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Consumer Research and Service Staff Involvement in the Service Development Process

A thesis presented in partial fulfilment of the requirements for the
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Abstract

The purpose of this research was to apply consumer research techniques to the development of services. The study also developed ways for involving both the consumer and service staff in the first stage of Service Development. A new model for the first stage of Service Development was proposed and tested.

One of the first of its kind in the public domain in New Zealand, this study presents an empirical evaluation of the application of consumer research techniques to local government Service Development. Four Service Development case studies were conducted with the Palmerston North City Council, New Zealand. The research focused on the first stage of Service Development and therefore much of it was oriented towards methods and techniques for eliciting, transforming and representing consumer requirements for the development of services. The model included the sub-stages of service development strategy, opportunity identification, needs analyses, service idea generation and screening, detailed investigation, service concept development and evaluation.

The nature of a service product being a result of the interaction between the service staff and consumers required that Service Development involve these two key groups. Consumer research techniques were selected and applied based on the results of the literature review, the research objectives, the nature of services and the outcomes desired. Methods for involving both service staff and consumers in the process of early Service Development were examined and the new model was tested empirically.

The main consumer research techniques included mail surveys, telephone interviews, personal interviews, self-administered surveys and focus groups. The new technique of joint focus groups with service staff and consumers was trialled. As part of the focus groups, some idea generation techniques such as word-storming, postbox technique, brainstorming and role-playing were tested with consumers, and where appropriate with service staff. Some of the traditional consumer research techniques used in Product Development needed to be modified slightly to accommodate the intangibility of services. For example, stimulus material such as word lists, video clips and visual collages were provided to respondents as tangible references to stimulate idea generation. Consumer

techniques that allowed for the exploration of the interaction between service staff and consumers, and those that permitted the presentation of tangible stimuli were found to be more useful.

Analysis tools such as the Quadrant analysis and Perceptual Mapping techniques were used successfully to represent consumer attitudes and perceptions towards the services that were studied. Segmentation of consumers based on consumer attitudes towards the specific service are recommended rather than only demographic segmentation. Matrices were developed to systematically and rationally move from one sub-stage to the next.

A Service Development framework that incorporates the participation of consumers and service staff in the Service Development process was created based on the literature and the service context. This model was applied and tested in the four case studies with a local government in New Zealand, to produce the final NuServ model for Service Development.

The extent of involvement of service staff in service delivery varies and therefore a range of services was selected within the local government, where a real opportunity or need for service improvement or development existed. A key message that emerged from the research is that Service Development benefits from the participation of both consumers and service staff. Service developers should adopt the consumer research techniques for a more participatory process of development. The Service Development model provides a process guide to service managers for developing and improving services. This research also provided insights and new directions for future studies in Service Development.

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CHAPTER 1

Introduction to Service Development

1.1 Need for Service Development in local government

This chapter provides an introductory background and brief overview of previous research in Service Development, the need for this research and the central theme of the thesis. It also covers the definition and nature of services, the service development process and consumers in service development. Outlined are some of the special features of services and the way in which these might affect Service Development. This chapter also provides background context to the primary research, which was carried out with the local government body in Palmerston North, New Zealand.

Some of the trends identified by the New Zealand Ministry of Research, Science and Technology for the early part of 21st Century are globalisation, new technologies, knowledge-based innovation and changing consumer markets (Source: Scenarios for local government to 2010). These changes together with the new focus on the consumer are forcing s to redefine their markets, adapt their core services and provide new products/services to meet the changing consumer requirements. Local government in New Zealand is not immune from the pressures of demanding consumers, competition and the drive towards successful services that meet consumer needs.

Most leading product manufacturing companies have a development process in place to research, create, test and introduce products, while service firms are lagging behind. They need similar systems to take advantage of market opportunities and to meet consumer demands (Scheuing and Johnson, 1989).

Most service industries have a need to develop a steady stream of service innovations. Very few service s are prepared or know how to meet this challenge. Service literature revealed that most of the research on Service Development has been done on financial services. It has been only in recent years that academic researchers are concerned with the development of a wide variety of services (Johne, Storey 1997). There is a lack of published research on the development of services by government

bodies. There is a need for empirical research in service development as both public and private sectors strive to meet consumer demands and consumer satisfaction.

1.2 New Zealand local government services

Local government is an important sector of the New Zealand economy. It contributes almost 3 percent of gross domestic product (GDP), employs 37,270 people and has assets valued at over \$35 billion. New Zealand has a population of nearly four million (Census, 2000). Local government has a very large influence on consumers' lives. It is responsible for basic services such as roading, water supplies, sewage treatment and disposal (utilities) and also has regulatory roles such as housing permits and licenses for animal ownership. It is increasingly required to provide new services, particularly services that are not provided by the private sector or central government and which are demanded by the communities through the annual planning process. It can, but does not have to provide recreational facilities, library services, promote the city and encourage business growth.

In the last few years, local governments have made some progress in strategic issues in response to the Local government Amendment Act 1996, through the annual planning and public consultative procedures. Councils would like public input into the Annual Plan to be more useful and meaningful (Source: Department of Internal Affairs, 1999). Local authorities are required by law to prepare an annual plan for each financial year, outlining the nature and scope of significant services and activities to be undertaken for the following year. Generally, public input is sought through submissions and comments on the Annual Plan. More people are making submissions about wanting a wider range of services (Blakely, 1995). Gill, 2000, has commented on the scope for substantial efficiency improvements in Local government services to meet current consumer demands.

At present, emphasis is placed on submissions and public meetings as a way of initiating new service development or improvements. Public meetings and forums appear to be unsatisfactory for specific issues that require a targeted audience (Gill, 2000). Creative and consistent techniques and procedures are required to include the public in service decision-making (Vaidyanath, 1999, service manager, City Council, personal communication). Councils would like to be seen as 'listening' to the

community. Legislation requires Councils to be more accountable, efficient, consult with the local community and be consumer focused. Globalization and a moving population mean more diverse communities and local governments must respond to these market changes and opportunities and remain relevant to its citizens.

