracking of customer issues	Efficiency and Customer satisfaction	High

Of identified business needs, efficiency, or producing more output with the same input, came up quite highly. Cost savings or cutting costs did not figure in these needs, given the company's preoccupation with market share and not short-term profitability. The growth in market share was to be primarily driven by customer penetration through cross-selling initiatives. While customer satisfaction was considered important, the identified customer needs are actually about simply complying with core service requirements (that is, fulfilling routine and non-routine service commitments). Addressing new or unmet customer needs to achieve competitive advantage was not in the service provider's consciousness. It was a picture of a business struggling to be more productive while controlling customer dissatisfaction, that is, grow its revenues and cope with the service demands of additional business (increased output) using its stretched and undermanned staff and error-prone operating systems (same input).

Thus the relative urgency ratings in Table 6.4 are premised on the company's twin priorities of sales force productivity (for accelerating business growth) and reducing customer dissatisfaction (for reducing customer defections). While all uncovered needs have to be addressed in the long term for strategic considerations, if prioritisation is necessary, those of low and moderate urgency ratings may be deferred until all needs of high urgency ratings are addressed first.

6.2.2 Research Question 2: Adoption and Deployment Issues

Research Question 2: What are the resource and organisational considerations that could affect the progressive adoption and deployment of CRM applications?

From interviews with the service provider's staff, the following factors were identified as determining the ease or difficulty in the successful adoption of CRM applications: management commitment and funding, in-house applications development, defining effective processes, data quality and resistance to change.

6.2.2.1 Management Commitment and Funding

There is no doubt that senior management supports the use of automation for improving the standards of efficiency and service in front office functions. Managers are challenged to forward justifiable proposals and the required funding can be budgeted for without unnecessary hesitation. In the context of its parent company's other businesses, the hygiene services business of which Company A is part of is relatively small so that required investments can be easily raised. The shareholders are said to be more interested in having a much larger sized business with a good support infrastructure. The desired result is substantial business operations with efficiency levels that would be difficult to match.

6.2.2.2 In-house Applications Development

The company has gone down the path of developing a front-office software program in-house rather than sourcing possible standard applications in the market and customising these according to their requirements. What probably contributed to this happening was they realised that they need some CRM-like functionalities, particularly for sales and marketing requirements, when the development of their services scheduling automation was still in progress. It was easy then to just expand the functionalities of the software under development since it also uses the same customer contract database. However, while two marketing functionalities have been incorporated (namely, 1. keeping track of the percentage breakdown of customers as to number of services taken, and 2. keeping track of the percentage breakdown of each service of the total portfolio value), development in this area has been pushed back. Some basic issues on the software's service scheduling and invoicing function still have to be resolved and these have understandably taken priority as they involve ongoing operational requirements.

The building of software in-house has also been hampered by the project being basically a one-man operation (that is, just the IT Manager). Apart from developing the software, the IT manager had to oversee its introduction and adoption not only in Singapore but also in four other countries, with a total of nine branches. As there are

non-uniform business processes throughout these places, the task of development and implementation of the software's version in phases becomes even more complex and therefore cannot be realistically accomplished expeditiously by one person. Realising this problem, company management very recently (in March 2004) assigned two operations and customer service officers from the Malaysian office to look after the software implementation part for Singapore and other places. This way, the IT manager can focus on development and other technology issues.

Despite additional resources for the project, progress has not been as expected basically because some improvements required on the scheduling and invoicing modules of the software needed attention. For example, the objective of efficiency gains in the software's initial version of the invoicing module had to be balanced with customer acceptance considerations. As revealed in the staff interviews, modified invoicing practices implemented with the initial version caused recurring confusion with customers and were a real irritant for them. Likewise for preparing service schedules and recording accomplished service tasks, needed improvements had been identified for not only fine-tuning the processes involved, but also on providing management information such as productivity reports. Thus, management recognised the need to double-back and improve the software. Until these improvements are satisfactorily made, development on other front office functions like on sales, marketing and customer service could not proceed.

6.2.2.3 Defining Effective Processes

The setbacks on the software development project also highlighted the fact that the company still had to work on defining effective processes. These processes should achieve desired efficiency but at the same time, satisfy reasonable requirements of customers, staff and management. Whilst previously these processes were evolved based on experiences with deployed versions of the software, the Regional office realised recently that it should pause and take stock of the development project, evaluate the strengths and areas for improvement of the current software and plan action steps from there. These could not be achieved without first concurring on what technology-enabled processes for front office functions need to

be put in place. Thus, in July 2004 it convened a series of meetings with representatives from the different countries to get their inputs.

Suggestions of desired outcomes in business processes were plentiful and made sense, yet designing the software to enable these outcomes could not be a one step initiative for two reasons. Firstly, there was a pressing need to remedy problems on the current software version for the service schedule and invoicing modules, so there was the need to focus on these areas, as pointed out previously. Secondly, many of the outcomes required a Web-based platform (relying on and communicating through the internet) whereas the current platform is simply a client-server one. The company has decided at this point to just come up with a reasonably performing in-house built version by the end of the first quarter of 2005. From thereon, it will outsource further development so that staff resource constraints will no longer be a factor. The brief for the IT contractor would be to migrate the existing system to a Web-based one.

6.2.2.4 Data Quality

A significant concern that could constrain getting optimal benefits from deploying CRM applications in the company is the quality of the customer contracts data. While one or two participants felt that the quality of the data was fine, there were a few that expressed concerns with the data quality based on their actual experiences. Examples noted down were as follows:

1. Data discrepancies between what service equipment and their locations are in the company database and what are actually installed at customer premises.

These discrepancies could be a result of changes made after the start of the service contract but were not recorded. For instance, the customer could have done some renovation on their washrooms that could have resulted in some of the original equipment not being re-installed or possibly moved to other locations within the customer's premises. Another scenario is when there were equipment model upgrading carried out by Company A but

these were not recorded in the contract database. Yet another possibility is that amendments to the contracts were made, say additions or reductions of services, but these changes were not input into the database.

2. Terminated contracts still in the Contracts database

There could be terminated service contracts that are still to be struck off the contracts database. Management could also have not been very quick in recognising these terminations hoping that they could still salvage these contracts. Another scenario is of customers signifying that they no longer wish to continue the service contract for various reasons (dissatisfaction, business closure, change of management and so forth) but company management did not formally recognise these notices as the prescribed notice period for termination was not followed. Effectively, though the customer could simply not allow the service company to continue on with the service in their premises. While the company has some legal recourse, the costs of pursuing the matter would very much outweigh any potential benefit, considering the relatively low value of service contracts.

While the problem of inaccurate data could not be definitely estimated (it would need thorough sampling if not an outright survey of all of Company A's 4,500 strong customer base), some participants suggested that this be systematically addressed. Two reasons were cited as examples. Clean or accurate data is a crucial ingredient of using information for reasoned marketing and service operations decisions. Another consideration is inaccurate data results in inaccurate billings that could be a source of customer dissatisfaction, as had been observed.

6.2.2.5 Resistance to Change

As pointed out earlier, resistance to change was reported to have occurred in the company in the adoption of the initial versions of the service scheduling and invoicing software. Two factors aggravated the situation— firstly, the effort to communicate objectives persuasively and win managers and staff 's cooperation was

lacking and secondly, there were problems with the software and the new processes introduced which strengthened resisting forces further.

During the interviews, it was almost unanimous that employees in the company should have no major problem in welcoming change. Thus new front office processes enabled by technology could be successfully introduced. The only divergent comment was the one made on salespeople, described as naturally wanting to be left alone and would therefore resent more Management control (such as when all their activities and contacts are electronically recorded and monitored). However, the situation was clarified as manageable, as salespeople could be swayed to adopt new processes if these changes could result in productivity and higher commission earnings.

Company management, it was suggested by lower level staff, has to make the effort to get people to cooperate and adopt the changes with new processes and technology. Said this same participant, convincing people to cooperate means demonstrating how new processes are beneficial to them such as less work stress and the reduction of time to complete tasks. A further comment was provided that with a few not-so-smooth changes in the past, the new management ought to work on winning the staff's trust. There were suggestions to this effect. Firstly, management should have a more participatory style by consulting and informing people openly before design and implementation initiatives are executed. Secondly, if innovations do work, they must communicate these results to everyone to win over remaining skeptics. To move forward then on the adoption of more CRM type applications in the company, management has to plan and invest on getting people's trust and cooperation.

6.2.2.6 Adoption and Deployment Factors: Summation and Significance

The previous sections explained five identified factors that impact on the ease or difficulty in the progressive adoption and deployment of CRM applications. These are management commitment and funding, in-house applications development,

defining effective processes, data quality and resistance to change. Based on observed situations, the individual impacts of these factors are presented in Table 6.5.

Table 6.5 Factors Influencing CRM Adoption and Deployment

Factor	Situation	Impact on Ease of Adoption
Management commitment and funding	Strong support for process automation	Positive
In-house applications development	Problems with operational systems; insufficient resources	Highly Negative
0000 Defining effective processes	Still in progress, consensus not reached yet	Highly Negative
Data quality	Some instances of inaccurate data noted	Moderately Negative
Resistance to change	Trust of staff need to be worked on, but situation manageable	Mildly Negative

Financial capability and management support for progressive adoption of CRM applications in the company is positive and if it were the only factor, then the project could have achieved more by now. However there are hindering factors that need to be addressed. Resistance to change is present, though not to a significant degree. Data quality issues are real and should be addressed systematically and vigorously because of their critical impact on many operational aspects of the business. Perhaps the more fundamental problem is that of defining effective front-office business processes that 1) result in efficiency gains, 2) are satisfactory to customers, and 3) could be reliably enabled and operated by the software under development. For not taking a strategic, holistic perspective, the current step-wise, seemingly trial and error

pattern of effecting process changes could be limiting success. The approach also results in setbacks that make staff lose confidence on the project. However, should hypothetically these effective processes be defined at some point, the question then is could the present in-house development approach produce the necessary applications for these processes? Considering firstly, the limited manpower resources committed to the project, secondly, the problems with the present modules that need urgent attention, and lastly, the basic fact that the software is not on a Web-enabled platform, it is unlikely that the company will easily see within one year, the benefits of wide-ranging CRM functionalities desired by managers, staff and perhaps even customers as well.

6.2.3 Research Question 3: Perceived Value of CRM Applications

Research Question 3: Considering benefits and costs, what is the service providers' perceived value of CRM applications?

The two previous sections investigated firstly, the company business needs that could be addressed by and benefit from CRM-type applications and secondly, the practical difficulties and costs that could be hindering the adoption and deployment of CRM applications. The findings on these issues have been analysed to answer the third research question as to the perceived value of CRM applications. Following are three main benefits that the service provider currently seeks which influence this perception: generating productivity and efficiency gains; facilitating management control; and analysing contract data for strategy planning.

6.2.3.1 Generating Productivity and Efficiency Gains

One of the primary benefits desired from CRM applications by the service provider is the ability to run smoothly and efficiently scaled-up service operations. The original motivation for the software under development was to automate the service scheduling, invoicing and customer service function using a centralised customer contracts database; in so doing, the service provider would

have the ability to run a larger sized business operation without a proportionate increase in staff. This motivation derives from two factors. Firstly, the labour costs in Singapore are relatively high. This constraint poses a challenge for the labour-intensive hygiene services industry where profit margins are being squeezed progressively by intense competition. Secondly, the company in a bid to establish market dominance acquired the service businesses of three competitors. The investment it made from these acquisitions could better pay-off if it could absorb the business revenues from these companies without taking on their entire operational and management overhead. To accomplish this, the service provider needs tools or software applications for its front office activities.

6.2.3.2 Facilitating Management Control

With ambitious growth plans for the company, senior board level management wanted very much to have a reliable information system to facilitate strong and detailed control of the business. Firstly, they wanted to keep track of the business' direction and thus apply corrective action where needed. It was very driven to be kept abreast of changes in the service business portfolio (annual contract values) not on a monthly or weekly basis, but on a daily even real time basis. Secondly, management wanted to know how well staff performed according to agreed standards. For instance, the operations group's efficiency in coping with their service schedules was one of the commonly referred to performance indicators, so that the number of scheduled jobs not done in a day was reflected on the software's management screen. This example illustrates the detail that senior management wanted to be updated on, reflecting on its control and micromanagement orientation.

6.2.3.3 Providing Analytical Functions for Strategy Planning

Management has realised that there is substantial growth in revenues that could be generated with their existing customers. To tap this potential, effective contract analysis information is required so that possible promotion projects could be

identified and appropriate action plans designed. The realisation of needing to focus on existing customers was fairly recent. Up to a few months prior to the research interviews, the company, as described by a manager, “neglected existing customers” by getting salespeople to concentrate on acquiring new customers, resulting in customer dissatisfaction and competitors getting other new services out of these customers. Now that lessons have been acknowledged, salespeople are being directed back to existing customers, bringing up the need for analytical tools to identify unsold or better still, unserved needs of customers.

The service provider perceives acquiring the three capabilities explained previously as the immediate value of CRM applications. Weighing the costs and recognising the difficulties involved, the service provider has decided to prioritise and commit to achieving these capabilities first. With the integration demands of acquired businesses in recent years, the company must first be put on a reliable operational and management state. Beyond these capabilities, other CRM functionalities and outcomes have to be planned for later. Some examples are sales staff’s customer contact management system, on-line database access or for the field service side, use of mobile devices for communication. As explained earlier, these developments are to be outsourced later and built on a Web-based platform.

6.2.3.4 CRM Web-enabled Customer Service and Support

The current perceived value that the service provider attributed to front-office applications obviously focused on developing the existing software for internal company needs which were increasing productivity and efficiency, facilitating management control and providing analytical functions for strategic planning. CRM as front-office applications however encompasses two sides of the provider-customer relationship. So far the company has limited its focus on routine or traditional requirements (such as ensuring service schedules are fulfilled and communicated customer issues are resolved). Customers’ unmet needs (or more accurately the possibility that these may exist) have not figured in the company’s awareness or planning considerations.

The service provider participants were queried on the need of providing customers with some service features through general CRM applications' Web-enabled functionalities. These service features, already part of provider-customer interactions in other business settings (see Table 2.7), are summarised below:

1. On-line access to comprehensive company information as well as their own records
2. On-line registration of sales orders and service issues
3. Immediate confirmation of orders/ resolution of service issues by Short Message Service (SMS) or by emails
4. Immediate automated confirmation of orders/ resolution of service issues by Short Message Service (SMS) or by emails.
5. The company allows for customer-specified service arrangements. It also has a comprehensive record of customer information and past contacts allowing for the company to provide customer-specific products and services, including catering to information needs.

As discussed in the Literature Review on CRM, the above-listed features could address possible customer needs for information, communication, transactional flexibility, speed, personalisation and customisation.

Service provider participants were generally lukewarm to the above Web-enabled service features. This attitude is explained by the following assumptions on the part of these participants:

1. Customers would prefer to use the traditional channels of interacting with the company, such as

- a. Receiving proposals or any written document by fax, which is more convenient as compared with email as it does not need logging on and printing.
 - b. Using the telephone to get information or make complaints or requests with the company. The company also has adequate phone lines and customer service staff to handle calls.
 - c. Face-to-face meetings.
2. Service customers do not really need instant confirmations or information as much as in goods-selling businesses where customers need to take immediate actions regularly. Furthermore, in hygiene services, most customer issues could wait. For instance, a malfunctioning soap dispenser need not be repaired immediately as firstly, it would not disrupt the customer's operations and secondly, there are probably other soap dispensers installed in the customer's premises that could still be used in the meantime. For the uncommon situations where urgent action is needed from the service provider, the customer would naturally simply use the telephone.
3. Customers show a high interest on hygiene services only when it is looking for a suitable service provider. Once the contract is signed, the customer demonstrates low interest on these services, which they view as of low importance. Thus, frequent interactions with service providers that could be supported by CRM functionalities are not the norm.
4. Customers have diverse characteristics, and only a minority (from large corporations with advance computerised systems) would probably take to using computer-mediated means for information and communication.
5. What customers are looking for with hygiene services providers are their quick response to customer complaints and requests and the use of a personalised service approach. These factors require a good service set-up and well-trained staff more than CRM service functionalities for customers.

In summary, analysing the above assumptions, the service provider is saying that the traditional means of communication and interaction between itself and customers are adequate. Therefore there is not much benefit with those means of communication and interaction that could only be enabled with CRM.

6.3 The Smaller Hygiene Services Company

The perspective of the large hygiene services market leader in relation to the potential perceived value of CRM applications was examined at length. In the design of this research, the results for this service provider was thought as better understood if it were contrasted with a company which has different characteristics, such as a smaller size and a limited service range. Data for this smaller company, henceforth referred to as Company B, was obtained from two Company A research participants who were previously associated with this smaller service business which was acquired by the subject service provider, Company A. These two participants occupied key sales and service management positions in that smaller service business. They were asked to respond to the same research questions posed to Company A's staff and share their views from the perspective of Company B's service business. The following results were from these interviews.

6.3.1 Business and Information System Situation

Company B was a locally owned Singaporean company. Its contract service business was roughly just 20% of Company A's current size, and was only doing the washroom hygiene service range and none of the floor mats or air purification¹ services.

The company's information system was quite basic. There was no client server network in the company just stand-alone desktop computers. The company maintained a Microsoft DOS database, wherein contract information is maintained. An assistant reporting to the General Manager had the database system on her

computer and was the only person authorised to input changes on the database. From time to time, but not more than monthly intervals, the General Manager would get a copy of the database file and save it on her computer. The same arrangement of getting contract database file copies was later made with the Sales Manager. On a weekly basis, a retained computer programmer would visit for a few hours to troubleshoot the program and make any changes requested by management, such as formatting records or purging old data.

The basic operational use of this database was for generating invoices and for receivables management (aging schedules and statement of accounts). On a monthly basis, some 400 or so invoices are printed according to the terms of the service contracts with customers. These volumes already justify some kind of automation that could at the same time keep track of payments and outstanding accounts.

For service operations, the database program was limited to producing the monthly service schedules for the entire company. On a daily basis, an operations planning assistant would consider all service schedules that needed to be done for the next day and based on the available service technicians and vans, prepare the schedule specifying assignments on customers to be serviced and the type of equipment /services involved. The Service Operations Manager would then receive these schedules, arrange for the respective service materials to be prepared, and give the service technicians their next day's assignments. While the system performed well, a weakness that could be said was that the process was dependent on the long-serving operations planning assistant's knowledge. However in practical terms, the business being small and the General Manager being quite familiar with the function, the risk of continuity should the assistant leave can be managed.

6.3.2 Business Needs for Information and Automation

The computer and information system, however basic, seemed to adequately meet the Company B's operational needs for invoicing and the general function of storing customer contract information for various uses. For service schedule preparation, their mostly manual practice apparently performed well so that no change was

thought necessary. This was in contrast with the research subject Company A, which prioritised this service schedule functionality for automation. Company A's service operations was five times larger than that of Company B.

For sales and marketing purposes, the need for information to give more detailed business analyses was not as pronounced with the local company. Unlike Company A that saw customer penetration (more sales to existing customers) as a key component of revenue growth, the local company's strategy was to acquire new customers based on aggressive pricing. What could have encouraged this direction was their having a more limited range to offer their customers (no floor mats service). Furthermore, since the company manufactured most of its service equipment and materials, and had good control of its input costs, it could use price discounts more easily to acquire business. Thus, rather than emphasize relationship marketing for greater penetration, the company focused more on winning tenders from companies inviting proposals for washroom hygiene services.

6.3.3 Impediments to Adopting CRM

Several impediments were identified for Company B to consider CRM applications and see potential benefits: lack of focus on existing customer base, limited financial and management resources, and concerns about security of information sharing.

Apart from the absence of a pressing need to exploit customer information for business strategy, the company was distracted by opportunities in exporting to overseas markets. Having established some manufacturing capability, it was in a good position to supply products to hygiene services providers in other countries particularly those in Southeast Asia. This export orientation drove the company so that management attention was focused there rather than in growing the Singapore service business more aggressively.

Company B was a family-owned entrepreneurial venture and had limitations in financial resources as well as managerial expertise. Whatever funds were available

for investment were earmarked for expanding manufacturing capability and export marketing. Also, apart from financial constraints, it would have been difficult for the company to consider investing in CRM systems because their awareness of computer technology was quite basic and not up to date.

The first hurdle on the way to adopting CRM would have been seeing the need for a more systematic customer relationship system that would require the deployment of CRM applications. Considering the present management perspective, the state of computerisation, and the limited funds situation, coming to this awareness and acting on it would have been a big and arguably, unlikely leap for company management. The company had historically implemented system innovations in limited step-wise fashion.

Another factor was management's concern about sharing customer contract information with a wider group of company staff if a CRM system was adopted. This information has traditionally been considered as confidential so that access to the database has been limited. A threat was seen if contract details (services provided, prices, renewal date) leaked out. This was seen as a likely possibility with resigning staff. In this industry, turnover is quite high and many leavers join competitors.

6.4 Comparison of Two Service Providers Results

The findings with the main subject service provider, Company A and that of the much smaller local company, have been compared. Generally, the perceived value of CRM applications was high with Company A, while with the smaller company it was quite low. Salient points of the comparative analysis are given below and are also summarised in Table 6.6.

Table 6.6 Comparison of Findings Between Company A and Smaller Locally owned Company B

Item Description	Company A	Company B
Service Business Size	Market leader, 35% market share	Size was 20% of Company A
Hygiene Services Range	All three: Washroom hygiene, Floor mats service, Air purification	Only washroom hygiene
Marketing Focus	Existing customers penetration	New customers acquisition
Recognition of CRM Value Drivers		
1. Achieving productivity and efficiency gains	High	Low
2. Facilitating management control	High	Low
3. Analysing data for strategy planning	High	Low
4. Web-enabled customer self service functionalities	Low	Low
Organisational Context Factors		
1. Computer system	Client-server network	Stand-alone PCs
2. Resources capability		
Financial	Good	Limited
IT expertise	Moderate	Low
3. Attitude to information sharing	Open	Wary

6.4.1 Value Drivers for CRM Applications

The value drivers for deploying CRM applications motivating hygiene services industry leader Company A, namely generating productivity and efficiency gains, facilitating management control, and analysing contract data for strategy planning, were not significantly present with the smaller Company B.

Company A had a compelling focus on the efficiency of internal processes. Information technology could provide solutions to manage the size of its business, which grew significantly in recent years. The situation was not such with the much smaller local company's service business which was growing quite slowly. Thus, the size of business, in so far as it poses an operational management challenge, was a factor in the difference in perception of the value of CRM applications.

Another factor is strategic orientation in relation to existing customers. While Company A was going for more penetration of their customers' business (a logical consequence from its having a large customer base and a wider service products range), the smaller local company tended to get new business by acquiring new customers using basically aggressive pricing. Thus, Company A would see more use of the analytic power of CRM applications on customer information.

The previous managers of Company B felt that the owners saw more opportunities in export markets (thus a lack of drive in getting more out of its Singapore service business). On the other hand, Company A was clear about further increasing its market dominance in Singapore. Thus seriously managing business growth in a systematic and efficient manner drove this market leader, who saw the need for establishing and tracking business performance measures that CRM applications provide.

Both Company A and Company B concurred however on the value or actually, the non-value of Web-enabled customer service functionalities with CRM applications. Apart from providing basic product and company information on their websites, both companies saw for reasons explained previously that customers would see limited practical use for these other functionalities, particularly that involving customer self-service in accessing specific customer information or communicating instructions and requests.

6.4.2 Organisational Context Factors

Apart from differences in business needs and management orientation, organisational context factors also impact on the high and low perceived value of CRM applications for Company A and the smaller Company B respectively.

Firstly, Company A had a relatively advanced state of computerisation and was more inclined or comfortable to take further even bolder steps in exploiting information technology. Company B did not have a server network to start with. To consider setting up this system, and accept and design file sharing work processes as would be needed with the deployment of CRM applications, would have been a big step for the smaller company.

Secondly, resource limitations, particularly on financial capability and available information technology staff, were not the same for the two companies and could explain their different perceptions. Company A had the means to progress their current service scheduling and invoicing operational software to possess CRM functionalities. These means were available or within easy reach, which was not the case with the smaller Company B. Thus, resource availability could be playing a part too in perceiving value of deciding on adopting and deploying CRM applications.

Thirdly, the value of having comprehensive customer information and sharing this across the organisation (which is the practical essence of CRM applications) was lost with the smaller company. The management saw more risks than benefits with this approach and elected to have tight control of information and provided information to staff on a limited or case-to-case basis. With Company A, the management's perspective was the opposite and therefore in line with the CRM direction.

6.5 Summary of Chapter 6

Research on the company who is the hygiene services industry leader primarily provided the service provider's perspective on the value of deploying CRM applications. The analysis highlighted the company's aggressive growth strategy

marked by several significant acquisitions of competitive businesses. The challenge of efficiently coping with the demands of a larger business size pushed the company to invest in in-house software development for its service scheduling and invoicing need. Progress has been slow and difficult. Meanwhile while the basic operational functionalities still have to be improved, expectations for the software to take on more CRM applications functionalities have been growing.

Addressing the first research question, business needs to increase productivity in sales and marketing, support sales force activities and help control customer dissatisfaction were identified requiring applications support.

Addressing the second research question, management commitment for investing in development was strong, and therefore a positive force for the adoption of CRM applications. However the following were hurdles to making expeditious progress—reliance on in-house software development, the trial and error approach in defining business processes which is still ongoing, and to a certain extent, doubts on data quality and people resistance to change.

Addressing the third research question, the company saw limited value on Web-enabled self-service functionalities for customers believing that customers would prefer traditional modes of communication. The perceived value of CRM applications for the company was high, however, as these could deliver internally focused benefits of achieving productivity and efficiency gains, facilitating management control, and analysing customer contracts data for strategy planning.

The research findings on a smaller service provider company (which perceived a relatively lower value of CRM applications) provided some comparison to see what factors contribute to the difference in perception of the two companies. Apparently, influencing factors were the size of the business operations, service products range, customer business focus and contextual factors like the state of computerisation, available resources and management openness to information sharing.

The next chapter discusses research findings on the service customer's perspective.

7. RESEARCH RESULTS AND ANALYSIS (SERVICE CUSTOMERS' PERSPECTIVE)

In the previous chapter, research findings on the perceived value of CRM applications from the hygiene services providers' perspective were presented. As this research project was designed as an industry case study, the service customers' perspective was also investigated and the findings are presented in this chapter. The answers to the four sets of defined research questions for the service customers' perspective are provided below. The data came from the results of the customer-accomplished questionnaire survey and the individual in-depth interviews that followed for the 21 participants.

7.1 Research Question 1: Service Quality Assessment

Research Questions, Set 1: What are current assessments of service quality? Does process service quality (where CRM applications can play a part) really matter more than output or core service quality in the perceived value of the service?

As discussed in Chapter 3, customers evaluate the quality of service rendered to them by service providers on two levels (Gronroos 1982 and Parasuraman et al. 1985). Firstly, there is the evaluation of the results of the core service (output service quality) and secondly, there is the perception of how well the overall service was rendered by the service provider's organisation (process service quality).

7.1.1 Output Service Quality Ratings

Averages of participants' ratings of perceived output service quality were computed from their individual ratings of the various hygiene services they contracted (as requested in page 2 of the Customer Questionnaire, Appendix 2). The scale used for rating each service was a five-point scale with the midpoint rating of 3 for average performance and a top rating of 5 for excellent performance. The results of these averages from each customer was translated in percentage terms. Thus a

ratings average of 3.0 or just average performance translated to 60%. The results considering all 21 customers are summarised in Table 7.1.

Table 7.1 Customer Ratings of Hygiene Services Output Service Quality

Lowest rating	53%
Highest rating	100%
Mean	73%
Median	76%
Number of responses	21

From the questionnaire results and what were said in the interviews, almost all participants did not have any major issues or complaints regarding the output service quality of hygiene services providers; the provision of the various service equipment and materials are satisfactorily producing the expected results. The mean value of 73% and a slightly higher median value of 76% reflect this observation.

No pattern on responses for output service quality was detected according to service provider used, size of service contract and customer type. These findings are interesting as they could indicate that in the industry, no service provider stands out on this criterion. Another possible indication is that there is no significant difference between expectations of particular customer groups for output service quality, for example upmarket versus the general type of establishments, or manufacturing versus recreation businesses. Almost all participants seem to say that they value output service quality, and their providers seem equally capable of delivering on their expectations.

Two participants who gave the lowest ratings of output service quality (53%, and the only cases returning a below-average rating) gave reasons of equipment non-performance. Probing however revealed that service issues had more to do with the dissatisfaction. In the first case, issues of concern were not specifically a result of the technical aspects of the service equipment but the reliability of the provider's staff

when carrying out their services. The second case could be viewed as a technical issue, as the installed equipment was not performing consistently to the customer's expectation. However, probing again revealed that the problem could be traced to insufficient equipment installed given the conditions of the customer's premises, a situation which could have been avoided by a more appropriate service proposal. Interestingly, these two participants who gave low service output ratings seemed not particularly concerned about these issues to the point that they would take steps in terminating their contracts.

Perhaps one participant could be said to stand out from all the rest on the output service quality issue. This participant's perception impacts significantly on her company's commitment to continue the relationship with the service provider. She seemed unhappy with one aspect of the provider's service equipment—their appearance. She was quite concerned about this point and was considering alternative providers as a result. That this case was an exception could be argued from the point that participants from similar upmarket establishments using the same service provider and equipment did not seem to be concerned about this issue.

7.1.2 Service Process Quality Ratings

This research relied on the SERVQUAL model (Parasuraman et.al 1988) to evaluate service process quality ratings of customer participants for their hygiene services providers. As explained in Chapter 3 and Appendix 4, process service quality encompasses five SERVQUAL dimensions, namely Tangibles, Reliability, Responsiveness, Assurance and Empathy. In the questionnaire, participants were firstly requested to rate the **importance** to them of the respective dimensions. They were then asked to rate their service provider's **performance** on these dimensions. The results are presented below in Tables 7.2 and 7.3.

Table 7.2 Ranking of Service Process Quality Dimensions According to Importance to Customers

Rank	Dimension	Description	Score in % (100 Highest)		
			Min	Max	Mean
1	Responsiveness	Dependable and accurate service performance as promised	71	100	92
2	Reliability	Willingness to help customers and deliver prompt service	57	100	90
3	Assurance	Trustworthiness and credibility of provider's staff	57	100	88
4	Empathy	Providing caring and individualised attention	57	100	84
5	Tangibles	Appearance of facilities, equipment, staff and distributed materials	33	90	68

7.1.2.1 Importance of SERVQUAL Dimensions

The participants were asked to rate items corresponding to the different SERVQUAL dimensions using a seven-point scale with a rating of 4 as the midpoint. These ratings were transformed to a score in percentage points so that a top rating of 7 corresponds to 100, and the rating midpoint of 4 corresponds to 57. The minimum and maximum scores and the mean are presented in Table 7.2. The minimum and maximum scores should give an indication of how unanimous or diverse participants' opinions are.

The above results point out that tangible elements from the service provider did not significantly matter as much to participants in relation to other aspects of the service rendered. In addition to a low mean score of 68 and a minimum score as low as 33, no participant gave a top rating equivalent to 100 for the tangibles unlike the four other dimensions of process service quality. Most participants remarked that the service provider meeting a certain minimum standard for most of the tangible

elements mentioned was adequate for them. Most felt that there was no need for the service provider to have new, polished vans or glossy brochures and report folders to impress them. As for service staff uniforms and appearance, nothing fancy is expected as long as service staff were not obviously untidy-looking. On this point, there were just a few exceptions who qualified that for their upmarket establishment (such as 5-star hotels), it was important that the service provider personnel be well-presented if they were to be servicing their public areas as they would be seen by their guests who could develop negative impressions, affecting the establishment's image.

The average importance values of other service process dimensions appear close enough that it may not be statistically justified to conclude the ranking indicated in Table 7.6. However, the interviews actually supported this ranking as explained in the following points:

1. **Responsiveness** rather than reliability was more important to the service customers. They could tolerate the occasional lapses in service schedules, mistakes by service provider personnel or failures of the service equipment. However, they would be less forgiving if the service provider was slow or inattentive to requests or complaints that they brought up. There was obviously a demand for prompt, if not immediate, resolution of any customer-raised issues.

Responsiveness could alienate or endear service providers with their customers. When pressed to recall instances when they were particularly dissatisfied with the service provider, customers often cited cases of unresponsive action such as their phoned-in requests not being resolved promptly. Worse incidents occurred when the service provider did not record these requests properly and subsequently were not actioned at all. Other examples also involved poor responsiveness as when there was unsatisfactory handling of enquiries over the phone with the responding provider staff not being knowledgeable nor demonstrating a helpful attitude.

On the other hand, interestingly, reported examples of delightful experiences mostly involved demonstrations of responsiveness as when the service provider staff resolved problems beyond customer expectations. Cited examples were when a manager himself handled some requested urgent supply deliveries, and when new service equipment was brought in, rather than simply repairing malfunctioning equipment.

2. **Reliability** was the second most important SERVQUAL dimension according to the questionnaire replies. There were two items under the reliability dimension—1) employees keeping promises and 2) services carried out without mistakes. From the ratings and from the interviews, the latter seemed to be rated much more than the former. Customers may tolerate service mistakes, but when any of the service provider employees make commitments, customers expect that these be fulfilled as promised.
3. The service provider demonstrating **assuring** behaviours also ranked high among customers in their evaluation of service quality. These behaviours manifest in service personnel being knowledgeable about their work and secondly, in being polite with customers. Generally, the former seemed more important than politeness of service staff. Knowledgeable provider staff are desired by customers 1) to execute installation and service work safely and properly, an important condition as the work is performed at the customer's premises, and 2) being effectively helpful in handling customer complaints and requests. As for politeness, while this could be an advantage with many customers desiring to be greeted, addressed and thanked nicely, there are also those customers who remarked that as long as no rude behaviour is exhibited, they could dispense with these niceties from provider staff.
4. Showing **empathetic** communication styles while serving customers was also a desired quality of service staff. However, from the interviews, it was obvious that the need was not generally customers needing 'sympathetic ears' or desiring close 'handholding' support when faced with service problems, but more of provider staff genuinely listening to

and accurately noting customer concerns when these are raised and executing appropriate remedial action quickly.

7.1.2.2 Performance Ratings of Process Service Quality

Having investigated the **importance** of process service quality dimensions for hygiene services customers, the actual **performance** ratings made by customers of their current service providers were subsequently determined. The same items as with the determining importance ratings were used for each of the dimensions of Tangibles, Reliability, Responsiveness, Assurance and Empathy. The individual ratings of each dimension by the 21 participants were computed for and summed up as the Aggregate Process Service Quality rating as shown in Table 7.3.

Table 7.3 Ratings of Process Service Quality by Customers of Their Hygiene Services Provider

Scores in % (100 highest)				
Dimension	Min	Max	Median	Mean
Responsiveness	36	100	57	64
Reliability	36	93	57	64
Assurance	43	100	57	66
Empathy	29	100	64	62
Tangibles	43	76	57	61
Aggregate Process Service Quality	47	88	60	63

The ratings made by customer participants of service process quality dimensions varied widely. The interviews confirmed that there were a few who were obviously delighted with their service providers -- three out of 21 participants gave overall ratings of 80% and above. The ratings were however skewed to the lower values as evidenced by the mean being 63%, with the median being 60%. The relatively low to

average ratings given by most customers indicate that there is a good improvement potential which service providers can work on.

From interview notes and as pointed earlier, responsiveness was a major quality appreciated by customers. Thus the ability of service providers to attend to customer's occasional complaints or requests in a prompt and effective way while demonstrating a helpful even flexible attitude was valued highly. To fail on these measures substantially reduces the customer's perceived quality of the overall service. An explanation lies in the fact that customer participants are working under constant pressure to maintain certain operational and quality standards in their premises and thus exceptional issues that need the service provider's attention must be resolved promptly lest the customers themselves get into trouble with their superiors or customers.