The importance to successful innovation of both a systematic development process and consumer's involvement in the process have been recognized. In the case of tangible product development, the process has developed over the years into well-recognized stages. The consumer has participated in all of the phases, whereas, interest in the service development process has been fairly recent and the consumer is only now being involved in the development process. In a 1993 study of product and service developers, lack of understanding of market needs was the leading reason cited for new product and service failure (Rosenau, 1996, as quoted in John & Storey's comprehensive review of Service Development).

There are fifteen local authorities or City Councils in New Zealand. The Councils decide the range of services provided, delegate the implementation of these to staff and monitor the performance. While the Councils have at times freedom to exercise their initiative they must do this within the laws and regulations set by the Central government.

The government has recently come under increasing pressure to review its efficiencies in improving and providing services (from being the sole supplier to being competitive, effective and efficient) and to involve the community (Sanderson, 2001). Councils are encouraged by the local government Act to consult with the public for the Annual Planning process. Any new service initiatives or ideas are required to be submitted to the Council and be adopted into the Annual Plan, if it is to be actioned in the following year. Public submissions have increased in the last few years. Submissions are the principal means of participation for the public at present (Annual Plan).

1.3 Definition of Services

Products (goods or services) are anything that can be offered to satisfy a need or want. A service has been defined as a 'deed, act or performance' (Berry, 1980). The diversity of services has led several researchers to classify services (Judd, 1964; Rathmell, 1974; Shostack, 1977; Hill, 1977; Thomas, 1978; Chase, 1978; Kotler, 1980; Lovelock, 1984, as quoted in John & Storey's review). Lovelock (1984) examined and synthesized the classification of services and suggested a basic system of classifying services by the nature of the service (tangible or intangible) and at whom it is directed. The value of this system is that it helps understand the extent of consumer participation. In some of these services the consumers have to be present physically, while in others they can receive the service from a distance, and in some cases the consumers are competitors because they perform or can perform these tasks themselves. This is not common in the case of most tangible products. The nature of services affects their development and management (Lovelock, 1996).

1.4 Service Characteristics

Services differ from goods in some very important ways and these differences present special challenges to service developers. When developing new services, the following four service characteristics need to be considered: intangibility, inseparability, variability and perishability. This means the service cannot be examined before purchase (as in the case of tangible goods), it is produced and consumed at the same time, it varies from one service to another within the same category and it cannot be stored.

1.4.1 Intangibility of Services

An implication of the characteristic of intangibility is that service products can proliferate. The fact that some services are relatively easy to develop compared with products means that service variety could be a problem to consumers. Although this may help in targeting and segmenting the market, the end user of the service might find it overwhelming. The service staff might also find the information overload and the need to explain all the options to consumers rather difficult. They might resist new services because it may involve training and learning new things. This poses special problems for the launch of new services. The rapid proliferation of similar

types of new product ideas is also an example of the quick diffusion that occurs in service industries due to the intangible nature of the products resulting in, amongst other challenges, the difficulty of providing brand name, copyright or patent protection for new services (de Brentani, 1989; Easingwood 1986).

1.4.2 Inseparability in Services

Products are produced, sold and consumed, whereas most services are sold and then produced and consumed. The inseparability of the creation and performance of certain kinds of services applies particularly to some personal services such as dental or medical treatment.

A result of this feature of inseparability is that the equipment and/or people who deliver the service may be highly visible to consumers. They may be seen as part of the service product. The physical aspects of the service environment and the behaviour of the front line staff will have important influences on the perception of the service by consumers.

1.4.3 Variability in Services

It is difficult to achieve uniformity in service production. Even though standards of service may be prescribed, there can be variability in the output from one unit of service to another. Human nature is such that variations can occur with changes in mood, time of day etc. The positive aspect of this characteristic of services, however, is that it allows for greater flexibility, and provides opportunities for unique services. In practice, however, there needs to be a balance between standardization and flexibility, which is often hard to define.

1.4.4 Perishability of Services

Services cannot be stored. If seats on an airline or a hotel room are not used at a particular time then they are lost forever. This feature of services can be a problem when demand fluctuates and this can aggravate the perishability feature further. Restaurant and tourist operators try to even out demand by attracting consumers (through differential pricing, special promotions) during off-peak times (Cowell, 1988).

The implications for the service developer is that all the elements of the service up to the point of delivery should ideally be on standby and ready to be easily assembled and delivered. For certain services a relatively greater level of teamwork and partnership is required among suppliers. For instance, cooperation between a tour operator, the accommodation provider and the transport carrier is essential for the delivery of a total tourism package. Dissatisfaction with any particular element can ruin the overall judgment of the service.

1.5 Local government Services in Palmerston North

The primary research for this study was conducted with the local government services in Palmerston North, New Zealand. Palmerston North is a New Zealand city consisting of a population of about 73,095 people (Statistics New Zealand 1996 Census), and located in the lower North Island. Topographically it has a flat terrain, a mild climate and a compact layout. Palmerston North is positioned as a 'knowledge city' and a source of opportunity to reflect the unique cluster of knowledge-based industries (University, Polytechnic, Research s). It has the highest proportion of people in the country using bicycles as their mode of transport to work (Census, 2000).