Another factor which participants indicated strong dissatisfaction with their hygiene services providers is not seeing a company representative for an extended period. Visits by company representatives project a customer caring attitude by the service provider, and for most participants in this study, knowing the particular company representative supporting the service give them confidence that there would be one contact person to call and chase after if service issues arise.

7.1.3 Comparing Output Service with Process Service Quality

From Tables 7.1 and 7.3, output service quality with a mean score value of 73% and a median value of 76% seemed to perform better than process service quality with a mean score value of 63% and a still lower median value of 60%. As explained earlier, these figures indicate that customers are not unhappy or concerned about the core hygiene services output but there are real concerns with most about how the accompanying service process.

On the issue of which aspect of service quality mattered more for hygiene services customers, there was clear and consistent evidence that among most participants, output service quality was not a concern that demanded ongoing attention. The

technical features of the service equipment and their performance (as long as meeting a minimum satisfactory level) were not quite ‘top-of-mind’ issues. This deduction could be made on the basis of recurring remarks on the importance to participants of how service oriented and responsive the provider is and how these characteristics (related to process service quality) mattered more to them. Most participants seem to feel, that on the output of the core service, there could not be significant differences between service providers. No attachment or even preference for the service provider was noted in this research as a result of primarily having good output performance.

Quantitative analysis done on the questionnaire results data also supported the importance of service process quality in the participants’ perceived value of the providers’ services. Perceived value as explained in Chapter 3 is the customer’s assessment of the benefits they receive from the contracted services considering the overall costs to them. Correlation analysis using SPSS gave the results summarised in Table 7.4.

Table 7.4 Output and Process Service Quality Correlation with Perceived Value of Provided Service

	Output Service Quality	Process Service Quality
Pearson Correlation, r	0.299	0.648
Significance	0.188	0.001*
Number of observations	21	21

* Correlation is significant at the 0.01 level.

Pearson correlation is a statistical method that returns a product moment correlation, r that ranges from –1.0 to +1.0 and reflects the direction and direction of a linear relationship between two sets of figures (Sekaran 1992). The positive r values shows that perceived value can be expected to increase with an increase of both output and process service quality; however, the correlation of output service quality

with perceived value of the service is weak ($r = 0.299$). That of process service quality is stronger ($r = 0.648$) and statistically significant at the 0.01 level. (Note that this determined relationship refers to the 21 participants in this research, which cannot be said to be necessarily true for the general population of hygiene services customers.)

7.1.4 Summary of Service Quality Findings (Research Question 1)

In summary, the results of the survey and the in-depth interviews indicate that performance on process service quality dimensions mattered more to customers than output service quality. This could be attributed to a general feeling that all providers are basically the same in terms of performance of the core hygiene services. There were no strong preferences or attachment to the service provider on this criterion alone. The fact that service providers are performing satisfactorily on the core output ratings probably make this aspect of the service less conspicuous to customers.

Process service quality was more important and it was the responsiveness dimension that clearly stood out. Many customers admitted feeling under pressure to maintain certain operational and quality standards in their premises, and therefore expect to get quick and effective response from their service providers when exceptional issues arise. Many likewise saw regular visits by the service provider's representatives as important as these give assurance that there would be a known contact person to call when customers require assistance on any problems. Other aspects of the process service quality like reliability, assurance, and empathy seem to be valued insofar as these contribute to quick, effective response. Also, the lower importance rating of the tangibles dimension seem to indicate that customers are focused primarily on the responsiveness of the service provider.

7.2 Research Question 2: Perceived Value-Added of CRM Possibilities

Research Questions, Set 2: Will CRM-enabled possibilities create additional value for the customer? Which of these possibilities are rated higher? What are the reasons behind these ratings?

As discussed in Chapter 2, various functionalities that come with CRM applications enable new possibilities to improve information dissemination, communication, flexibility as well as offer more personalised and customised services for customers in their relationships with their service providers. This research project investigated whether hygiene services customers would view these CRM possibilities as truly value-adding. The possible reasons for these perceptions were likewise explored.

7.2.1 Ranking of CRM Service Possibilities

The participants were asked to consider the seven possible CRM functionalities listed in Table 7.5 and rate each as to their potential to add to the overall value of what they were already receiving from their service provider. As shown in Appendix 4, replies were requested by referring to a scale of 1 to 4, where 1 represents no added value, 2 as adding just a little value, 3 as adding a moderate amount of value and 4 as adding a lot of value. Table 7.5 shows the ranking of CRM functionalities for value-adding potential to customers. The frequencies of minimum ratings (1s) and maximum ratings (4s) as well as the mean values for 21 participants are likewise shown.

In general, customer participants viewed service possibilities from CRM applications positively and as adding value for them. While there were opinions that some of these possibilities would not be of benefit to them, these were few and there were many more opinions expressed that these possible features add a lot of value. The mean value of ratings at 3.1 (in a scale of 4 being the highest) attests to a general affirmation by customers.

Table 7.5 Value Adding Potential of CRM Service Possibilities

Rank	CRM Service Possibility	Frequency of Ratings of No Added Value, (1s)	Frequency of Ratings of a Lot of Added Value, (4s)	Mean Value of Rating (4, max)
1	Service provider has complete customer records for efficient service	0	13	3.5
2	Service provider can communicate immediate confirmation of customer requests, resolution	0	10	3.4
3	Customer can log to website and register requests, issues	2	8	3.1
4	Customer can log to website and review service records	2	8	3.0
5	Customer receives regular info on relevant matters from service provider	0	5	2.9
6 / 7	Provider gives customer option to specify future service materials used	2	4	2.8
6 / 7	Customer can access provider's website to get restricted information	1	3	2.8
	Mean value-added of listed CRM service possibilities			3.1

7.2.2 Efficient Responsiveness and Other Values Sought with CRM Service

From the ranking of perceived value-adding potential of CRM service possibilities, interview responses were analysed to determine congruency of findings and seek the underlying explanations. The findings could be summarised in the statement that efficient responsiveness is the main value sought from service providers through CRM service possibilities.

1. The item ranked highest by customers was phrased in the questionnaire as: *“When we phone Company A’s offices, whoever answers the call would have updated information on our current agreement, service history and past purchases, so that we are attended to efficiently”*.

Customers appeared unanimous on the importance of the service provider having up to date and readily accessible information on their agreement and other pertinent information in their relationship. The explanation lies in the vital role that a good information system plays in ensuring smooth, efficient and mistake-free service. The theme of quick and effective response to customer issues underpins this finding. Customers expect that the service provider would not be fumbling around with wrong information or take frustratingly long to respond to customers’ routine or exceptional queries or requests.

2. It is interesting that the next two ranked value-adding service from CRM applications are related once more to responsive service for issues brought up by customers.

2.1 A confirmation by email or SMS text message as to the progress or resolution of customer issues was taken as value-adding by all participants. From their remarks, they see these confirmations as an assurance that they could now forget about the specific issues or problems they raised, and thus focus on the many other things that come up in their day-to-day work.

2.2 The next ranked service possibility of registering issues or requests by logging on the service provider’s secure website could surprise some who expect that customers would naturally prefer to pick up the phone and call the service provider. However, there were quite a few who felt that sending an electronic message was better at times for the following reasons:

a. Reading and sending emails have become part of many participants’ morning or afternoon work routines. Thus to send an electronic message to the service provider could be viewed as not being inconvenient. Unproductive time could also be avoided in a way, as phone calls to providers

may not reach the intended party at the initial try. Some remarked that they simply want their message to be sent and did not need to speak to any of the service provider's staff at that point. With this frame of mind, these participants also prefer email or SMS confirmation of action taken on their messages as noted previously.

b. According to some participants, sending an electronic message also has the advantage of customers keeping a record of their message to the service provider. Thus there is something definite to refer to in monitoring and following up requests. Electronic messages having spelled out details of requests also avoid miscommunication and possible arguments about relayed instructions that could happen with phone calls. Participants keen to have their requests or complaints acted on promptly and without mistake thus opt for this alternative. They feel that it is also to the benefit of the service provider as it avoids repeat jobs or unnecessary trips for them due to mistakes in relayed information.

3. After the benefits related to getting responsive service, many customers indicated they would appreciate being able to access information about their service arrangements, history and any purchases made. This possibility is seen as an efficient alternative to getting information relatively quickly as and when required without having to make phone calls to the service provider. Perhaps one reason why this service possibility was not ranked higher is that as some customers remarked, they do not really have a need for the subject information on a regular basis.

4. A service possibility that did not rank high with customer participants was receiving regular information (technical, marketing and industry news) from the service provider. Again, this result was explained by the limited utility of this service to customers, who do not see the critical importance of such to their work. However, all participants still admit some value to this feature, although little to moderate for most.

5. Participants were asked to consider the possibility of customising the service in terms of choosing service materials (such as variety of air freshening or soap fragrances for future service schedules). The result was a surprise in that only four out of the 21 participants said that this added a lot of value for them. The expectation as with other services giving customers choices was that this service possibility would be rated quite highly. From the remarks given, it seems that most were not excited about having variety and would leave the thinking of what is best to the service provider.

6. The possibility of getting restricted product and technical information from the service provider's website did not also appeal to most. Of the three who rated this feature well, one was relatively new in the responsibility of overseeing the hygiene services performance and therefore would feel the need for information more than the experienced customers. Interestingly, the other two were being serviced by companies who were also looking after cleaning and hygiene requirements (for instance, factory or kitchen sanitation) which are outside the scope of most hygiene services providers. There was more technical content in these combined services, so that these customers probably needed to have efficient access to information from their one-stop service providers than most others who had providers solely focused on hygiene services.

7.2.3 Summary of Perceived Value-Added of CRM Possibilities (Research Question 2)

Generally, the hygiene services customers who participated in the research saw the value-added benefits of seven specific service possibilities enabled by CRM applications. On average, customers returned a rating of moderate value-added for these possibilities. The questionnaire results allowed ranking of these possibilities. The results from the interviews were congruent with this ranking. The first three seen as adding more value (accurate and readily accessible customer information, confirmation of resolution of service issues, and instructions, queries by electronic means) were related to effective responsiveness in cases of service issues or queries initiated by customers. The next ranked was the ability to look into customer service

records on-line. Adding flexibility in accessing this information, as and when needed, is considered advantageous to efficiency-conscious customers. The other CRM service possibilities seemed to be rated more as nice-to-have but not really critical features for the customers. Customisation in terms of expressed choices of service materials did not appeal much as the possibility of variety did not outweigh the effort in further thinking about alternative choices. Receiving and accessing technical, product and industry information online also did not score well as these had limited utility to participants.

7.3 Research Question 3: Factors Influencing CRM Perceived Value adding Potential

Research Question 3: Do these factors—level of process service quality, level of personal interactions, level of perceived risks, and level of IT use in the work context, influence the perceived value-added from CRM-enabled service possibilities?

The discussion on Research Question 2 concluded that on average, participants saw a slightly higher than moderate potential for CRM to add value to them. There were a good number of participants who were obviously attracted to the benefits of CRM possibilities; nine of the 21 perceived value-adding benefit at a more than 80% rating. And there was also a small minority who felt that CRM would not really matter to them; these two of the 21 participants rated value-added at no more than 50%. The draw (or lack of it) of CRM for hygiene services customers, in terms of possible explanatory factors, is explained here.

7.3.1 Process Service Quality and CRM's Perceived Value-Added

It was predicted from the literature review that should customers have difficulties or unpleasant experiences in service processes, then alternatives created by CRM service possibilities would be attractive to them. From this research of hygiene services customers, it seems that there is no straightforward relationship. Process service quality, *by itself*, does not appear to be a good predictor of CRM's perceived value-added. For instance, there were groups experiencing different levels of process

service quality, yet returned similar ratings for CRM's value-added. Analysis led to a classification of participants into three categories, which are summarised in Table 7.6.

A qualification must be made here that a Low CRM Value-Added Rating refers to an over-all average score considering ratings of seven nominated CRM service possibilities. Thus a customer categorised as returning a Low CRM Value-Added Rating may have rated possibilities like on-line communication and information access to them as very low, but other possibilities like the provider's up-to-date information on them and Short Message Service (SMS) mobile phone confirmation of jobs done as value-adding to them; still, the over-all average rating turned out as low.

Table 7.6 Classification of Participants According to Process Service Quality and CRM Value-Added Scores

Description	Characteristics	Number Out of 21
Average or Lower Process Service Quality Rating, Low CRM Value-added	<p>Prefer to stick to traditional communication modes for dealing with service provider;</p> <p>May or may not use computers routinely with work;</p> <p>Improvements with service processes do not seem an urgent concern.</p>	6
Above-Average Process Service Quality Rating, High CRM Value-Added	<p>Quite receptive to innovation;</p> <p>Routinely used computer systems and the Internet with work</p>	5
Average or Lower Process Service Quality Rating, High CRM Value-Added	<p>Routinely used computer systems and the Internet with work</p> <p>Articulate about discontent with present service processes and want to see definite improvements.</p>	10

1. Average or Lower Process Service Quality Rating, Low CRM Value-added

There were participants who did not rate their providers' service processes well, just average or below average, yet saw CRM possibilities as not really that beneficial. These participants wanted to stick to traditional modes of communication with their providers, and were not receptive to the alternative possibilities with CRM services. While some of this group did not use computers routinely in their work, others did, yet felt that it was not an efficient use of time to communicate and receive information by having to log on-line versus using the telephone or the fax machine. The implication for this communication preference is that this group felt that it was still possible to get the level of service quality that they expect from present practices. It was observed however that the definiteness or urgency to see improvements was not high. There were six of the 21 participants who could be part of this category.

2. Above-Average Process Service Quality Rating, High CRM Value-Added

There were participants who said they were satisfied with process service quality, yet were still quite attracted to CRM service possibilities. The prediction before this finding is that this group would not see much value with CRM as their service expectations are already adequately satisfied. Analysing these participants, the group could be characterised by their being quite receptive to innovation and also importantly, routinely used computer systems and the Internet in their work. Thus, any difference that makes for incremental improvement is appreciated, particularly so if the innovation does not entail much effort in adoption. There were five of the 21 participants who could be part of this category.

3. Average to Lower Process Service Quality Rating, High CRM Value-Added

This third category of participants numbering 11 of the 21 participants actually fitted the prediction that those who rate less than above average process service quality would find high value-added with possibilities enabled by CRM services. However as stated in the introduction of this section, the relationship of these events is not straightforward as qualifying conditions were present. Firstly, similar to the

second group, these customers used computers and the Internet quite routinely in their work. Secondly, in contrast with the first group, they were more articulate about not being contented with how things were and had higher expectations for the service processes that they experience. Basically, these unmet expectations were a desire for the service providers to engage them more through regular contacts and communications and to demonstrate efficient and responsive behaviour when these customers need assistance.

7.3.1.1 Summary of Section on Process Service Quality and CRM's Value-Added

The level of process service quality did not seem, *by itself*, to be a good predictor of CRM's perceived value-added by customers. Two distinct groups of observed participants had different ratings of experienced service processes (one group gave low ratings for process service quality, while the other gave high ratings), yet both saw high value-added with CRM service possibilities.

From the analysis of the profile of these two groups that rated CRM value-added highly, it was not the level of process service quality (whether high or low) that seems to influence this rating, but the desire to see improvements, be it in significant or incremental steps. These two groups also shared an obvious common characteristic—they both used computer systems and the Internet quite routinely in their work.

Then there was a third group who, contrary to prediction, despite returning poor process service quality ratings on their providers, still rated CRM's value-added potential as low. This third group preferred the traditional modes of communication with the service provider. Customers of this group also seemed not that definite or felt an urgency to see improvements with their providers' service processes.

7.3.2 Personal Interactions and CRM's Perceived Value-Added

One of the research aims was to investigate whether the presence of pleasant personal interactions would influence the perceived value-added from CRM service possibilities. The prediction was that if pleasant personal interactions were present, then these would dampen the attractiveness of CRM service possibilities generally.

The level of personal interactions between customers and service providers was assessed through the interviews and questionnaire results. In the questionnaire (Appendix 4), three items were used to measure the level of personal interactions (pleasant interactions, regular contact with service provider’s representative, and friendly relationship with service provider’s representative). Results from the questionnaire are provided in Table 7.7. The percentage scores were computed from ratings in a seven-point scale, so that a rating of 7 corresponds to 100%, and the midpoint rating of 4 corresponds to 57%.

Table 7.7 Customer Scores for Personal Interactions

Lowest rating	19%
Highest rating	100%
Mean	62%
Median	62%
Number of items	21

There was a fairly wide range of levels of personal interactions, though the mean and the median were slightly higher than the midpoint level. Only Company C was rated consistently high by customers who participated in the research. Other companies, including Company A, had contrasting ratings, thus resulting in a wide spread generally.

From the ratings, and analysing notes from each of the 21 investigated relationships, observations and insights were derived.

1. There were a few customers who obviously had established ‘strong social bonds’ with their providers (as described by Berry and Parasuraman 1991). Most though had irregular and basically business activity-oriented contacts with their provider’s representatives.

2. Whilst the presence of social bonds reinforced the customer-provider relationship in a few cases, this feature was not seen as an overriding or critical need for most participants. Where these were present, these were appreciated from the customers' perspective in that they also facilitated the continued provision of satisfying service processes or that customers perceived that they were able to receive some preferential treatment from their providers.

3. Generally, the participants thought that the kind of suitable interactions are primarily regular visitations by a provider representative where service feedback or issues can be discussed. Service providers could also use these meetings to communicate new service or industry information to customers. Such regular meetings can be every three to six months. Many customers actually stated that that these meetings must not be frequent (even once a month may already be too much) as they were concerned that these meetings do not interfere with their working time unnecessarily.

7.3.2.1 Personal Interactions and CRM Services

Insights on how customers view CRM services based on the findings on personal interactions are provided below.

1. There were no more than three of the 21 participants who would prefer service with a high level of 'personal touch', wherein a representative regularly keep in touch in them and would also act as the one-stop contact point for all issues they may have. These customers enjoyed the social aspect of their relationship with their providers' representative as well, characterised by regular friendly chats about non-business issues and occasional lunches or outside-of-the-office meetings for coffee. These three customers, however, rated CRM services well. While they expressed a concern that these features would change how they are experiencing service processes (meaning, a change to impersonal and possibly frustrating service), they acknowledged that CRM services could also mean higher efficiencies for them. That these participants were using computers and emails routinely in their work seemed to

have contributed to their recognition of CRM services despite the anxieties of getting poorer service.

2. Most customers, however, have not had strong personal interactions or developed ‘social bonds’ with their providers. It did not seem to matter to them that this was the case nor did they express a preference for such. This majority welcomed periodic visitations by the service provider’s representatives but expected these meetings to be quite brief, professional in nature and agenda-driven so as not to waste their time.

3. One of the CRM service possibilities that participants were asked to consider was receiving relevant product, service or company information by email or accessing a restricted website. As mentioned earlier, this feature did not appeal very much to most. It was not that participants did not see the information as useful, but many preferred to receive this information from face-to-face meetings with the service provider’s representative. Reasons given for this preference was 1) information regarding hygiene services was probably not urgently needed for immediate action, and 2) customers preferred to have the benefit of asking questions and receiving answers live rather than through the internet. Related to the second reason, an interesting situation mentioned was in presenting any technical improvement on service equipment or material, it is best if the service provider show an actual specimen which the customer can see, touch, or smell (in the case of new air freshener or soap fragrances). The point made here is that customers seem to prefer communication of new information through face-to-face meetings as this mode is more time-effective for them; communication of interesting but non-urgent information could thus be a regular agenda item during periodic visits of the service provider.

7.3.2.2 Summary of Section on Personal Interactions and CRM’s Value-Added

The level of personal interactions between the hygiene services providers and customers was quite spread out—from minimal contact to service with a high personal touch. The development of friendly relationships or ‘social bonds’ helped reinforce the service provider’s image of delivering superior service processes in a

small minority. While these few participants obviously moderated their recognition of CRM's value-adding benefits, the resulting ratings were still high. One common characteristic of these participants was that they were using computers and emails quite routinely in their work, making them cognizant of the efficiencies that automated service processes can generate.

The level of personal interactions between hygiene service providers and customers did not seem to affect the attractiveness of CRM services, basically because personal interactions were minimal or superficial in most cases. Also, most participants' idea of required personal interactions were periodic visits (two to four times a year) by service representatives to discuss service issues and communicate new developments. High 'personal touch service' and constant visibility of the service provider representative were not really sought. These customers also mentioned that information that did not require urgent action was best communicated not electronically through CRM services but through these periodic visitations as this would be more efficient (requires less of their time than logging on and navigating through Web pages) and effective (understanding content and being able to ask questions, if necessary).

7.3.3 Perceived Risks and CRM's Perceived Value-Added

Another research aim was to investigate whether the perceived risks associated with the provided hygiene services would influence customers' perceived value-added from CRM service possibilities. The prediction was that if risks were perceived as high, then an increase in the attractiveness of CRM service possibilities would be observed. As discussed in the literature review, the presence of risks heightens the customer's need for more information and control of the services provided. These needs could be addressed by CRM service possibilities, hence the predicted value-added benefit. The level of perceived risks was assessed through the interviews and questionnaire results. In the questionnaire (Appendix 4), three items were used to measure the customer's perceived risks (essentiality to business operations, amount spent, and impact of unsatisfactory performance). Results from the questionnaire are provided in Table 7.8. Again, the percentage scores were

computed from ratings in a seven-point scale, so that a rating of 7 corresponds to 100%, and the midpoint rating of 4 corresponds to 57%.

Table 7.8 Customer Scores for Perceived Risks

Lowest rating	29%
Highest rating	100%
Mean	72%
Median	76%
Number of items	21

There was a fairly wide range of levels of perceived risks, but the mean and the median seemed significantly higher than the midpoint rating of the scale. Customers seem to attribute a fair amount of perceived risks to the hygiene services, with the attributed essentiality to them and generally, a concern that things go well consistently. This was consistent with what came out from the interviews as well. Whether these attitudes translated to the need for a heightened need for CRM’s service possibilities was not however straightforward.

It seems that despite the perceived risks indicated, the need for control or close management of the hygiene services contract and the provider’s performance was not strong. One would have expected that these levels of perceived risks could normally have driven customers to seek information constantly, wanting to receive news on developments with their provider regularly and even have a say on which types of consumable materials they get. With these possibilities, customers can be in constant control and ensure that the results are always according to their liking. Yet these CRM possibilities on information access and customisation did not fare well. There could be two explanations for this observation. Firstly, hygiene services is a mature industry and has been around for some time, so that most participants have a confident familiarity with the services. While most acknowledge that service failures could affect them, there were no significant concerns detected that these participants could not manage these eventualities. Secondly, when participants were asked about

how frequent they complained about something going wrong, most answers pointed to these being rare. Thus with the confidence of knowing how to handle service failures, which rarely occur anyway, customers seem to have developed a more laid back attitude in constantly monitoring the service provider's performance.

As discussed in the Research Question 2 section, the CRM possibilities that participants rated well were on increasing the efficiency and responsiveness of the service provider on the exceptional occasions when customers needed to contact them. Participants seem to say that for hygiene services it is sufficient that providers will be ready to respond well when they needed their providers to act on their complaints or requests.

7.3.3.1 Summary of Section on Perceived Risks and CRM's Value-Added

Whilst most customers indicated perceived risks associated with hygiene services as significant, this did not translate to the need for these customers to constantly seek information and closely manage the service contract and monitor their provider's performance (CRM service possibilities could naturally address these needs). The explanation could be in most customers possessing a seemingly laid back attitude in closely watching and controlling the hygiene services contract; this attitude was seen as a result of confidence that they could handle hygiene services failures, which anyway rarely occurred in their experience. Thus, in this research, the level of perceived risks did not appear to be a driver for information access and self-service possibilities. The importance of hygiene services to customers reflected, however, in those possibilities that enhanced service provider's responsiveness to customer-raised issues and requests.

7.3.4 Use of IT in the Work Context and CRM's Perceived Value-Added

Another research aim was to investigate whether the use of IT in work would influence customers' perceived value-added from CRM service possibilities. The prediction was that if use of IT was promoted in the company and the participant's usage was high, then an increase in the attractiveness of CRM service possibilities would be observed. As discussed in the literature review, if CRM service processes would be similar with other tasks that customer perform, and if the work environment was supportive of such, CRM services would be more appreciated. The use of IT in the work context was assessed through the interviews and questionnaire results. In the questionnaire (Appendix 4), three items were used to measure this (company promotion of process automation and use of computers, customer's use of email for work, and customer's surfing the internet for work). The extent to which these conditions apply were rated by participants in a scale of 1 to 4, where a reply of 1 represents not at all, 2 being to a minor extent, 3 being to a moderate extent and 4 being to a large extent. The frequencies of responses for the 21 participants are shown in Table 7.9.

Table 7.9 Use of IT in Work Context with 21 Participants

Item	Frequency of Ratings of Not at All (1s)	Frequency of Ratings of To A Minor Extent (2s)	Frequency of Ratings of To A Moderate Extent (3s)	Frequency of Ratings of To A Large Extent (4s)	Mean of Item (4, max)
Promotion of process automation and computer use in the company	0	2	9	10	3.4
Use of emails for work	2	1	3	15	3.5
Surfing Internet for work	1	11	6	3	2.5

The above results point to most participants having a work environment that supports automation and computer use. The relatively high use of emails for work could be seen as a practical demonstration of computer use-supportive environments that participants were in. Surfing the Internet for work was clearly less than the use of emails with most participants. Information searching for new products or new suppliers was not a normal part of most participants' work.

There was one participant who reported that he did not have access to a computer in his work area. And also another who said that the use of the Internet is restricted in their company for computer system security considerations. Thus clearance ought to be obtained first from their superior and IT administrator to log in to the provider's website. However, this did not seem as a significant barrier. For all others, no other impediments to use of CRM's on-line services were noted.

Of all investigated factors that could influence how customers would see value in CRM service possibilities, the use of IT in the work context seems to have the most significant and straightforward effect. Whether satisfied or dissatisfied with process service quality (how they were being serviced by the provider), those participants who rated CRM services highly had the commonality of working in an IT-supported environment and where emails and to a lesser extent, Internet surfing, were part of their day-to-day work routines. Even in the few cases observed where there were strong interpersonal relationships or 'social bonding', there was still a high level of acceptance of the value of CRM services. Similarly, one participant who gave the lowest rating of perceived risk still had a moderate rating for CRM's value-added to him. This participant was operating in a very IT-aware and equipped environment. Thus it was the pervasiveness of IT in their work context that seemed most influential in shaping participants' thinking towards CRM services. It was not difficult for them to accept how CRM's communications technology and process automation could increase their efficiency and management of hygiene services and their relationship with their provider.

On the other hand, there were two participants who were obviously not attracted to CRM service possibilities, particularly on on-line communications and information possibilities. One of them did not have the means to avail of these possibilities, as

this participant did not have a computer in his work area. It is therefore understandable that this participant could not appreciate the possibilities with CRM services. The other participant who also rated CRM value-added poorly was working in a large organisation that has a good IT infrastructure in place. However, this participant did not take to using emails as a means of communicating, and seemed quite unhappy or uncomfortable sending emails in situations he has no choice.

7.3.4.1 Summary of Section on Use of IT in the Work Context and CRM's Value-Added

A high level of IT use in the work context was found with most participants. Computer systems and automated processes were being promoted significantly in their organisations, and this situation was mirrored in their routine use of emails for communications and to a certain extent, surfing the Internet for work purposes. The IT-use condition appeared to be the most important of investigated factors that influence the participants' appreciation of CRM service possibilities. It was an overriding factor that seemed to outweigh the predicted impact of the state of process service quality, level of personal interactions and perceived risks. Participants with higher levels of IT promotion and use in their company and their performance of work could easily appreciate the efficiency possibilities that CRM services bring about.

7.3.5 Summary of Section on Factors Influencing CRM Perceived Value adding Potential (Research Question 3)

Four factors that were predicted to influence the customer participants' recognition of the value-adding benefits of CRM services were investigated and a summary of the findings are as follows.

1. Level of Process Service Quality.

The level of process service quality did not seem, *by itself*, to be a good predictor of CRM's perceived value-added by customers. For instance, there were two distinct

groups of observed participants who had differing ratings of experienced service processes, yet both saw high value-added with CRM service possibilities. What was common with these two groups though were 1) a desire (and a willingness to act on it) to see further improvements, be it in significant or incremental steps, and 2) they both used computer systems and the Internet quite routinely in their work.

2. Level of Personal Interactions

The level of personal interactions between hygiene service providers and customers did not seem to affect the attractiveness of CRM services, basically because personal interactions were minimal or superficial in most cases. High ‘personal touch service’ and constant visibility of the service provider representative were not strongly sought. Most customers were happy to have short meetings on quarterly or even semi-annual intervals, to discuss service feedback and communicate new information.

The presence of friendly relationships or ‘social bonds’ was observed in a few participants. These few participants still gave a strong recognition, though, of CRM’s value-adding benefits. This could possibly be explained by the common characteristic of these participants of using computers and emails quite routinely in their work, making them cognizant of the efficiencies that automated service processes can generate.

3. Level of Perceived Risks

While a majority of participants indicated perceived risks associated with hygiene services, these customers were not inclined to constantly seek information and closely manage the provider’s performance (via CRM service possibilities). This was probably a result of confidence that they could handle failures in hygiene services, which anyway rarely occurred. The level of perceived risks did not appear to be a driver for information access and self-service possibilities. The importance of hygiene services to customers reflected, however, in those features that enhanced the service provider’s responsiveness to customer-raised issues and requests. Most participants valued these possibilities highly, both those who gave high and low

ratings of perceived risks for hygiene services. Thus, with these mixed results, it was not possible to come up with a simple generalisation that perceived risks results in a higher assessment of CRM's value-added effect.

4. Level of IT Use in the Work Context

A high level of IT use in work for most participants was apparently resulting in the acceptance of CRM services' value-adding effects. The IT use situation of participants was dominant and outweighed the predicted impact of the state of process service quality, level of personal interactions and perceived risks. Irrespective of a participant's situation with these three factors, a high level of IT use in his or her work context would likely result in a significant appreciation of CRM services. On the other hand, those with a low level of IT usage were likely to see little value with CRM services.

Two characteristics were also found to be significantly present in those participants who obviously recognised CRM's value-adding effects. Firstly, they demonstrated a desire to see continuing improvement in their work, whether in big or incremental steps. This drive made them open to consider the possibilities that CRM brings and they were not really fazed by the changes that adopting new ways could entail. The second common characteristic of these participants was having a business-like posture towards the relationship with the service provider. Quite contented with maintaining an arm's length distance with providers, they nevertheless are certain about the performance indicators of the hygiene services provider and have a keen interest in ensuring their achievement.

7.4 Research Question 4: CRM Service and Customer Commitment

Research Question 4: *Will providing CRM-enabled services increase commitment to the service provider?*

The previous sections pointed to recognition of the value-added benefits of CRM service possibilities by hygiene services customer participants. The next question is--

would provision of CRM-enabled services translate to an increased commitment by customers to their service providers? The research investigated this issue by posing the question and exploring customer thinking in the interviews.

In investigating the impact of experiencing CRM service possibilities on their commitment, participants were asked to state how could such possibilities affect their attitude towards **extending** their relationship with their service provider. As shown in Appendix 4, replies were requested by referring to a multiple-choice question. The four possible replies correspond to a four-point scale where 1 represents no effect at all, 2 as a minor effect, 3 as a moderate effect, and 4 as a large effect. Table 7.10 summarises the findings. The frequencies of replies as well as the mean value for 21 participants are likewise shown.

Table 7.10 Effect of CRM Service Possibilities on Customer Commitment: Frequency of Replies and Mean Value (21 Participants)

	Frequency of Ratings of No Effect, (1s)	Frequency of Ratings of to a Minor Extent (2s)	Frequency of Ratings of to a Moderate Extent (3s)	Frequency of Ratings of to a Large Extent (4s)	Mean Value of Rating (4, max)
Attitude towards extending relationship with service provider	5	2	9	5	2.7

The mean rating of 2.7 corresponds to a slightly less than moderate effect on increasing customer commitment should CRM services be provided. This figure compared with the mean rating of 3.1 for the value added of these services to customers seem to indicate that not all of the value of perceived CRM benefits translates to increased customer commitment. This deduction is also consistent with the interview findings. It is necessary to look into specific circumstances of participants and uncover explanatory factors to understand this apparent discrepancy.

The following analysis focuses on the extreme responses. Thus those who indicated moderate effect results on commitment were excluded. By studying only those who either stated no or minor effect on the one hand, and those who stated large

effect on the other hand, it could be possible to see useful patterns on the relationship of CRM potential value-added to potential increased commitment.

There were five participants who indicated that the CRM services would result in an increased commitment to their service providers to a large extent. There were some common characteristics of this group:

1. *Gave above average rating of added value of CRM services.* This group was definite that CRM brings forth meaningful advantages to them.
2. *Are moderately to highly satisfied with their service provider.* Having no weighing issue against the current service provided, CRM is seen as improving on what is already a good arrangement.
3. *Maintain a professional business-like posture to the service provider.* More than being simply being efficiency-driven as this could be said too of many of the participants, this group seems to be saying to providers that they set clear performance criteria and the providers should simply focus on achieving such. Thus, with this group, efforts by service providers to establish interpersonal relationships would not be readily reciprocated.

On the other hand, there were a total of seven participants who said that CRM services would have no or minimal effect on their commitment to the service provider. Examining the background of this group, two types seem to emerge depending on their rating of CRM's value added benefit to them:

Minimal Commitment Effect, Group 1: This subgroup gave low to average ratings for CRM's added value. Further, they indicated preference to stick to traditional means or modes in communicating with their service providers, basically through the telephone. One had no access to the Internet at his workplace in the first place, which explains the result. Others in this subgroup had Internet access, yet still preferred the telephone or face-to-face meetings. All were relatively satisfied with their service providers and do not seem to want see any changes with how things were.

Minimal Commitment Effect, Group 2: This subgroup gave above average ratings for CRM's added value, yet stated that these service possibilities would have minimal effect on increasing their commitment to the service provider. Some reasons for such attitudes were traced to one or a combination of the following reasons:

1. *Some service output quality dissatisfaction.* An issue with the core service performance variables as in the earlier pointed-out case of dislike of the look of the service provider's equipment could bring the customer to a non-recoverable status despite new provider efforts (like CRM services).
2. *High service process quality dissatisfaction.* Again, a case of a non-recoverable customer who could already be scouting for a replacement to the current service provider because of major issues on unpleasant experiences or impressions on how they were serviced.
3. *A transactional attitude towards the service provider.* There were some customers who would as a matter of company policy or personal belief not commit to a long-term relationship with the service provider. Thus they might say that CRM services adds value to them, but at the expiry of the present contract, they would still shop around for the best deal for their hygiene services requirement. Two of the twenty-one participants adhered to this philosophy, and interestingly both were from government institutions.
4. *Prefer service with high personal touch.* While admitting to the advantages of CRM service possibilities, one participant still expressed a strong preference for maintaining a high person-to-person contact with the service provider. Obviously, the social aspect of the relationship was something valued, but the participant added that closeness with key provider staff also allows them to secure better deals and priority status when problems arise.

7.4.1 Summary of CRM Service and Customer Commitment (Research Question 3)

Most participants saw the value-adding benefits of CRM-enabled services, but were hesitant to return a proportional amount of increased commitment to the service provider if these services were provided. Analysing the participants' background and opinions revealed that those who admitted to giving higher commitment gave above average ratings for the value-added effect of CRM services, were reasonably satisfied with their providers, and characteristically maintained a business-like posture to the relationship. Those who stated CRM would have no or minimal effect on their commitment could be split further into two sub-groups- one did not really see real advantages with CRM, while the other saw advantages but either had basic unresolved and practically irreparable issues with the service provider, were strongly transaction rather than relationship-oriented, or preferred a business relationship with high personal communications and social content.