The Palmerston North local governing body consists of 15 councilors, a mayor and a management team of nine members, including the city manager. Ultimate responsibility for all the City Council's activities rests with the Council. The Council decides the range of services and activities to be provided, sets the policy for these services and activities, delegates the implementation of these to the staff and monitors their performance. The City **Vision** is: *'Together we will make Palmerston North an exciting City in which to live, learn, work and play.'* The Council's Strategic Plan determines the direction and philosophy of operation and the means by which it plans to achieve the Vision. The **mission** statement of the Strategic Plan is: *'Palmerston North City Council: Working with our community to build a better City'*

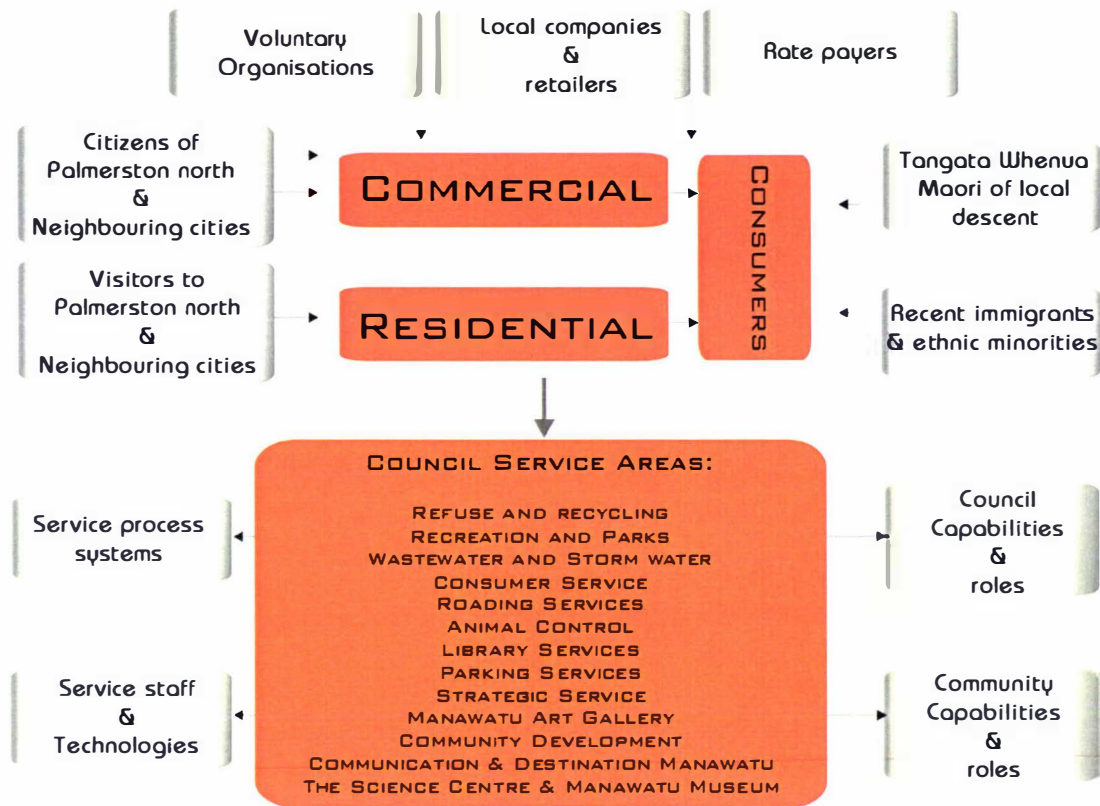


Figure 1.1: Council Services and Consumers

The Council is a statutory body responsible for the provision of a wide range of essential services, guided by the local government Act. Some of the services include customer services, library services, roading, communication, strategic services, cultural and recreational facilities etc. (See Figure 1.1).

The extent of services offered depends on community input and the willingness of residents to pay higher rates for more services. Councils are expected to work closely with the community so that consumer needs and wants are reflected in the way in which services are provided (Sanderson, 2001).

The four Case studies in this research were carried out for the following Units of the Palmerston North City Council (PNCC):

The Strategic Planning Unit provides advice on the long-term direction of the City and Council on economic, social, environmental and community development areas.

The City Marketing Unit initiates and implements services that will promote the City and increase visitor numbers to Palmerston North.

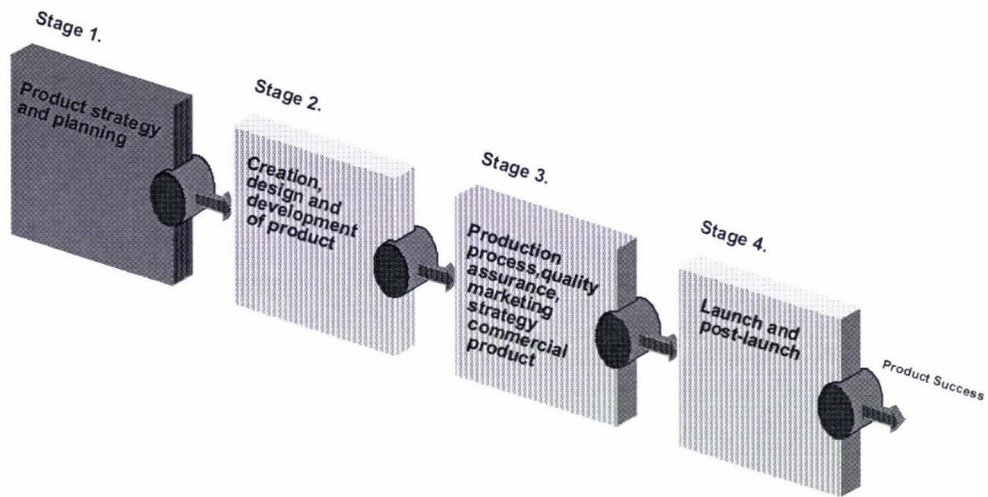
The Consumer Services Unit is the provider of services to the public on behalf of all of the Council's activities.

The Palmerston North Environmental Trust initiates and supports projects that help raise awareness of enhancing the physical environment of the City, such as encouraging bicycle usage.

1.6 Service Development Process

New Service Development (NSD) has been relatively neglected in the literature on innovation and New Product Development (NPD). Extensive research and significant published literature exists on product development. Valuable insights and experiences are available in product development literature, which are applicable to developing services. However, it is recognized that there are a number of aspects distinctive to services, which are likely to affect its development.