7.5 Summary of Chapter 7

The customers' perspective in this case study of the perceived value in the hygiene services industry in Singapore was investigated by addressing four research questions that looked into the present state of service quality, the value-adding potential of deploying CRM services and possibly increasing customer commitment and investigating factors that could be draw customers to CRM services. These questions are restated below and a brief summary of reported findings are provided.

Research Question 1: What are current assessments of service quality? Does process-related service quality (where CRM applications can play a part) really matter more than output-related service quality in the perceived value of the service?

1. Performance on process service quality dimensions (how services are delivered) mattered more to customers than output service quality (results of the core service) in assessing perceived value received from their providers. Providers were basically seen as of similar standing in terms of performance

of the core hygiene services. The many low and average ratings for actual process service quality experienced by participants could indicate the potential value-creating impact of CRM applications that enhance service processes.

2. It was the responsiveness dimension of process service quality that clearly stood out in importance. Many customers admitted feeling under pressure to maintain certain operational and quality standards in their premises, and therefore expect to get quick and effective response from their service providers when exceptional issues arise.

Research Question 2: Will CRM-enabled service possibilities create additional value for the customer? Which of these possibilities are rated higher? What are the reasons behind these ratings?

1. Hygiene services customers who participated in the research saw the value-added benefits of seven specific service possibilities enabled by CRM applications, indicating a rating of moderate value-added for these possibilities.
2. The three highest ranking CRM service possibilities seen as adding more value (the provider having accurate and readily accessible customer information, confirmation of resolution of service issues, and instructions, queries by electronic means) were related to effective responsiveness in cases of service issues or queries initiated by customers. This ranking is consistent with findings that participants want providers to have a high state of preparedness to respond when customers needed them.

The next ranked was the ability to look into customer service records on-line. Adding flexibility in accessing this information as and when needed, this feature is considered advantageous to efficiency-conscious customers.

The last tier of CRM service possibilities seemed to be rated more as nice-to-have but not really critical features for the customers. Customisation in terms of expressed choices of service materials did not appeal much. For participants, the

possibility of variety did not outweigh the effort in further thinking about alternative choices. Receiving and accessing technical, product and industry information online also did not score well as these had limited utility to participants.

Research Question 3: *Do ratings of these factors-- service process quality, current level of personal interactions, perceived risk level, and IT use in the work context, influence the perceived additional value from CRM-enabled outputs?*

Part of the research aims was to investigate factors that could draw customers to recognise the value-adding benefits of CRM services to them.

1. The general above average rating of CRM services value-adding impact could be attributed to a high level of IT use in work for most participants. This factor seemed to be the most important of investigated factors that influence the participants' appreciation of CRM service possibilities overriding the predicted effects of levels of process service quality, personal interactions and perceived risks.
2. Two other characteristics were found among participants who rated CRM's value-adding benefits highly. First was the possession of a drive to see improvements in the hygiene services situation, whether in big or small steps. Second was a business-like posture towards the relationship with the service provider. This tended towards maintaining an arm's length distance with the provider, but quite clear and definite about the results expected.

Research Question 4: *Will providing CRM-enabled service increase commitment to the service provider?*

Most participants saw the value-adding benefits of CRM-enabled services, but not all would return a proportional amount of increased commitment to the service

provider if it were to provide these services. On this issue, there were three distinct groups of participants observed with common characteristics:

1. Would give higher commitment
 - Gave above average ratings for CRM services value adding effect
 - Were reasonably satisfied with their providers
 - Maintained a business-like posture to the relationship with provider

2. Would not give higher commitment (Case 1)
 - Did not see significant real advantages with CRM services

3. Would not give higher commitment (Case 2)
 - Saw advantages with CRM services; but
 - Had basic unresolved and practically irreparable issues with the service provider; or
 - Were strongly transaction rather than relationship-oriented in dealing with service providers; or
 - Preferred a business relationship with high personal interactions.

Through a discussion of findings with respect to four posed research questions, this chapter investigated the service customers' perspective in the assessment of perceived value from deploying CRM applications in the hygiene services industry. The next chapter will compare findings with those found for the service providers' perspective to synthesise a combined industry view.

8. FINDINGS AND DISCUSSION

In this research investigating the perceived value of CRM applications in the hygiene services industry in Singapore, two perspectives were considered-- that of the service provider and that of the service customer. Research results and analysis for these two perspectives were presented separately in the previous chapters. In this chapter, these perspectives are synthesised to come up with an integrated picture that projects both sides of the provider-customer relationship. The research findings in relation to the literature are discussed in subsequent sections.

8.1 Synthesis of Perceived Value – Commonalities and Differences

The posed research questions were meant to define unmet or poorly met needs that could be addressed by CRM applications, the background of these needs, the benefits sought, as well as impediments, drivers and other considerations in the adoption of these applications. Research results from both providers' and customers' perspectives are presented in Table 8.1.

8.1.1 Commonalities

A scan of the research results in Table 8.1 reveals some commonalities for the service provider and the service customer.

1. Both generally see significant perceived value with CRM applications. For the service provider, value creation consists of bolstering operational capability, and soon, the use of customer and sales data for marketing and sales management requirements. For the service customer, value lies with greater assurance that exceptional cases and service issues would be better managed.

Table 8.1

Research Results of Service Providers' and Service Customers' Perspectives

Item	Provider	Customer
<p>Where value seen <u>most</u> and benefits sought</p>	<ul style="list-style-type: none"> ▪ Centralised customer contracts database for scheduling services and invoicing <p><i>Benefit: Achieve productivity and efficiency gains in the light of scaled-up business size and tighter profit margins.</i></p> <ul style="list-style-type: none"> ▪ Management tools for tracking business growth and sales force performance <p><i>Benefit: Get up-to-date reports on sales force and net business gains performance, given company aim of pursuing rapid growth: identify strategic and tactical options, such as segmentation and cross-sell, up-sell initiatives.</i></p> <ul style="list-style-type: none"> ▪ Reliable customer complaints handling system <p><i>Benefit: Have systematic control of service complaints management. Provider pressed to improve in this area to reduce customer dissatisfaction and contract terminations.</i></p>	<ul style="list-style-type: none"> ▪ Up-to-date customer records accessible to all of provider's customer service staff <p><i>Benefits: Efficient handling of all customer enquiries, issues. Reliable service schedules and billings.</i></p> <ul style="list-style-type: none"> ▪ Customer gets immediate confirmation by mobile phone SMS or by email to confirm resolution of customer requests <p><i>Benefit: Receive assurance that pending service issues are resolved, so as to get these out of their minds.</i></p> <ul style="list-style-type: none"> ▪ Possibility of customer to log in into company website and register requests and complaints. Secure personalised Web page would also give information of service history <p><i>Benefit: Establish systematic record of requests for efficient resolutions and avoidance of disputes on instruction details.</i></p> <p><i>Benefit: Customers avoid uncertainties associated with phoning in (such as long call waiting time, contact person unavailable, inefficient handling of call).</i></p>

Table 8.1 con't

Research Results of Service Providers' and Service Customers' Perspectives

Item	Provider	Customer
<p>Where value seen <u>least</u>, and reason why</p>	<ul style="list-style-type: none"> ▪ On-line channel for customers registering requests and complaints <p><i>Reason: Feel customers rather use traditional means of communications like face-to-face interactions, the telephone and fax machine.</i></p> <ul style="list-style-type: none"> ▪ Providing restricted technical and other relevant information on-line to customers <p><i>Reason: Feel customers have low level of involvement with hygiene services except during the contract signing and renewal period. Thus, this feature will not be of much interest to them.</i></p>	<ul style="list-style-type: none"> ▪ Possibility of specifying types of service materials for future service schedules, thus allowing customised options <p><i>Reason: Customers are satisfied with what they are getting on technical aspects of the service. Do not want to consider changes to something already going well.</i></p> <ul style="list-style-type: none"> ▪ Providing restricted technical and other relevant information on-line to customers <p><i>Reason: Generally do not see the utility in day-to-day work. Would rather meet periodically service provider to discuss interactively technical issues and hear about new developments.</i></p>
<p>Considerations for setting up / adopting CRM services</p>	<ul style="list-style-type: none"> ▪ Current software development focus is on updating operational processes on scheduling services and invoicing. ▪ Data cleansing needs attention. ▪ Next step is generating reports for planning, performance tracking and sales management. ▪ Customer defections due to poor service forcing need of more responsive complaints management system. 	<ul style="list-style-type: none"> ▪ Relatively high IT use in the customer's work context driving perceived value with CRM service possibilities. ▪ Personal interactions still help, but most just need short periodic visitations (every 3 to 6 months) from service provider to discuss service feedback and learn about new developments.

2. Both put the establishment of an up-to-date customer database as the primary value source with CRM systems. For the service provider, this priority was to facilitate the tedious processes of firstly, putting up daily service schedules to comply with contract commitments and secondly, to generate invoices that increased in numbers, due to acquired businesses. For the customer, there was the need to be confident that the provider keeps reliable records so that their enquiries and service issues can be efficiently handled when they contact the provider. This need for accuracy of information stems from changes in the service contract that are made from time to time, like addition or reduction of services taken and location of services. Thus, mistakes in service schedules and billings are prevented.

3. Customer participants supported the providers' prediction that customers would not be interested in accessing restricted technical and other relevant information on-line. The reasons for this finding were congruent from both perspectives —there exists limited utility on a daily basis for this information feature, given the nature of hygiene services being well known and mostly quite routine. Some customer participants felt that if specific information was occasionally needed, they would rather have a face-to-face meeting with the service provider's representative so that they could simply listen to explanations and have the opportunity to ask questions and get answers without going to and fro if it were by electronic messages.

8.1.2 Differences

While there were commonalities for service provider and customer, there were differences as well.

1. The provider staff uniformly felt that customers would not value on-line functionalities to register requests and complaints. Quite a few customers who participated in the research said otherwise, giving practical advantages of using electronic messages versus using the telephone,

firstly, of having clear instructions or complaints on record and secondly, performing such tasks at times convenient to them. This finding echoes the point of Zemke and Connellan (2001) that there are some customers who feel more assured with messages that they have records of. In a general way, it also exemplifies Seybold's (1998) assertion that today's customers desire to be in control (of the process and of their time).

2. A fundamental difference observed in studying both perspectives was on the issue of the importance of hygiene services to customers. The providers' view is that customers look at these services as being of low importance and interest, while the research shows otherwise. True, customers do not monitor all that happens with hygiene services, but research results show that many participants feel a significant level of perceived risks, which as defined implies importance to them and an ongoing concern that things go well. However, these participants seem to have adopted a management approach whereby the focus is on avoiding service mistakes, and more importantly, if these occur, the service provider must demonstrate preparedness to respond to these exceptions reliably. Providers underrating customer interest in hygiene services was also demonstrated in their lukewarm attitude towards automated service completion messages to customers, a CRM feature that rated quite high with customer participants.

8.1.3 Adoption Factors

For the service provider, the challenges in putting in place CRM applications comprise of the following:

1. Investing in cleansing their contracts and customer data to improve accuracy. Clean data is crucial in the reliability of information and therefore the quality of customer service, and the integrity of management functions.

2. Completion of operational functionalities of the software (that is, for service schedules and invoicing) must be pursued. Once these tasks are completed, then sales and marketing management needs, in particular business analysis and sales force control, are to be addressed.

The service provider's tasks to enable it to proceed in the development and deployment of CRM applications are not easy. While management support exists for further investments, the development project needs to be adequately resourced in terms of staff (in-house or outsourced) for both development and testing requirements. A workable plan with project milestones, timelines and resource requirements will be helpful to guide and chart the project's progress from developing useful applications for operational needs, then to sales and marketing management requirements, and later start incorporating Internet-enabled customer service functionalities.

For the service customer, adoption of CRM service features is relatively easy. Almost all of the participants have the computer hardware and connectivity requirements to avail of such features and are already conditioned to adopt new communication and information access media. Eighteen of the 21 participants said that they are already using emails routinely in their work (3 to a moderate extent and 15 to a large extent). Further, most participants are working in companies where computerisation and process automation are promoted (nine said that this is true to a moderate extent, while 10 confirmed that this is true to a large extent).

The service provider utilising the above customer information must take note however that there is definitely some room for personal interactions in information dissemination to customers. Customers still prefer to meet a service provider representative on spaced-out intervals of three to six months, to discuss service feedback and hear and discuss important but non-urgent information. In this case, customers want to be served, and not serviced through automated processes.

8.1.4 Summary of Section 8.1

A summary of the research results comparing perceived value in deploying CRM applications in the hygiene services industry in Singapore showed that there are significant value creation opportunities with CRM features for both service provider and service customer. As immediate benefits, the former sees operational efficiency and sales force productivity, while the latter sees enhanced responsiveness and management of service and related issues, as these happen. A key feature valued from both providers' and customers' perspectives is the provision of an up-to-date centralised database containing customer information to facilitate service processes and customer service. Both provider and customer also seem to agree that on-line technical and product information access are not important, given the nature of hygiene services being well-known and consisting of quite standard, relatively unchanging processes.

Where the perspectives differ is on the providers' assumption that customers would not appreciate on-line or automated communications features. This seems to be based on the notion that customers prefer traditional modes of communications like face-to-face interactions, the telephone and fax machine. However, while personal interaction still have a role, the state of IT use in the customer's work context has made many participants conditioned to readily accept the efficiency benefits of CRM services.

Perhaps a more fundamental difference is the provider's viewpoint that customers have a low interest on hygiene services. The research showed that on the contrary, many customers have a significant level of concern that hygiene services are performed satisfactorily and more importantly, any service failures or issues are reliably responded to.

8.2 The Service Providers' Perspective in Relation to the Literature

In this section, the research results for the service providers' perspective are discussed in relation to the literature. Specifically, the aspects of applicability of and benefits from CRM applications, the implementation considerations, and the strategic viewpoint for the over-all CRM project are covered.

8.2.1 Applicability of and Benefits from CRM Applications

To examine applicability of CRM applications for the hygiene services providers' business, research results were compared with several criteria discussed in the literature. The first set of considered criteria was presented by Karimi et al. (2001) who proposed that the beneficial impact for providers would be more should these criteria apply. Table 8.2 presents research results against these criteria.

The findings for the hygiene services business show that three criteria proposed in Karimi et al. (2000) apply, and three do not. For the service provider, the capability to deal with service agreement obligations, in the form of a huge amount of varied service jobs that have to be efficiently grouped on a daily basis, make automation of this task necessary. Then there is the drive to streamline service and accounts administration to improve efficiencies and cut costs. Profit margins have been shrinking because of intensive competition. Thus, the motivation is strong to achieve operational efficiency in functions dealing with customers. The service provider has still not realised though that another important condition that merits CRM applications exists in the business-- that of customers wanting confirmations on service requests and complaints.

Table 8.2**Criteria for CRM's Beneficial Impact and the Hygiene Services Business**

Criteria for CRM's Beneficial Impact	Hygiene Services
<ul style="list-style-type: none"> An accurate, quick confirmation to customers is essential. 	<p>Yes. Though unrealised by the service provider, this need is foremost in the customer's mind when it comes to their responding to the customer's requests and complaints.</p>
<ul style="list-style-type: none"> A large number of routine customer interactions are required per day for receiving orders or information. 	<p>Yes. Routine interactions are required in the form of service jobs that have to be grouped for efficient combinations.</p>
<ul style="list-style-type: none"> Increase in multiple ordering or service sites would provide value to customers. 	<p>Not applicable.</p>
<ul style="list-style-type: none"> Products can be surrounded by value-added information to customers. 	<p>Not really applicable.</p>
<ul style="list-style-type: none"> Customer tastes are potentially volatile. 	<p>Not applicable. Customers seem to be contented with routine offers that have been standard for some time.</p>
<ul style="list-style-type: none"> Direct and indirect labour levels are high 	<p>Yes. Relative to current service price levels, labour costs in functions dealing with customers are high.</p>

The three other criteria for beneficial CRM impact, namely, need for multiple ordering and servicing sites, possibility of value-added information with products, and volatile customer tastes, do not exist. The first condition is not applicable as hygiene services are done on customer's facilities, while the latter two have been confirmed as not true based on customer research results. However, the three existing needs (large number of routine interactions, cutting labour costs and customers wanting service requests confirmations) are present to a large extent that the non-existent conditions do not really put CRM beneficial applicability in question.

On the issue of business size, Gentle (2002) quoted a guideline of upwards of 10,000 customers and 30 sales and service staff where the need for CRM

applications becomes evident. While the subject of this research, already the market leader in the hygiene services industry, had only around half of these figures at some 4500 customers and some 16 sales and customer service staff, there still exists a substantial information processing load due to the nature of the business that justify CRM applications. Firstly, there are not just two or three products or services that are provided customers, but three main categories of services with some 40 service variations according to expected outcome, equipment used, and service frequencies. This therefore amounts to a larger complexity. The situation is compounded by the fact that services are not one-off services and that the service loads change on a daily basis depending on new customers acquired, and existing customers terminating, reducing or adding on services to their contracts.

Reynolds (2002) made the point that in industries with low differentiation of core services, CRM-enabled service features can be a differentiator for competitive advantage. Low differentiation of the core hygiene services was one of the research findings. Moreover, customers confirmed that service processes (where CRM applications can be introduced) mattered more in their perceived value of their relationship with the service provider. Thus Reynolds' point is supported.

Poirier and Bauer (2000) also suggested two marketing considerations that make a strong case for CRM applications. First is the presence of a diversity of customer needs that necessitate offering customised products. This apparently is not applicable as customers rejected customisation options, preferring instead to stay with standard packages as offered by providers. The second condition mentioned by Poirier and Bauer was the skewed distribution of revenues across the customer base, wherein a minority of customers account for a significant amount of the total business. With 20% of customers accounting for 60% of the service provider's total revenue, this condition is observed supporting the need for CRM applications to identify and profile these customers to deliver preferential service. One of the preferential service initiatives considered is the designation of Key Account Managers who would visit these high-valued customers regularly and look after their requirements.