Product Development is the term embracing improvements and also radical alterations to product or service performance attributes. In the field of tangible product development, there is evidence of highly sophisticated processes being used. Earle (1971) detailed a systematic process which combined market and technical research with go/no go decision points. Cooper (1994) mentioned the focus on business objectives and flexibility that goes beyond the simple, functional stage-gate systems. In 1997 Earle developed a four stage Product Development process: Strategy Development, Product design and development, Commercialization, Launch & post-launch (Figure 1.2). Each stage consists of **activities**, which produce **outcomes** on which **decisions** are based. The process is meant to be simple and loosely structured rather than rigid and complex (Earle and Earle 1999).



The product development process for the next decade

M D. Earle 1997

Figure 1.2: Earle's Product Development Process

Service Development has a similar development process to Product Development (Terrill & Middlebrooks, 1996, as quoted in Johne & Storey, 1998) as shown in Figure 1.3, but there are significant differences in the activities and the research techniques (Johne & Storey, 1998). Johne and Storey in their comprehensive review of service development literature commented on the importance and lack of effort to develop specific service development models. Scheuing and Johnson (1989) highlighted the importance of the delivery system design, as services are by their nature processes.

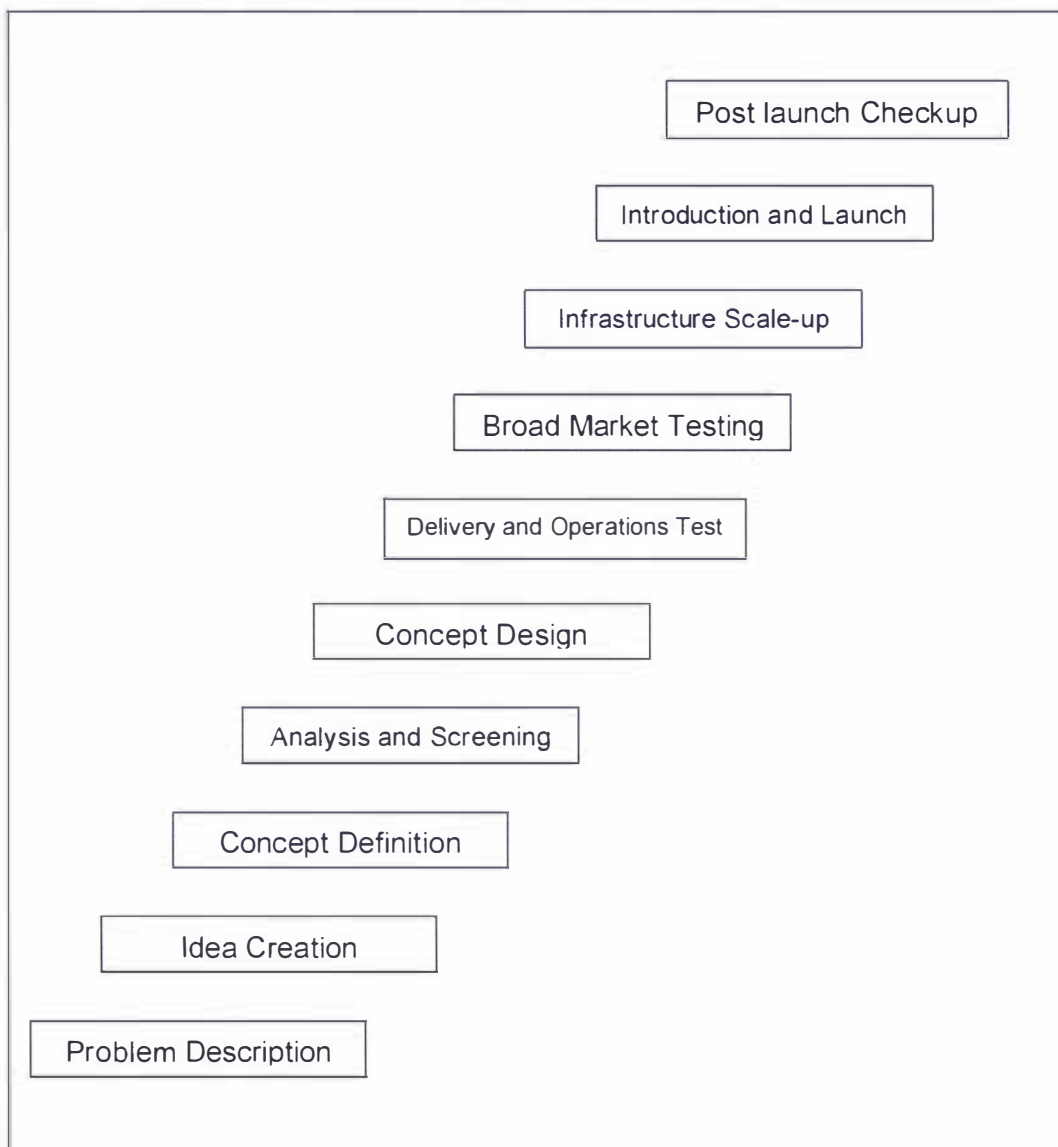


Figure 1.3: New Service Development Process (Terrill et al.)

Development of services remains less well researched (Easingwood 1986, Johne and Storey, 1996). Investigations have shown that New Service Development (NSD) is often less well-planned and organized than New Product Development (NPD) (Storey and Easingwood, 1998; Bowers, 1989). Service development literature suggests that relative to product firms, service firms are less likely to perform concept tests, test marketing, launch activity and are inefficient in predevelopment activities (Easingwood, 1993). The first steps of problem description, idea creation, concept definition, analysis and screening are vital for the success of the future stages.

A study comparing the innovation activities of Australian service firms and manufacturers explored the factors necessary for successful development of new goods and services. The study (Atuahene-Gima, 1996) found that both types of firms focus on similar factors but the relative importance varied. The critical factor for services - the importance accorded to innovation activity in the firm's human resource strategy - ranked third in importance for manufacturers. Service innovation advantage and quality ranked third in importance for service firms. Compared to manufacturers, successful service firms must place greater emphasis on the selection, development and management of employees who work directly with the consumer.