There is a research finding that can be highlighted as another criterion to predict the beneficial impact of CRM applications. The service provider saw a lot of potential in selling more services to their existing customer base given the finding that as much as 60% of their customers subscribe to just one or two services, when they could offer in most cases, at least eight others. The business growth potential, given this low customer penetration rate is quite attractive, pointing to the need for customer data analysis and segmentation with CRM applications and from there, the crafting of appropriate marketing programs. Defined as cross-selling, this initiative is a regular feature of most CRM strategies, yet the potential for such has not been emphasised as a CRM applicability criterion.

The connection of exploiting the existing customer base for revenue growth and the applicability of CRM also figured on the study of a smaller service provider company. Lacking the services range of the market leader service provider, this company looked for growth by acquiring new customers. This condition, together with its smaller business size and other factors, made this company see not much interest with automated CRM systems.

In summary, these conditions were found that supported the deployment of CRM applications for the hygiene services provider, consistent with what was suggested in the literature:

- | | |
|--|-----------------------------|
| 1. Large number of routine interactions; | Karimi et al. (2000) |
| 2. Substantial business size (planned) | Gentle (2002) |
| 3. Cutting labour costs | Karimi et al. (2000) |
| 4. Customers wanting immediate confirmations | Karimi et al. (2000) |
| 5. Low differentiation of core products or service | Reynolds (2002) |
| 6. Skewed distribution of revenues across customer base. | Poirier and Bauer
(2000) |

A seventh criterion was found that has a significant potential impact on the provider's business—low penetration of existing customers. In this research, from the service providers' perspective, this condition perhaps stands out as the most

important in pushing the business case for CRM, given that it will support ambitious revenue growth through focused salesforce performance.

8.2.2 Implementation Considerations

The service provider has not formally termed its front-office system development as a CRM initiative, but its experiences on this drawn-out project point out factors to consider if it were to move forward smoothly even now and until the time it adopts a full CRM theme. The identified implementation considerations were likewise reported in the literature.

1. Need to work with cleansed data (Lim 2004)

Systematic data cleansing must be organised after which checking procedures must be put in place.

2. Staff resourcing of development and deployment tasks (Kotler et al. 2002)

Development (the service provider is developing the software in-house) and deployment tasks involve substantial work and must be adequately resourced. This has become more important as the organisation has identified the need for more sales and marketing management functionalities once the operational modules for service schedules and invoicing are completed.

3. Change management program (Zikmund et al. 2003)

While resistance to change of concerned staff was perceived as manageable, getting their buy-in and commitment to the CRM initiative must not be taken for granted. The CRM's deployment success would be maximised with appropriate communications and training programs.

4. Defining effective processes (Kincaid 2003, Kalakota and Robinson 2001)

The provider recognised the need to define new effective processes that result in higher efficiencies, which could be reliably enabled by the software under

development. Two problems were however observed—firstly, the project was being pursued in a step-wise, seemingly trial and error, pattern; secondly, the customers' perspective was not being considered. The first problem has resulted in frustration among staff for the continuous changes they experienced; the second problem has resulted in customer dissatisfaction with changes that were confusing to them (for instance, new billing schedules). The company has thus decided to take a step back and use a more consultative approach in developing the software by seeking a wider opinion among staff in Singapore and other countries about what would work best. Still though, the customers' perspective was not systematically incorporated, a major concern that is discussed in the next section.

In summary, the development and deployment of the in-house front-office system software has been difficult and continues to pose challenges. Problems encountered were as reported in the literature for earlier adopters of CRM systems (data cleansing, staff resourcing, change management attention and redesigning for effective processes). Senior management though remains committed to seeing the project move forward, motivated by the potential benefits not only of operational efficiency, but utilising information technology to exploit the untapped potential of the existing customer base. The presence of shareholders funding support for further expenditures was also a driving force.

8.2.3 Strategic Viewpoint for the CRM Project

8.2.3.1 Long Term Strategic Vision

Various authors (Kalakota and Robinson 2001, Reynolds 2002) emphasised the importance of a clear business strategy in deploying CRM applications. Such advice is given so that a blueprint of immediate and future tasks according to considered priorities guide the organisation. In this research, the original reason for embarking on the customer information software for the service provider was to simply organise a centralised service contracts management system which would facilitate the functions of drawing up service schedules, invoicing and

contracts administration. The challenges posed by numerous services and regular changes with the customer base made the development and deployment tasks difficult, particularly as the project was under resourced. As these original objectives were nearing completion, management saw the potential of customer information to guide sales and marketing strategy, particularly on achieving greater penetration of the existing customer base. Another valued potential is using the system firstly, for streamlining management reporting and secondly, for business control purposes. These new objectives were not clear, definitely not articulated, at the start of the development project, but these are now being pursued more of an afterthought as the beneficial possibilities became evident. The pain and frustration experienced with the project could have been avoided had a long view strategy, that saw the value of customer information, been adopted. This strategy could have incorporated or called for adequate staff resourcing, milestones achievement against clear timelines and a systematic development and deployment program involving staff consultations, testing and training activities.

The lesson from the research findings could apply to small and medium businesses that are considering automating their customer records system to cope with pressing operational requirements. These businesses will be better off if they look beyond the present exigencies and envision the project as part of a broader business strategy initiative that covers sales, marketing and customer service. Systematic customer records could be very valuable as the starting point in identifying and shaping growth and profitability strategies. With this premise, effort in developing the system can be optimised; data formatting and input tasks are not duplicated or reworked as the long-term utility vision is considered at every turn. Further, adequate resourcing could be planned for and applied.

8.2.3.2 Incorporating the Customers' Perspective

The most popular definition of CRM is that it is a business strategy utilising technology to acquire and retain customers. Kincaid (2003) expands this definition by specifying the objective as building successful relationships with customers. Reynolds (2002) brings it a step further by talking about the CRM

strategy being ultimately based on a customer-centric philosophy whereby the company, its employees and its systems are aligned towards its customers. With these definitions, customers should play a central role in a CRM project. In this research, the service provider's front-office development project has obviously not incorporated this customer-orientation. The observed focus was on operational efficiency, an orientation described by Reynolds (2002) as being product or process centric— where cutting costs and improving efficiency are pursued through optimisation of internal processes.

Aiming for operational efficiency is not contrary to CRM objectives; it is in fact one of the main benefits that make CRM attractive. However, by not incorporating the customer's perspective in front-office software projects, the service provider risks missing out on meeting important customer needs. Thus it may be efficient but ineffective, a weakness that more customer-oriented competitors can pick out and profit from. Unacceptable defection levels of customers could hurt the service provider significantly, driven as it is to achieve rapid business growth.

While not termed as a CRM project yet, the front-office software's latest mandate was to assist in penetrating existing customers; but without considering the customers' perspective, the service provider could be handicapped in its attempt to sell more to them.

Reynolds (2002) states that companies such as the subject service provider could be going up the CRM evolutionary process, where product or process centric focus advances to more customer-centric approaches. The problem with accepting this process is that the business could be missing out on opportunities or worse, putting itself at risk by delaying the consideration of customer needs. Thus Rigby's and Ledingham's (2004) concept of considering both operational efficiency and customer satisfaction factors is more assuring. Rigby and Ledingham advocate prioritising outcomes that create competitive advantage and progressing the CRM project in stages accordingly. However this does seem to be applicable with the service provider which has so far not really put the customers' perspective in its front-office system development planning.

In summary, analysis of the service provider's front-office software project's development history point out the **past** weakness of not being guided by a long-term strategic view. The project was initiated to cope with specific operational requirements, and then at a later point had to comply with sales and marketing management needs. The lack of a long-term project view resulted in delays and frustrations that could have been avoided with a sound project plan with a broader scope identifying milestones, timelines and resources required. Additionally, the **present** weakness of not incorporating the customers' perspective was identified. While achieving internal efficiency, the service provider could miss out on meeting pressing customer needs that could result in losing customers or being unsuccessful in its aim to sell more to existing customers.

8.2.4 Summary of Section 8.2 (The Service Providers' Perspective in Relation to the Literature)

The research results for the service providers' perspective were discussed in relation to the literature. There were several CRM beneficial applicability criteria which the hygiene services industry did not seem to satisfy, namely, 1) need for multiple ordering and servicing sites, 2) possibility of value-added information with products, 3) volatile customer tastes and 4) diversity of customer needs. However, there were at least five literature-suggested CRM applicability criteria which were observed in the industry: 1) Large number of routine interactions, or 2) substantial business size (planned), 3) Need to cut labour costs, 4) Customers wanting immediate confirmations, 5) Low differentiation of core products or service, and 6) Skewed distribution of revenues across customer base. Apart from those mentioned, another general criterion that could significantly motivate CRM adoption was suggested from the research results— low penetration of existing customer base in relation to the available products or services range.

Obstacles or challenges to CRM projects mentioned in the literature were confirmed as existent as well with the subject service provider. These were need for 1) Data cleansing, 2) Staff resourcing, 3) Change management attention, and 4) Redesigning for effective processes. On balance, however, for the subject service provider, the perceived benefits of moving forward weighed more than the

identified challenges. The presence of senior management commitment and funding support from shareholders were strong driving forces.

8.3 The Service Customers' Perspective in Relation to the Literature

In this section, the research results for the service customer perspective are discussed in relation to the literature. Specifically, the aspects of service relationship outcomes and draw or attractiveness of CRM services are covered.

8.3.1 Output versus Process Service Quality

Service quality, comprised of service output and process components, is a key outcome of the service provider-customer relationship. The issue of the importance of output versus process service quality is a popular topic in services marketing. As most studies have focused on consumer services, this research makes a contribution by covering a service industry in the business-to-business area.

In the hygiene services industry in Singapore, there is evidence that the process service quality matters more to customers than the core or output service quality. Customers seem to perceive low differentiation in the core services offered, seeing little difference between providers' equipment, service materials and their output or performance. When asked to relate delightful and unpleasant aspects of the service, all accounts were about customer service experiences. Thus, what customers experience in service processes as they interact with the service provider apparently correlates more with the value they attribute to the service relationship. This finding is important, as CRM service possibilities have to do with these interaction processes. The finding also supports Parasuraman, Zeithaml and Berry (1998) statement that there is strong evidence that process service quality matter more in business-to-business service markets.

Of process service quality dimensions investigated [SERVQUAL dimensions by Parasuraman, Zeithaml and Berry (1988) were used in this study], responsiveness and reliability in service processes stood out, with customer participants ranking responsiveness a degree higher. Responsiveness has to do with customer experiences when they have to contact service providers for service or other issues. They look forward to being attended to promptly and perceive a helpful attitude from provider staff while their particular issue or concern is reliably handled (no mistakes). This finding again finds support in which pointed to the importance in business-to-business service markets of handling situations well when customers experience problems. While the service provider demonstrating an assuring and empathetic attitude also ranked high with customer participants, these were apparently on a second level compared with responsiveness and reliability. Tangible elements on the other hand clearly did not really matter much.

8.3.2 Perceived Value and CRM's Impact

Service fees or cost to the customer of hygiene services would be almost the same with different service providers, as competitive prices have become the norm in this mature market. Therefore it would be benefits received that would influence the benefits versus cost comparison or perceived value, another important service relationship outcome. As mentioned previously, service process quality seems to be playing a major role in customers' perceived value of the over-all service. Another finding is that, there were observed personal interactions in a small number of cases leading to social bonds between service provider and customer. This condition seems to enhance perceived value. In many cases investigated, however, these social bonds were missing, but perceived value was also high, apparently as a result of process service quality being well rated. This finding can be significant as it identifies a business-to-business service where social bonds play an incremental, but not critical, impact on perceived value.

The observed potential of CRM service possibilities to increase customer perceived value in the hygiene services provider-customer relationship is one of the important findings in this research. Again, the research contribution stems from the subject industry being in the business-to-business area, and perhaps more importantly, value from CRM applications was explored from the customers' perspective as well (most studies on this topic only looked at the adopting company).

Enhancing responsiveness of the service provider appeared to be the primary value sought by customers with CRM service features (thus accurate and accessible customer data and immediate service request confirmations figured highly). This is consistent with the mentioned finding of responsiveness being the most important of process service quality dimensions, and again that of SERVQUAL authors, Parasuraman, Zeithaml and Berry (1998) that business to business service customers value help when problems arise.

Customers did not seem to take much to the possibilities offered by on-line information access and service customisation options. What emerged from these results was a picture of customers wanting service providers to basically perform their contract obligations and show the readiness to respond reliably should service issues or problems arise. No extraordinary technical performance, just consistent routine services and responsive, reliable non-routine service capability, if needed.

Service provider participants did not think that customers would warm up to CRM service possibilities. There were two assumptions operating here—first is the low interest and therefore, low involvement that customers have for hygiene services, and second is the preference of customers to traditional modes of communications like the telephone, fax machine or person-to-person. Both assumptions seem to have been disproved by the results, as discussed previously. Thus, the findings of significant additional perceived value with CRM service possibilities.

From previous studies, factors were identified that could possibly influence the 'draw' or attractiveness of CRM service possibilities to hygiene services customers. Results were mixed for 1) satisfaction with current levels of process service quality, 2) presence of personal interactions and 3) perceived risks in the service, probably as a result of not one of these being strongly influential enough to show clear relationships. However, this weak effect was not true with the last factor investigated; the level of IT usage in the customer's work context was observed to have an overriding influence over all others. Hence, a customer working in an environment where computers are used extensively and process automation is promoted, will probably see more value with CRM service features regardless of how weak or strong the other three factors were. This finding is significant as with the continuing permeation of information and communications technology in the Singapore workplace, almost all customers will soon be in a state of mind to find value in CRM service possibilities.

8.3.3 Customer Commitment

One of the expected payback from introducing CRM service features is increased customer commitment to the service provider. As discussed in the literature review, customer commitment is a relationship outcome that is driven by service quality and perceived value.

The indicated increase in customer commitment was obviously less than the indicated perceived added value of proposed CRM services. There seemed to be a relationship however, given that more than half of the participants said that providing CRM services would make them increase their commitment by a moderate to a large extent. The relationship seemed to be stronger for participants who 1) gave above-average value-added ratings for CRM service, 2) were already moderately or highly satisfied with the service, and also 3) maintained a straightforward, business-like posture towards the service provider. The relationship between perceived CRM value-added and commitment was weakest where 1) the customer had a major problem with the service provider or the

service, or where 2) the customer maintained a non-long term and transaction-oriented attitude towards the service provider.

As published studies on CRM and customer commitment are rare, it was difficult to compare the above findings with other research. There have been reports cited that CRM has increased customer retention rate by 50 to 200% (Brown and Gulycz 2002), but in-depth investigation of factors in specific cases are difficult to find. Thus, the findings on perceived CRM value-added and resultant commitment are a contribution that would hopefully spur further investigation in other business settings.

8.3.4 Summary of Section 8.3 (The Service Customers' Perspective in Relation to the Literature)

The research results for the service customers' perspective were discussed in relation to the literature. Firstly, the predominance of process versus output (core) service quality in influencing customer perceived value was observed, which was consistent with the prediction for business-to-business services.

Responsiveness was the most valued process service quality dimension, and CRM service possibilities that enhanced provider responsiveness capability were correspondingly, rated higher than others. This supports published pronouncements that business-to-business customers care much about getting help when problems arise. Of investigated factors that contribute to CRM value-added results, it was the level of IT usage in the customer work-context that overrode the possible effects of satisfaction with service processes, personal interactions and perceived risks. With continuing permeation of information and communication technology into the Singapore workplace, almost all customers should soon see significant value in introduced CRM service features.

The pathway from increased customer perceived value with CRM service possibilities to increased commitment was observed. It was most obvious where there were no major service problems with the provider, where CRM service

possibilities were valued highly, and where the customer maintained a straightforward, business-like posture with the service provider.

8.4 The Hygiene Services Industry, CRM and Business Services

In this section, the findings pertaining to business characteristics and practices in the hygiene services industry and the impact of CRM applications are discussed. One objective is to evaluate whether there is potential applicability of the findings to other business services, which were classified and explained in Chapter 3. The other objective is to explain variances of findings with what were stated in the literature.

8.4.1 Importance of Process Service Quality and CRM

The importance of process service quality among the hygiene services customers has been linked to their significant value-added ratings of CRM possibilities. The favourable evaluation of CRM possibilities has, in turn, been found to influence potential increased customer commitment. It is therefore useful to explain why process service quality was rated highly in hygiene services. Presumably, customers of other types of business services with these characteristics would also find significant value-added with CRM.

Intangibility of Core Service. The difficulty in evaluating output service quality (the performance of the core hygiene services) has pressed customers to look at their experiences with service processes to judge the provider's service quality.

Service on Possessions. The nature of hygiene services where the direct recipient of the core service is the customer's possessions (or facilities) results in minimal contact between service provider and customer. Again, this accounts for service processes being the main gauge of service quality. Extending this analysis, with the customer not being present as the core hygiene services are

performed, then the service processes that customers get into are those involving exceptions, when the customer becomes aware of service issues or problems and contacts the service provider for assistance. This explains why the responsiveness dimension of process service quality was rated highly.

8.4.2 Services Marketing Implications and the role of CRM

Two findings with hygiene services were in some variance with what were found in the literature. These were firstly, the appropriate selling method for this type of services and secondly, the importance of personal interactions and social bonds. The implications for CRM applications are then explained.