A review by Cowell in 1988, of the process of service development highlighted the following points:

- Most new services development appeared to be technology driven rather than consumer driven
- Generally, the rate of new service creation is quicker, while consumer adoption of new services are slower, relative to new products
- There are more service improvements rather than service innovations
- In most services, consumers are involved in the service production process
- Service staff are critical to service production and delivery

The lack of skilled and experienced development staff is one of the key barriers to product development in service firms (Drew, 1995; John and Harborne, 1985). There is still the tendency for development teams to be run on a department or committee basis (Edgett, 1993). It has also been stressed that there should be no fear of blame or punishment for failure (Atuahene-Gima, 1996).

1.7 Involvement of Consumers and Service Staff in Service Development

Products and services are seldom separate in the eye of the consumer; there is a continuum in relative importance in the buying and using the manufactured product through to the service product. The product development process is used for both new products and services but there are differences particularly in the involvement of consumers and service personnel. Consumer involvement is crucial in NSD (Johne and Storey, 1998). The groups of people having an influence on NSD are the service development staff, the front-line staff and the consumers.

Consumer experiences, expectations and perceptions appear to play a major role in the success of a service (Levitt, 1976, as quoted by Johne & Storey, 1998). Hence, new service developers should consider these factors when deciding to bring out a new service. In general the more involvement by consumers in NSD the better, though on the whole consumer involvement in NSD in practice has been found to be very low (Martin and Horne, 1995).

1.7.1 Role of Consumers in Services

Both service and manufacturing organisations try to satisfy identifiable consumer needs. The satisfaction of needs in each case requires stages of development (which have been well defined and well-researched in the case of goods, but not services) for the creation, purchase, use and evaluation of the new product/service. The difference between services and goods lies in the distinctiveness or separability of the steps and the degree of interaction or involvement between the consumer and service staff in each step.

There is a relationship between consumer, company personnel and product in all Product Development projects but the type of relationship varies. Where products are designed for selling through retailers, the consumer/product relationship is important; in the development of industrial products, there is a relationship between the supplier, the buyer and the product; for a service, the consumer, service and service staff relationship is important. This creates differences in the role of the consumer in the service development process and in the consumer research done in Service Development.

The partnership of the service staff and the consumer is a direct result of the unique characteristics of services. This leads to important issues of management of the service personnel and the consumers. Management of role perception for front-line staff and consumers, motivation, preferences, attitudes and behaviour become extremely important (Edgett, 1991).

The factors influencing new product or service failure are almost the same. The two main causes of service failures have been found to be poor, or lack of, market research and inadequacy of specifications. The difference between a successful service and an unsuccessful service is often the way consumers are treated (Levitt, 1976). In fact, it is surprising that there is very little research in this area despite the importance of the human interface in the service development and delivery.

It is recognized that consumers play a role in service production (Cowell, 1988) and therefore, their participation in developing services will need to be considered. Bateson (1982) points out that consumers vary in their level of participation. For example, many schools expect students to be active producers of their own education while some "spoon feed" their pupils. A large proportion of the elderly population would prefer not to deal with automatic teller machines - they do not want to play that role. Hence the role expectations of the consumer affect the service product, based on the willingness and ability of consumers.

There are different levels of service assistance (Gronroos, 1987). Some require or prefer more help while others are happy to do it themselves. To continue the education analogy, there are some students that are in the 'special needs' category that may need extra coaching and others in the gifted group that perhaps require minimal guidance.

1.7.2 Role of Service Staff in Services

Service literature has highlighted the crucial role that service staff play in some services where there is direct contact with consumers. The strength of this contact and relationship with consumers varies across the range of services (Gronroos, 1987). Due to the normally close interaction of service staff with consumers, they are often seen to be part of the service product (Johnes and Storey, 1998). Hence, research on new service development (NSD) should include service staff.

The researcher planned to involve service staff in the development process based on the evidence in the literature that their contact with consumers and their role in service provision meant that they have a strong influence on and knowledge about the service and therefore should be involved in its development. In an extensive search of the published literature, no formal publications were found covering research into the involvement of service staff in government Service Development. Significant service researchers like John, Storey, Edgett and de Brentani point out the lack of empirical research on the Service Development Process.

1.8 Need for Consumer Research in Service Development

Researchers have developed and used various consumer research techniques, but a majority of the work has been in the area of tangible products. In a service setting, market research is needed to help offset the effects of intangibility and inseparability (Cowell, 1988). Although it is expected from a theoretical basis that service industries have a strong need for consumer research, previous empirical studies suggest that these industries have not used this aid (Edgett, 1994).

Most of the research on the consumer's involvement in services focuses on consumer satisfaction and total quality systems. Few relatively recent studies deal with the formal process of service development (Smit and du Ples, 2000) and the consumer's participation in the stages of development (Scheuing and Johnson, 1989).

The product development process consists of the major stages of idea generation and screening, product concept to prototype development and through to the final product testing and commercialization stage. Consumers may be involved in all of these stages. A systematic development of a new service is more complex, due to the human elements involved and the nature of services.

Examination of the early development stages in financial services showed that internal sources of information were more likely to be used in new service screening than external sources such as consumer focus groups (Edgett, 1993). He also suggested that financial institutions are reacting to the competition instead of the consumer need. Griffin (1997) stressed the need and trend towards more qualitative research techniques in both Product and Service Development.

Research has shown that service staff play a major role in service provision, as stated above, hence, it is suggested that they be involved in the development process, in addition to consumers. One should learn from the experiences of tangible product development (which has been around for about forty years) and adapt the process of development, taking into consideration the peculiar nature of services.

There is a lack of research on service development in the public sector, although research on service quality has been reported by Donnelly et al (1995). Most of the research on public services has focused on service delivery aspects. There is a clear need for research on service development in local government in New Zealand for the following reasons:

The local government's role in society has increased. This is based on the government report that intervention at government level can be a more effective way of providing services, improving the welfare of society and leading to more efficient use of resources (Scenarios for local government to 2010, 2000)

Services are on the increase in local government (Trade New Zealand, 2000). There is a lack of empirical research on Service Development in the New Zealand local government. Public accountability and the pressure to 'get it right the first time' points to the importance of a systematic, well-researched development, based on sound information and consumer input. The emphasis is on innovation rather than productivity only, as used to be in the past. Consumers are more willing to pay for what they have asked for and need rather than on what is available already (Cowell, 1988).

More emphasis should be placed on a pro-active approach of promoting and developing the community's services rather than simply preventing it being harmed and maintaining existing services.

As both ratepayers and consumers of government services, New Zealanders are making increasing demands for information and participation in the decisions about government services (V. Vaidyanath, M. Manson, H. Tanguay, 1998), and expressing dissatisfaction with some services, especially social services. There is a need for a process model for Service Development (Smit and du Ples, 2000; Kelly & Storey, 2000), in order to better manage the complex procedures and the many groups of

people involved. Very few models on service development have been applied and researched in the public sector. A process model to assist government managers to systematically involve consumers and provide value to successful service development is required. The Palmerston North City Council's Annual Plan states that one of its strategic objectives is to develop effective techniques for identifying community needs and to improve their consultation methods. Local government needs to improve its responsiveness and effectiveness of services from a consumer perspective (Gill, 2000).

1.9 Research Theme

The central theme of the research was to study the application of consumer research techniques in the development of local government services. The areas examined were:

- Consumer participation in the development of services
- Service staff involvement in the development process
- Modelling of the Service Development Process

CHAPTER 2

Review of Consumer Involvement in Service Development

2.1 Introduction

This chapter reviews the Service Development process with particular emphasis on the early stages of the process and the role of the consumer. Activities and techniques for consumer research in the development process are reviewed. Research that has been conducted on local government services was also investigated. The aims and objectives of this research are presented.

Several topics related to new Service Development were reviewed in order to provide direction and new areas for research. Since New Service Development (NSD) is multi-disciplinary, relevant research was found in a wide variety of journals and disciplines such as, service marketing, service quality and service management. Some of the key topics reviewed were consumer research related to NSD, government research, development processes, public service management, new public management, services marketing and service quality research. However, the focus was on consumer research in Service Development.

One fundamental principle is that technology, products and services rarely exist on their own. They should be considered in the context of user understanding, information support, change of behaviour, demands on the user and benefits from solved problems (Drew, 1995). The aim of user-oriented Service Development is to achieve the best possible fit between the service and the people who use them. A prerequisite for achieving this is the identification of user requirements, based on studies of user expectations, experiences and customer satisfaction. User requirements are then transformed and articulated in such a way that they provide a basis for the choice and development of products (Cooper & Kleinschmidt, 1987).

The main purpose of the first stages of Service Development is to gain knowledge about where and how the service will be used and the consumer interaction with the service, to pose requirements for new or improved services. This research focused on the early stages of Service Development and, therefore, much of it was oriented towards methods and techniques of eliciting, transforming and representing consumer requirements for development into services.

2.2 Consumer and Service Staff relationships in Services

In the Product Development literature there are three major stages at which consumer input is incorporated. These are at the initial phase, product testing and market test stages. Earle (1971, 2000) has emphasized the importance of researching the consumers and utilising these people in the entire development process. In Service Development, Shostack (1984) recognized that consumer input is usually not solicited until service firms have already designed their products, while literature suggests that the reverse is practiced. With increasing use of market research techniques it is valuable to identify important attributes and develop services based on that.

There are a number of trends related to consumer input in development. There is an increasing use of qualitative research techniques for exploratory research. These are also termed as ethnographic research, which include the study of consumers and the product or service relationship. It is argued that the consumer should participate throughout the development, particularly in the early stages. Consumers can handle an increasing variety of tasks such as rating the importance of attributes, generating and screening ideas, concept preferences etc. Consumers are used for extended periods of time and more frequently in the development.

It is important to involve consumers in the development process and help them articulate their needs. In general the more involvement by consumers the better, though on the whole consumer involvement in service product development has been found to be low (Martin and Horne, 1995).

Edvardsson and Olson (1996) make a number of important observations with regard to the consumer's role in development; involving multiple interactions with consumers, with staff, with the physical parts of the service needs to be customer friendly. They go on to say that the consumers are the best people to judge these

service aspects. Schneider and Bowen (1984) have suggested that consumers may need training for their role in service production and in this way they can become “partial employees”.

Both service and manufacturing s try to satisfy identifiable consumer needs. The satisfaction of needs in each case requires stages of product development (which have been well defined) or steps for the assembly of new services, the purchase, use and evaluation of the product/service. The difference between services and manufactured products lies in the distinctiveness or separability of the steps and the degree of interaction or involvement between the consumer and producer in each step. Table 2.1 shows a comparison of the consumer’s interaction in the various stages of development of manufactured products and services.

Table 2.1 Differences in the consumer interactions in the development processes for Products (Goods) and Services.

	Products (Goods)	Services
Production/Assembly	Customer not involved in the production process Production is not visible to the customer (hence, the manufacturing facility is unimportant to customer) Production can be standardised and controlled Production takes place at a separate location and time from use	Customer is part of the production phase Most of the process is visible (hence, service facility is very important) Assembly cannot be easily standardised Assembly and use occur simultaneously
Purchase	Purchase is separated in time from use	Purchase and use occur simultaneously
Use	The customer controls the use of the product. The firm may provide guidelines, but is outside the process when it actually happens	The supplier is integrated into the use process and can control this

The services marketing and services management literature recognizes the sometimes intense; sometimes intimate relationships that characterize some service environments. For instance, relationships with a service provider who is performing a service on your person (usually medical or dental) or on your mind (usually educational) tend to be more intense than other services or product related exchanges. The greater opportunities for more personal contact in these circumstances means that, in general, both consumer and service staffs have roles to play in the service encounter (Gronroos 1990).