Appropriate Selling Method. Hygiene services fall under the category of Intermediate Services on Boyt and Harvey's (1997) classification scheme. Boyt and Harvey recommended that for Intermediate Services, use of the mass media and sales promotions would be more applicable given that the services are not complex and easily comprehended. Personal selling, which is what is actually practiced with hygiene services, is thought to be cost-inefficient. The premises are true; personal selling is expensive considering the low revenue values, and the services are not difficult to understand. However the hygiene services business may differ from other Intermediate Services, such as janitorial services or pest control for example, thus requiring the use of salespeople. Unlike janitorial services or pest control services, firstly, the need for hygiene services is not immediately obvious (again the point of more intangibility) and therefore there is more need to persuade customers, and secondly, hygiene services cover a wider range of services (washroom hygiene, floor mats, air quality improvement) so that a consultative selling approach is required. Using an expensive resource like salespeople will only work, however, if they are consistently productive. CRM, with its power to assist the service provider to analyse, focus, monitor and enable sales operations, would thus be valuable in marketing hygiene services as there are apart from numerous prospects, more diverse service offerings.

Personal Interactions and Social Bonds. The services marketing literature has generally advocated that service provider-customer personal interactions leading to social bonds are common qualities of strong service relationships (Berry and Parasuraman 1991, Hennig-Thurau and Hansen 2000, Gounaris and Benetis 2002). In the literature review, there were concerns expressed that the deployment of CRM applications would weaken relationships with personal interactions' diminished role in service processes. Apparently, this concern did not have a general basis in this study. Many customers demonstrated a straightforward, business-like posture towards the service provider and did not express desire for the closeness or social bonds described in the literature. As earlier mentioned, customers suggested interactions, but these were more of brief, spaced out meetings to discuss service feedback and any new developments with the service provider.

With the above background, communication through CRM service features (where face to face meetings or phone calls are diminished) could add value to the relationship. These features seem to be valued as they provide customers with flexibility and a feeling of being in control of the process according to their needs. The periodic meetings were however suggested to ensure things were going well and new information passed along (customers do not want self-service if they could manage not to do so). For the service providing deploying CRM services, this is akin to the balance, referred to in Callaghan (2002), which must be established between the personal (face to face) means and the 'electronic' means of communication.

8.4.3 Summary of Section 8.4 (The Hygiene Services Industry, CRM and Business Services)

To determine the potential applicability of research findings to other business services, key characteristics of the hygiene services business were identified. As the importance of process service quality to customers seemed to have resulted in perceived value of CRM service possibilities, the reason for this importance was traced. Identified factors were 1) the nature of hygiene services as possessing a

degree of intangibility of the core services' output and 2) low customer-provider contact typical of this service being performed on possessions (or facilities).

Two variances of research findings with the literature were highlighted. One was the appropriateness of personal selling (a costly proposition), but which was justified as necessary due to wide range of potential services that could be offered to customers. This situation actually increases CRM's beneficial impact with more information to process for operations and management purposes. The other variance was on the importance of close personal interactions or formation of social bonds. Efficiency-driven, straightforward and business-like posture of many customers to service providers ensured that CRM communications would not be unappreciated. Close personal bonds were apparently not that important with many customers.

8.5 Summation and Generalisation of Findings

In this chapter, the service provider and service customers' perspectives were analysed and a synthesised view showed commonalities and differences in their perceived value of CRM applications. There were significant value creation opportunities with CRM features for both service provider and service customer. The service provider wants operational efficiency and sales force productivity. The service customer wants enhanced responsiveness to non-routine service and related issues, as these come up. In addition to these specific findings, there were other findings that could possibly be generalised and contribute to knowledge in the research area:

Diverse Product / Service Range as a CRM Value Driver

The presence of a diverse range of products or services that a company markets in combination with a low penetration rate of its customer base makes CRM more beneficial. This criterion did not seem to be highlighted in the literature.

Importance of Strategic Long-term View

Companies wanting to introduce technology in coping with operational needs in front-office functions should best take a long-term view, beyond its present exigencies. Projects that involve customer information in particular should consider management and operational possibilities that could be pursued in the future. In this way, the development of automated processes could advance in orderly phases with optimal efficiency. Even if achieving internal operational efficiency promises lucrative returns, the customers' perspective should be considered early on lest the provider miss out on opportunities or expose itself to competitive innovations.

CRM and Process Service Quality

CRM applications should add more customer value in services where process service quality matter more than output (or core) service quality. In hygiene services, this was seen as the case due to the intangibility of output service quality, the low contact between provider and customer, and the reliance of customers on experienced service processes to judge value received.

CRM and IT Use in Work Context

CRM service possibilities are seen as more value-adding by customers in work contexts where information technology is promoted and routinely utilised.

CRM Value, Service Quality and Customer Orientation

Perceived value-added from CRM services leads to increased customer commitment particularly when the perceived value is high, there are no major problems with the service, and the customer has an efficiency-driven, straightforward and business-like posture to the service provider.

Close Personal Interactions not Universally Sought

Close personal interactions or social bonds are not universally sought in services. However, CRM adopters should endeavor to find the right balance between face-to-face and electronic communications. A preference for the former in some situations may not be to experience the personal touch in services, as it could be due to this method being time-efficient for the customer (as it provides the opportunity to exchange information and clarify questions quickly).

The next chapter presents the conclusion of this research.

9. CONCLUSION

In this research, the perceived value of deploying CRM applications was investigated in a business services setting, specifically the hygiene services industry in Singapore. Two perspectives on the issue were investigated, that of the market-leading service provider and that of a purposive sample of 21 service customers. The research established that the service provider recognises substantial value in CRM applications, particularly those with service scheduling, sales and marketing functionalities. This was despite its vision being confined to an internal efficiency focus and it having to cope with the challenges of getting its in-house software development on a faster track. The service provider's business size and wide service offerings were determined to amount to a degree of operational and management complexity that makes the initiative worthwhile, if not imperative. On the other hand, most of the service customers saw significant value-added with CRM service possibilities, this effect strongly influenced by the level of IT promotion and usage in their work contexts. The preparedness of the service provider to provide reliable, responsive service when problems arise was a major value sought with these innovations. Potential for increased commitment to the service provider as a result of introducing CRM services was also noted, and this was particularly evident where no major issues existed with the current service, and with customers who exhibited an efficiency-driven, business-like posture in relating with the service provider.

9.1 Theoretical Contributions

Classification schemes, based on the commonalities observed with different service businesses, were explained in this study. The exercise has been useful to understand hygiene services in a broader sense, for instance, the service having an intangible output and secondly, being performed on possessions (or facilities) where minimal contact between service provider and customer occurs. These two characteristics, in particular, helped explain findings of the importance of (non-core) service processes and specifically that of responsiveness in customers'

service quality evaluations. In turn, prediction on applicability of CRM perceived value findings and their consequences could possibly be made with other services sharing these commonalities.

This empirical research adds to the limited number of studies conducted in business-to-business service settings. Its contribution also stems from its covering important service marketing issues such as the roles of output (or core) service quality versus process service quality, and the relationship outcome variables of perceived value and commitment. For instance, the research supported the general notion of the importance of process service quality in business services, but at the same time, it shed some doubt on the crucial importance of social bonds in all service relationships.

The study of CRM applications and business services is also a new research arena. The research pointed out specific areas where CRM applications add value, and the factors possibly influencing these findings. The predominant influence of the customer's IT work context for CRM's perceived value should generate interest among researchers, particularly since it overrode other factors appearing in the literature like service quality satisfaction, perceived risks and even interactions.

For the service provider, another criterion (that of diverse offerings and low customer penetration rate) was found driving CRM's value. By comparing results with those of a smaller organisation, the study also supported the proposition that business size as well as the focus on existing customers make CRM applications more attractive.

9.2 Practical Implications

The study provides practical implications for managers in service industries, who are considering exploiting technology to optimise their businesses. For those in hygiene services particularly, the holistic analytical approach undertaken in this study could provide an effective blueprint in the crafting of a sound long-term

strategy, one that pursues both operational efficiency and customer satisfaction. By considering both providers' and customers' perspectives, the strategy can thus identify projects to develop priority capabilities and introduce these in phases in an orderly manner. As an example, the subject service provider might have to prioritise enhancing responsiveness of their complaints management system over customer data analysis capabilities as dissatisfied customers are already defecting to competition.

Another lesson for the service providers is the importance of keeping in touch with customer sentiments and proactively seeking how incremental value can be created in the delivery of their services. This study demonstrated how incorrect the providers' judgments are of the value impact that CRM functionalities could have with their customers. The customers' work environments, as with most of the business world, are changing at a fast pace, so that traditional notions (for instance, preferences of communication and interaction modes) may no longer hold. Providing for systematically researching customer values and preferences seems imperative for the hygiene services situation. As with other business services done on property, contact between the provider's management or sales staff and the customers is not the norm in the service delivery act, so that changes in customers value equations could happen undetected.

The study findings should also be valuable to business process consultants and CRM product vendors, as they work closely with their clients in designing and deploying CRM systems for similar service industries. Prioritisation of objectives and consideration of the customers' value perspective must be taken into consideration so that CRM does solve real business needs and thus deliver on its promises.

Finally, one finding of the research is the powerful influence of the use of IT in the customers' work context in their valuation of CRM-mediated services. With the rapid permeation of information technology in workplaces striving to increase their efficiencies, the appreciation of the benefits of CRM-mediated services is therefore expected to proportionally increase. This implies that service providers must embrace CRM as part of their service strategy if they were to maintain competitive advantage.

9.3 Limitations of the Study

A limitation of this study is the use of one main service provider as the subject with one another smaller company used for comparison. This raises the question of whether this sample could adequately represent the providers' side, regardless if it were the industry market leader, and at the time of the research, an amalgamation that included three acquired companies. Another limitation is the constitution of the customer sample as to whether the purposive sample suitably represents the customer population.

Substantial reliance too was made of the customer questionnaire results. Getting inaccurate responses to suit popular expectations was possible. The researcher recognised this risk, however, so probing questions to explain responses were employed. For the service provider interviews, it was possible too that responses were not comprehensive or frank enough so as to be politically correct.

Lastly, the context of the study is Singapore and the results may not have generalisability for similar services in other countries because of differences in social and work cultures.

9.4 Future Research

It is believed that this study opens research possibilities in many areas. Firstly, the findings on the predominant role of IT usage in the customer's work context and the diminished impact of personal interactions in driving CRM's perceived value could have cultural underpinnings. Would the findings be identical in other markets like Australia for instance? Secondly, would these findings be true in other business services falling under different classification categories? How could differences be explained, if these were the case? Lastly, focusing on each process service quality dimensions, what other technology-enabled possibilities could be developed to enhance service experiences?

Focus groups of customers and service providers can brainstorm for these innovative features.

Exciting and rich research possibilities emanating from the study give a sense of fulfillment that this effort was worthwhile, and that after completing this two-year journey, other scholars can now hopefully, carry on and build on contributions made.

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APPENDICES

Appendix 1 Service Provider Interview Invitation and Topics

Appendix 1.1 Invitation Letter Template

Appendix 1.2 Interview Consent Form

Appendix 1.3 Lists of Service Provider Interview Topics

Appendix 2 Service Customer Participation Invitation and Questionnaire

Appendix 2.1 Customer Invitation Letter Template

Appendix 2.2 Service Customer Questionnaire

Appendix 3 Customer Questionnaire Formulation And Purpose

Appendix 1 Service Provider Interview Invitation and Topics

Appendix 1.1 Invitation Letter Template

Victoria University of Technology

PO Box 14428
Melbourne City
MC 8001 Australia

Telephone:
(03) 9688 4335
Facsimile:
(03) 9688 4888



Mr John Smith
Company A General Manager

Dear Mr Smith

The Victoria University based in Melbourne, Australia is currently conducting a research on the potential value of CRM (Customer Relationship Management) software applications in Business-to-Business services. As an executive in the Hygiene Service Industry, we wish to interview you on this subject.

Your participation is entirely voluntary. The interview will take approximately 45 to 75 minutes to complete. If you agree to participate, please sign the attached consent form at the time of the interview.

Enclosed is a list of interview topics. Please note that you may refuse to answer any questions in the course of the interview that you feel uncomfortable with. You may also decide to withdraw your agreement to participate before, during or after the interview.

The results will be entered anonymously into the project's database. The results will be handled in strictest confidence and any record will be stored securely for at least five years. If ever, results of the interview will be reported on a group basis (for instance, as an industry perspective). Absolutely, no individual interview results will be released.

Your inputs and point of view are important to the success of this research project. We therefore look forward to your kind cooperation for the research. This project is being supervised by Dr Stephen Burgess of VU's School of Information Systems. Should you have any queries or concerns regarding this project, Dr Burgess can be contacted at Tel: +613 96884353, email: Stephen.Burgess@vu.edu.au.

Thank you for your consideration.

Yours faithfully

RAFAEL PAGUIO
DBA Student

Mobile: + 65 97432900
email: rafaelpaguio@research.vu.edu.au

This research project has been approved by the Victoria University of Technology Faculty of Business and Law Human Research Ethics Committee, Project BHREC 2003/38

Appendix 1.2 Interview Consent Form

Victoria University of Technology

PO Box 14428
Melbourne City
MC 8001 Australia

Telephone:
(03) 9688 4335
Facsimile:
(03) 9688 4888



INTERVIEW CONSENT FORM

I agree to be interviewed for the research project conducted by Mr Rafael Paguio as supervised by Dr Stephen Burgess of the Victoria University of Technology, Project BHREC 2003/38.

I understand that I can refuse to answer any questions that I am uncomfortable with. If I have queries or concerns, I understand that I can contact the Victoria University of Technology Faculty of Business and Law Human Research Ethics Committee.

Signature

Mr John Smith
Company
General Manager

Date:

Appendix 1.3 Lists of Service Provider Interview Topics

1.31 General Manager, Singapore Hygiene Service Company

- Company vision and strategy.
- Current key business needs and challenges in Sales, Marketing and Customer Service, pertaining to
 - Increasing revenue,
 - Increasing efficiency / reducing costs and
 - Improving customer service
- Complying with management reporting requirements
- Competition and the Market Situation
- Information systems and IT: current situation
- Future / ongoing computerisation plans and priorities
- Organisational factors that affect or will affect the introduction of computerised sales, marketing, customer service and operations functions
 - Financial requirements
 - Staff readiness and cooperation
 - Skills for project management / implementation
- Comment on providing following IT / Internet service features to customers
- Access to their own as well as relevant company information through the Internet
- Self-service for orders / service issues
- Immediate confirmation of orders / resolution of service issues
- More personalised service through use of more complete customer information
- More customised service offers depending on customer preferences

1.32 Sales Manager, Singapore Hygiene Service Company

- Responsibilities
- Use of IT in work
- Current sales management operational issues
- Current customer service / relationship issues
- Use of IT in addressing operational and customer related issues.
- Providing IT / Internet service features to customers

1.33 Operations Manager, Singapore Hygiene Service Company

- Responsibilities
- Use of IT in work
- Current service management operational issues
- Current customer service / relationship issues
- Use of IT in addressing operational and customer related issues.
- Implementation of IT Projects in the Service Department
- Staff readiness and cooperation
- Comments on providing IT / Internet functionalities to customers

1.34 Customer Care Executive, Singapore Hygiene Service Company

- Responsibilities
- Use of IT in work
- Current customer care operational issues
- Use of IT in addressing customer care related issues.
- Implementation of IT Projects in the Customer Care Department
- Staff readiness and cooperation
- Comments on providing IT / Internet functionalities to customers

1.35 Key Account Manager, Sales Consultant

- Responsibilities
- Use of IT in work
- Current selling and customer relationship operational issues
- Use of IT in addressing operational and customer related issues.
- Implementation of IT Projects in the Sales Department
- Comment on providing IT / Internet service features to customers

Appendix 2 Service Customer Participation Invitation and Questionnaire

Appendix 2.1 Customer Invitation Letter Template

Victoria University of Technology

PO Box 14428
Melbourne City
MC 8001 Australia

Telephone:
(03) 9688 4335
Facsimile:
(03) 9688 4888



MS JEAN NEO, Executive Housekeeper,
XYZ Hotel

6 May 2004

Dear Ms Neo

The School of Information Systems of Victoria University in Melbourne is currently researching the potential value of eBusiness applications in service provider-customer relationships. As a customer of hygiene services in Singapore, we would like to invite you to participate in this research. Your organisation was chosen randomly from collated customer lists contributed by various people familiar with the industry.

Should you agree, your participation will involve filling up a questionnaire, which will take approximately 15 minutes to complete. We shall then arrange for a 45-60 minutes interview to discuss your responses and other related issues. Your participation is voluntary and you may therefore decline to answer any question that you feel uncomfortable with.

This project was initiated for a doctoral thesis requirement. The research results will be entered anonymously into a database. Individual results will be handled in strictest confidence, and all written record will be stored securely for at least five years, as per University policy. Results of the survey will only be reported on a group basis (for instance, as a customer group or as an industry summary). No individual results will be released.

Your inputs are important to the success of this research project. As a gesture of appreciation for your time and contribution, we shall provide a choice of dining vouchers to all respondents. In addition, we shall make a contribution on behalf of respondents to a nominated charity. Kindly fill in the attached participation reply sheet, and either post this form to our Singapore partner, Sumbershire Educational Consultants c/o Mr Justin Goh, or alternatively, fax this to Singapore No: 6446 4098.

We look forward to your kind cooperation. For any questions, you may contact our researcher who is currently in Singapore (Mr Rafael Paguio, Singapore Mobile 97432900). Thank you for your consideration.

Yours faithfully
Dr Stephen Burgess
School of Information Systems

**This research project has been approved by the Victoria University
Faculty of Business and Law Human Research Ethics Committee. Project BHREC 2003-38**

Victoria University of Technology

PO Box 14428
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eBUSINESS FOR SERVICES RESEARCH PROJECT (BHREC 2003-38)

SERVICE CUSTOMER QUESTIONNAIRE

Instructions: Please fill up this questionnaire and hand it over to our researcher at the start of the interview.

There are additional questions in shaded boxes below. Simply think about these additional questions for discussion during the interview.

GENERAL INFORMATION

The Hygiene Services industry provides the following products on rental / service contracts:

Hand Soap, Shower Soap, Cloth Towel, Paper Towel, Warm Air Dryers, Toilet Tissue Paper, Toilet Sanitisers, Aerosol Air Fresheners, Gel Air Fresheners, Air Purifier Systems, Lady Sanitary Bins, Dust Control Floor Mats.