2.3 The Challenge of Service Development

Product Development is an industrial research method used to develop or improve products in ways that focus on the users of the particular product (Earle, 1992). The product development process is essentially cross-functional, involving human resources from functional groups including marketing, production and processing. This encourages concurrent engineering, with decisions being subjected to evaluation of their impact on succeeding stages in the development process (Earle, 1971). Several early researchers have studied the product development process including Booz-Allen and Hamilton (1982), Earle (1971) and Cooper, Kleinschmidt (1987). Earle (2000) emphasized the integration of consumer research into the product development process and the evaluation of the market, particularly in the early stages.

Recent specialist literature focuses on the development of services as distinct from tangible products. Most service products involve close interaction with consumers. The interaction is the distinguishing feature of service offerings (Johne and Storey, 1998). This poses special challenges for Service Development. This means the development should not only look at the service product but also the appropriate nature of interaction of with consumers. John and Storey, 1998, point out that because the interaction process is typically an integral part of a service, the development of a new service is usually far more complex than the development of tangible products.

Griffin's 1997 review on development trends and practices reports a focus on qualitative market research and a trend towards direct contact with users. The three most important consumer research tools have been developed within the last ten years

are: the voice of the customer (1 on 1 face-to face situation-based interviews to uncover needs), site visits (respondent interviews on site) and beta testing (prototype evaluation in actual use situations). Established consumer research tools such as conjoint analysis, concept tests, focus groups and test markets are still used.

Best practice studies recommend that New Product Development (NPD) and New Service Development (NSD) should start from a product or service strategy, use multi-functional teams and do more qualitative market research (Booz-Allen and Hamilton, 1982, Kelly and Storey, 2000).

The literature revealed that the services that were most studied were financial services, insurance, telecommunications, hotel and food services. Griffin, 1997, reported that adapting product development processes for Service Development has not occurred in any routine fashion. She also summarized the following about NSD:

- The New Service Development (NSD) process should not be over simplified or miss out important activities
- Engineering tools are of limited use in NSD
- The long legacy of emphasis on NPD rather than NSD could explain the lack of information on effective NSD practices

Research analysing the differences between developing services and products (Martin and Horne, 1994) showed that consumer participation in the development process and the use of consumer information is less common but more important in Service Development.

Examination of the early development stages show that internal sources of information are more likely to be used in new service screening than external sources such as customer focus groups (Edgett, 1996). He also suggests that financial institutions are reacting to the competition instead of the consumer need.

As in most industries, service firms must increasingly pay special attention to resource allocation and to prioritisation of projects. Due to the nature of services there is a temptation to undertake too many projects, to spread resources too thinly and to do a less-than-proficient job on each project (Edgett, 1993).

Studies on the implementation of the Product Development process to service s suggest that the following are key factors (Scheuing and Johnson, 1989):

- The importance of a consumer focus: finding out consumer needs and areas for improvement
- Importance of innovation strategy and fit to organisation's vision
- Top management support and commitment
- Sound decision-making based on research

There has been much international research into Product Development practices and in recent years on Service Development. Most investigations have centred on the manufacturing industry and the private sector. This research provides insights and new directions for Service Development research in the public sector. It studies the application of a systematic process of consumer research for the development of services for the local government. Consumer research techniques used in previous studies have been investigated, adapted and applied in the "live" case studies.

Scheuing and Johnson (1989) and more recently Johne and Storey (1998) and Smit and du Ples (2000) have published comprehensive reviews of new Service Development. Ongoing literature searches built on these key papers and included recent insights specifically on the early stages of Service Development. Comparisons of findings in the literature were made with the present research. Some of the general issues were a confirmation of others' results, while some were unique to the local government service environment.

2.4 Purposes served by Service Development

Service Development can serve two main sets of purposes: business purposes of the service and personal purposes of those involved. Business purposes serve the objectives of the service supplier and include aims such as diversification, growing new markets, using company resources, attracting new consumers and improving the loyalty of existing consumers or changing the company's image (Easingwood and Storey, 1998).

A service may achieve higher overall customer satisfaction through increasing the number of satisfied consumers as well as increasing the satisfaction of existing

consumers. Similarly, perceived service quality is said to lead to repeat usage (Gronroos, 1990). The development of a service can lead to a better understanding of a market's particular requirements, making it easier to spot further opportunities (Easingwood and Storey, 1998). It is recognized that attracting new consumers is considerably more difficult and costly than keeping existing ones (Cottrell, 1993).

Little research has been published on the personal purposes of NSD, that is the personal reasons that service development is undertaken by service managers. Research by Griffin and Page (1993) showed that personal aspirations of development managers are different from academic researchers. They are reported to avoid product development failures. Service Managers do not take enough risks and do not want to be associated with product failures (Smit and duPles, 2000).

2.5 Success Factors in Service Development

Large-scale investigations of success factors in Service Development have been carried out by the following leading researchers: Easingwood and Storey (1998); Edgett (1994); Cooper et al (1994); Atuahene-Gima (1996); and de Brentani (1995). Their research showed that project success is multi-factored. The supporting activities can be broadly summarized under three tasks: opportunity analysis, project development and offer formulation. *Opportunity analysis* identifies the new service opportunities and includes an assessment of the synergy with the existing process operations. *Project development* is the timely and cost effective preparation of projects, the importance of the development process. *Offer formulation* maximizes the appeal to target consumers in terms of core performance attributes and consumer evaluation, choice and usage elements (Johne and Storey, 1998).