Please fill in:

Your primary Service Contractor for hygiene services is

For the rest of the questionnaire, we shall refer to this above-named service provider as Company A.

What function or department within your company does your position fall under?
Please tick.

Building or facilities management _____ Engineering or facilities maintenance _____
Office administration _____ Purchasing _____
Housekeeping _____ General management _____

Others: Please specify _____

What is your job title? _____

Question during the Interview:
Please describe the purchasing process for Hygiene Services in your organisation.

<p>Company A provides us the following products; Tick box if true</p>	<p>On a scale of 1 (Poor) to 5 (Excellent), circle your rating of the results experienced with the product(s) provided by Company A.</p>
--	---

			Poor	Average	Excellent		
Hand soap system	<input type="checkbox"/>	▶	1	2	3	4	5
Shower soap system	<input type="checkbox"/>	▶	1	2	3	4	5
Cloth towel system	<input type="checkbox"/>	▶	1	2	3	4	5
Paper towel system	<input type="checkbox"/>	▶	1	2	3	4	5
Toilet paper system	<input type="checkbox"/>	▶	1	2	3	4	5
Sanitiser system	<input type="checkbox"/>	▶	1	2	3	4	5
Aerosol air freshener system	<input type="checkbox"/>	▶	1	2	3	4	5
Gel air freshener system	<input type="checkbox"/>	▶	1	2	3	4	5
Air purifier system	<input type="checkbox"/>	▶	1	2	3	4	5
Sanitary bin system	<input type="checkbox"/>	▶	1	2	3	4	5
Dust control floor mat	<input type="checkbox"/>	▶	1	2	3	4	5

Question during the Interview:
 What are the reasons for the high as well as low scores you gave for the above products?

SERVICE CHARGES

Please tick box. The monthly charges we pay for above services from Company A amount to:

- | | |
|---------------------------|--------------------------|
| Less than S\$ 200 | <input type="checkbox"/> |
| Between S\$ 200 and \$600 | <input type="checkbox"/> |
| Between S\$ 601 and 1200 | <input type="checkbox"/> |
| More than S\$ 1200 | <input type="checkbox"/> |

LENGTH OF RELATIONSHIP

How many years has Company A serviced you? _____ years (more or less)

In your case, how important is each factor in determining service quality of a hygiene services provider? *On a scale of 1 to 7, circle your rating of each possible quality factor:*

FACTOR FOR SERVICE QUALITY	Not at all Important							Extremely Important
Has good-looking vans and service tools	1	2	3	4	5	6	7	
Has neatly attired service staff	1	2	3	4	5	6	7	
Has professional-looking printed materials	1	2	3	4	5	6	7	
Employees keep promises	1	2	3	4	5	6	7	
Services done without mistakes	1	2	3	4	5	6	7	
Any requested service is attended to promptly	1	2	3	4	5	6	7	
Has employees who are always willing to help	1	2	3	4	5	6	7	
Employees are knowledgeable about their work.	1	2	3	4	5	6	7	
Employees are polite.	1	2	3	4	5	6	7	
Gives individual attention	1	2	3	4	5	6	7	
Listens sincerely to our concerns	1	2	3	4	5	6	7	

Questions during the Interview:

1. Please explain the reasons behind the factors you gave high importance scores.
2. Are there other service quality factors (not mentioned above) that you consider important?

COMPANY A's PERFORMANCE vs. OUR MINIMUM STANDARD

How would you rate Company A vs. your minimum standard or expectation for the following performance measures?

On the given scale of 1 to 7, circle the number that corresponds to your rating, setting a rating of 4 as equivalent to or the same as your minimum standard level.

PERFORMANCE MEASURE	<u>Compared with my minimum standard,</u> Company A's performance is						
	Much Worse			Same			Much Better
Has good-looking vans and service tools	1	2	3	4	5	6	7
Has neatly attired service staff	1	2	3	4	5	6	7
Has professional-looking printed materials	1	2	3	4	5	6	7
Employees keep promises	1	2	3	4	5	6	7
Services done without mistakes	1	2	3	4	5	6	7
Any requested service is attended to promptly	1	2	3	4	5	6	7
Has employees who are always willing to help	1	2	3	4	5	6	7
Employees are knowledgeable about their work.	1	2	3	4	5	6	7
Employees are polite.	1	2	3	4	5	6	7
Gives individual attention	1	2	3	4	5	6	7
Listens sincerely to our concern	1	2	3	4	5	6	7

Questions during the Interview:
Please recall particular incidents when you were
1. Quite disappointed with Company A's service;
2. Very pleased with Company A's service.

Please indicate the extent that you agree with the following statements. Circle the number that corresponds to your response to each statement. Thus circling a 7 means that you strongly agree with the statement, while circling a 1 means that you strongly disagree. You may circle any of the numbers in the middle that show how strong your feelings are.

Statement	Strongly Disagree							Strongly Agree
My interactions with Company A’s employees have been pleasant.	1	2	3	4	5	6	7	
Company A’s representative(s) keep in touch with us.	1	2	3	4	5	6	7	
I have a friendly relationship with Company A’s representative(s).	1	2	3	4	5	6	7	
Company A’s services are essential to our business operations.	1	2	3	4	5	6	7	
The amount we spend on services presently provided by Company A is not small.	1	2	3	4	5	6	7	
Occasional unsatisfactory performance of what Company A provides can still affect us.	1	2	3	4	5	6	7	
Considering the money and attention we pay, we are getting good value with Company A.	1	2	3	4	5	6	7	
All things considered, we are very satisfied with having Company A as our hygiene services provider.	1	2	3	4	5	6	7	
We want to remain a customer of Company A as we appreciate our working relationship with them.	1	2	3	4	5	6	7	
With the way things are, it is justified to continue with Company A beyond our present contract period.	1	2	3	4	5	6	7	

Questions during the Interview:

1. How often do you want a representative of your hygiene services provider to visit you? What services / attention do you expect from the representative?
2. How much attention / priority do you give to hygiene services compared with your other contracted maintenance services?
3. How do you feel about the idea of having long-term relationships with service providers?

Consider the scenario that Company A, in addition to what they currently have, adopts some eBusiness and Internet capabilities that will provide the features mentioned below.

Please indicate your reaction to these additional service features. Specifically, let us know how much you feel it will add to the overall value that you are currently receiving from Company A. Please *circle* the corresponding number.

Additional Service Feature	Does not add any value to us	Adds a little value to us	Adds a moderate amount of value to us	Adds a lot of value to us
Being able to log into Company A’s secure website and get restricted product and technical information.	1	2	3	4
Receiving regular relevant technical, marketing and industry information by email from Company A.	1	2	3	4
Receiving immediate confirmations by email or SMS on our requests, complaints or orders.	1	2	3	4
Being able to log into Company A’s secure website anytime (24 hours x 7 days basis) to register any requests, complaints or orders.	1	2	3	4
Being able to log into Company A’s secure website anytime (24 hours x 7 days basis) to view records of service history, purchases made and resolution of registered complaints.	1	2	3	4
Being able to log into Company A’s secure website and specify our preferred fragrance or product types, for example for air fresheners or soaps, for future service periods.	1	2	3	4
When we phone Company A’s offices, whoever answers the call would have updated information on our current agreement, service history and past purchases, so that we are attended to efficiently.	1	2	3	4

Questions during the Interview:

1. Please explain the reasons for your ratings.
2. What specific situations will the service feature be useful?

Assume that Company A provides all the eBusiness Service Features listed in the previous page.

How will providing these additional service features affect your attitude towards extending your relationship with Company A? Please tick box accordingly.

- Will not have any effect at all on our present attitude
- Will positively affect our attitude, but just to a minor extent
- Will positively affect our attitude to a moderate extent
- Will positively affect our attitude to a large extent

WORK ENVIRONMENT

Finally, the following statements relate to the use of IT in your work environment. Please circle the number that you feel reflects the actual situation:

Additional Service Feature	Not at all	To a minor extent	To a moderate extent	To a large extent
In our company, process automation and the use of computers are promoted...	1	2	3	4
For my work, I use emails....	1	2	3	4
For my work, I surf the Internet.....	1	2	3	4

PLEASE ENSURE THAT YOU ANSWER THE QUESTIONNAIRE BEFORE THE START OF THE INTERVIEW. THE INTERVIEWER WILL NEED THIS COPY, SO YOU MAY WANT TO MAKE A PHOTOCOPY FOR YOUR REFERENCE DURING THE INTERVIEW.

THANK YOU FOR YOUR KIND COOPERATION.

This research project has been approved by the Victoria University Faculty of Business and Law Human Research Ethics Committee. Project BHREC 2003-38

Should you have any questions, you may contact the University at the above address or contact numbers, the Researcher, Mr Rafael Paguio (Tel +65 9743 2900, Rafael.Paguio@research.vu.edu.au) or the Project Supervisor, Dr Stephen Burgess, Senior Lecturer, School of Information Systems, (Tel +613 9688 4353, Stephen.Burgess@vu.edu.au).

Appendix 3 Customer Questionnaire Formulation And Purpose

The questionnaire consists of seven pages. An explanation of the content and purpose of each page is given below:

Page 1: The instructions spells out the tasks expected of the participant, and the role and handling of the questionnaire in the interview process. The presence of prompt questions that are to be discussed during the interview proper was also pointed out.

The sequence of questions is meant to get the participant to focus on the hygiene service purchasing context and the relationship with the service provider. It was crucial for validity and reliability considerations that the participant is clear about the purpose and subject domain of the questionnaire.

The response given on this page plus that on the prompt questions for the interview should give good information on purchasing practices and the role of the participant in the process. This outcome is consistent with the nature of qualitative research, which delves deeper into the what, hows and whys of participant responses (Gillham 2000). Further, by classifying the participant's position it would be possible to develop insights on his or her perspective in procuring hygiene services and expectations of the relationship with the service provider.

Page 2: The questions on service charges and length of relationship are meant to get more information regarding the purchasing and service context. These are purposely put following the specific products/services portion to get more accurate responses as the customer was prompted on defined items for reference.

The amount of service charges paid would be useful in inferring on the attention of the service provider to this customer, and likewise, the importance

that the customer put on purchasing these services. The length of relationship information could be useful in explaining customer attitudes and behaviours.

The products/services section was designed to enumerate and rate the specific services and related equipment being provided. The information obtained here could be used as an indication of technical or outcome-related quality.

Pages 1 and 2 were meant to be relatively easy to fill up. In constructing questionnaires, it is recommended to start with light questions to warm up participants and engage their thoughts effectively in the process (Dillman 2000). Another suggestion (Williamson 2002) followed was the avoidance of sensitive questions at the beginning. Such questions could put off or make participants defensive. Thus, in inquiring about service charges, ranges were deemed sufficient. Asking specific price amounts could be seen as asking commercially sensitive information. Another example was an originally intended question to confirm the extent of the participant's role in the service purchase decision was not included, as it could make the participant uncomfortable. In any case, this information could be indirectly learned when the participant discusses the purchasing process during the interview.

Page 3: This page seeks to obtain information on the importance of process-related service quality attributes from the hygiene service customers' perspective. What customers evaluate as important should be quite valuable for strategic considerations. On these identified attributes, service providers could not fail if they want to keep their customers. Should they want to gain a competitive advantage, effort should be put in excelling on these important attributes.

The 11 items listed in the scale were condensed from the original 21-item list of attributes in the SERVQUAL scale developed by Parasuraman et al. (1988). To have included all would have been onerous for participants, as more questions using these same items were still to be asked in the following

sections of the questionnaire. Lee and Cunningham (2001) made the same observations and adapted an abbreviated SERVQUAL scale of 5 items as applicable to their research context.

The 11 items used in this research are meant to measure all five generic dimensions of process-related service quality. These particular items were selected based on interviews following observations and interviews with service providers.

For Tangibles, the three items used were:

- *Has good looking vans and service tools*
- *Has neatly attired service staff*
- *Has professional looking printed materials.*

For Reliability, the two items used were:

- *Employees keep promises*
- *Services done without mistakes.*

For Responsiveness, the two items used were:

- *Any requested service is attended to promptly*
- *Has employees who are always willing to help.*

For Assuring, the two items used were:

- *Employees are knowledgeable about their work*
- *Employees are polite.*

Finally, for Empathetic, the two items were:

- *Gives individual attention*
- *Listens sincerely to our concerns.*

The prompt questions for the interview aims to firstly, produce insights on underlying reasons for importance ratings, and secondly, reveal if there are other relevant service attributes that were not included in the scale.

- *Please explain the reasons behind the factors you gave high importance scores.*
- *Are there other service quality factors (not mentioned above) that you consider important?*

Page 4: Information on how customers rate their service provider on the selected service attributes is sought in this section. The scale uses the same 11 items from the previous page. Participants are asked to refer to a point of minimum (or adequate) level of expected service. From this point that corresponds to the middle of the scale, they are asked to rate their provider's performance. This employed technique is one of several formats of SERVQUAL scales (Zeithaml and Bitner 2003).

Detailed service quality performance ratings should give insights on a provider's strengths and weaknesses. Weak areas, particularly if important for customers, point to unmet or poorly met needs that require urgent attention. For this study, these weak areas could provide opportunities where CRM applications can make an impact.

The prompt questions in page 4 ask for examples of particularly disappointing and particularly pleasing service incidents. This technique was derived from the approach used in a research methodology called Critical Incidents Studies. Customer accounts of very poor and very good service (thus the term "critical incidents") are classified into themes or common causes. The resulting insights could be powerful for planning service processes and training customer-facing staff (Zeithaml and Bitner 2003). Further, Foss et al. (2002) point out that identified service weaknesses are in effect opportunities for improvement from which new value propositions can be created.

Page 5: The service and relationship factors of Interactions, Perceived Risk, Perceived Value, and Commitment are investigated in this section:

Interactions: The three items relating to the presence and quality of Interactions look into frequency, pleasantness and friendliness ratings, of contacts with service provider staff. The last two items refer specifically to a specific company representative that liaises with the customer. These items were formulated based on common themes of service provider relationship best practices (Claycomb and Martin 2002).

- *My interactions with Company A's employees have been pleasant.*
- *Company A's representative(s) keep in touch with us.*
- *I have a friendly relationship with Company A's representative(s).*

To this set of items on Interactions, interview prompt questions were added:

How often do you want a representative of your hygiene services provider to visit you? What services / attention do you expect from the representative?

Perceived Risk: The three items used relate to the risk dimensions of service importance, financial and business consequence. The first item helps determine the importance customers put on hygiene services and confirm Fitzsimmons and Fitzsimmons (2004) low importance classification of services to facilities such as hygiene services and consequent low risk perception. The second and third items refer to gravity of financial and business consequences as a result of bad service (Lee and Cunningham 2001).

- *Company A's services are essential to our business operations.*
- *The amount we spend on services presently provided by Company A is not small.*
- *Occasional unsatisfactory performance of what Company A provides can still affect us.*

The following interview prompt question is meant to explore other possible views on the importance of the service and comparison of hygiene services with other contracted services.

- *How much attention / priority do you give to hygiene services compared with your other contracted maintenance services?*

Perceived Value: A single item was used for perceived value.

- *Considering the money and attention we pay, we are getting good value with Company A.*

Perceived value as explained in Chapter 4 is an evaluation of benefits and costs (Patterson and Spreng 1997; McDougall and Levesque 2000). In this example, the costs are taken as the payment for the services and the amount of attention that the customer gives in dealing with the service provider (Lee and Cunningham 2001).

Commitment: The two items used should indicate firstly that the relationship is valued and therefore a preference to stay exists; and secondly, that there is a justified conviction for the relationship to continue on (Garbarino and Johnson, 1999).

- *We want to remain a customer of Company A as we appreciate our working relationship with them.*
- *With the way things are, it is justified to continue with Company A beyond our present contract period.*

An interview prompt question was given so as to uncover customer views towards relationships with providers:

- *How do you feel about the idea of having long-term relationships with service providers?*

Page 6: In this page, the customer is asked to rate how much additional value they see from the itemised service possibilities and outcomes made possible by CRM applications:

- *Being able to log into Company A's secure website and get restricted product and technical information.*
- *Receiving regular relevant technical, marketing and industry information by email from Company A.*
- *Receiving immediate confirmations by email or SMS on our requests, complaints or orders.*
- *Being able to log into Company A's secure website anytime (24 hours x 7 days basis) to register any requests, complaints or orders.*
- *Being able to log into Company A's secure website and specify our preferred fragrance or product types, for example for air fresheners or soaps, for future service periods.*
- *When we phone Company A's offices, whoever answers the call would have updated information on our current agreement, service history and past purchases, so that we are attended to efficiently.*

As explained in Table 2.7, the above listed CRM-enabled possibilities are related to one or a combination of customer needs related to information, communication, flexibility through self-service, personalisation and customisation.

Two interview prompt questions were given so as to clarify and gain additional insights from the added-value ratings:

- *Please explain the reasons for your ratings.*

- *In what specific situations will the service feature be useful?*

Page 7: The first section of investigates whether the provision of CRM-enabled service features increases the customer's commitment to the provider in terms of extending the relationship further. Responses should indicate whether CRM applications could matter in a practical and beneficial way for the provider. The question posed is:

- *Assuming that Company A provides all the eBusiness Service Features listed in the previous page, how will this affect your attitude towards extending your relationship with Company A?*

Finally, the last section investigates the use of IT in the customer's work context. Responses indicate on a scale of 1 to 4, the extent these three items are true:

- *In our company, process automation and the use of computers are promoted...*
- *For my work, I use emails...*
- *For my work, I surf the Internet...*

The placement of these possibly sensitive questions at the end was thought appropriate and in line with Williamson's (2002) recommendation. This is likewise in line with the guidelines of Frazer and Lawley (2000) who observed that after investing their time in completing most of the survey, participants are more likely to complete the task despite the presence of sensitive issues. The questions referred to personal practices. In any case, these questions were otherwise easy to answer and breezing through this portion should give the participant a good sense of achievement and closure in having completed the questionnaire.