Ideally the development will be market-driven. Technically or intuitively driven development often results in products that lack relevance to the consumer (East, 1991). Hence the importance of identifying the precise needs of the market. Firms with a strong market orientation often develop more successful products (Johne, 1998). Successful new services should be part of the 's strategy and for a clearly identified target market. Functional coordination during development is recommended. This can be achieved through good internal communications or cross-functional development teams. Martin and Horne (1995) showed that success is

more likely if there is extensive involvement of consumers in the development process, especially in idea generation. The early stages of the development process are emphasized as being particularly important for preventing mistakes later on.

In general it is advantageous to develop services that are familiar to consumers, less complex, and relatively easy for consumers to understand. This is particularly true for services that require a high degree of customer participation (Lievens and Moenaert, 1994). Many consumers cannot evaluate technical aspects of a service and therefore rely on functional aspects and their experience when judging service product performance. An important element of this is the service staff expertise not only in terms of technical skills (e.g. service knowledge) but also customer service skills and the particular needs and capabilities of the consumers who will use the service.

Research into the success of a whole series of Service Development projects in companies- over a long period of time- have also produced similar success factors to individual projects (Drew, 1995; John and Snelson, 1988; Martin and Horne, 1993). Successful projects used more formal, better-structured processes, include market knowledge and manage within the limitations of available resources.

Cooper et al obtained data in 1998 from 173 financial services and identified three performance dimensions: financial, relationship and market development. Management implications included the need for a market driven, customer focused development process, emphasis on planning and executing the launch, the role of product design and project prioritisation factors. John and Snelson, 1988, identified "active client consultation" and "client commitment" as two major factors critical to success.

The need to be successful in Service Development is becoming essential with the increase in public accountability and costs of developing and implementing new services. More demanding consumers, technological changes and competition create pressures within the service industry to adopt better and more systematic methodologies for development (Edgett, 1993).

The U.K. study, Project SAPPHO (Rothwell, 1976, as quoted by John and Snelson, 1988) showed that the most distinguishing factors between 'winners' and 'losers' were, in rank order:

- Understanding of consumer needs
- Attention to marketing and launch activities
- Efficiency of development activities
- Effective use of external sources

These factors were similar to those reported by Cooper and Kleinschmidt, 1987, Booz-Allen and Hamilton (1982) and Bortree. (1991). Recent research on NSD has shown that a formal planned approach to new business services is also associated with improved performance (de Brentani, 1993).

Drew, 1995, stressed the need for a clear corporate vision and role for New Service Development. Clear goals must be set for the Service Development programme. In general, the culture of the plays an important role. There should not be fear of failure. Excessive bureaucracy can stifle innovation. Internal systems should support innovation and enhance communication. Many service organisations lack development competencies and appropriate al structures (Scheuing and Johnson, 1989, Edgett, 1993).

2.6 Service Development Process

Service industries are lagging behind in Service Development models compared to manufacturing industries (Gronroos, 1990). They are facing the challenge of a more sophisticated customer who demands a more efficient, competitive and effective service. The lack of skilled and experienced development staff is one of the key barriers to new service development in service firms (Drew, 1995; John and Harborne, 1985). There is still the tendency for development teams to be run on a committee basis (Edgett, 1993).

Shostack (1984) identified four essential characteristics of an effective development process: objectivity, precision, fact-driven and methodologically based. Cooper (1994) emphasized that the levels of sophistication reached in tangible product development are yet to be reached in Service Development. Bowers, 1989, Scheuing and Johnson (1989); Martin and Horne (1993) have all shown that service suppliers do not, in general, use formal development procedures and fail to meet Shostack's

characteristics. Moak (1986) showed that new service product failures were due to the skipping of stages of the process or the process was carried out haphazardly.

Booz-Allen & Hamilton (1982) have noted that companies that have a disciplined approach to the development process, experience more new product success. Product success is associated with systematically carrying out the individual stages of the process and conducting each stage, particularly the first few stages proficiently (Cooper and Kleinschmidt, 1995, 1987). Easingwood (1986) found evidence of differing practices among service businesses in terms of the formality of their *screening processes*, ranging from the formal (26 per cent) to the informal (23 per cent). He also found that practices vary between service sectors with more formal procedures being used by financial institutions, but not by other service s.

The use of a structured process of development is an effective tool to achieve success. Cooper, 1983, Cooper and Kleinschmidt, 1991, highlighted the benefits of the formal process to successful development. Jenkins et al. (1997) have stated that a formal process provides a road map for the product development team to follow.

Although the literature emphasized the importance of the structured process to successful development, in practice only around half of the companies surveyed in New Zealand have been found to use at least some of the stages (Campbell 1999, Kerr 1997, Griffin 1997, Page 1993).

The level of existing knowledge in Service Development can be compared to the level of knowledge about the development of tangible products in the late 1970s (Cooper and de Brentani 1991). Recent studies have determined that although the development of new services does share a number of common traits with tangible product development, there are several distinct differences (Cooper and de Brentani 1991). A large number of development models have been advanced in the area of manufactured products (Earle 1967, 1997; Booz-Allen & Hamilton, 1982; Cooper 1988, Crawford, 1987). Very few models have been proposed or empirically tested in Service Development. John and Storey, 1997, have reported that the major stages of the process remain the same, but the activities within stages differ due to the nature of a service product. They also mention the lack of effort to develop specific Service Development models.

Scheuing and Johnson, 1989, and Shostack, 1984, have introduced some differences to traditional development models in the service sector. However, models developed to date tend to address the development process from a macro level and do not deal specifically with details of the stages (Figure 2.1), nor do they show the consumer and service staff involvement. The models also appear to be rigid and linear. Studies by Cooper and de Brentani 1991 and Easingwood, 1986, have confirmed that the successful development of new financial products is affected by the detail and quality of development activities. These studies confirm the need for more research into the process of Service Development.

Scheuing and Johnson (1989) have developed a New Service Development (NSD) model that incorporates the design of both the service and the delivery process. They concluded that service innovators must use more market research in the development process. Their model was developed based on several product development models developed earlier by researchers such as Pessemier, Urban and Hauser and Crawford.

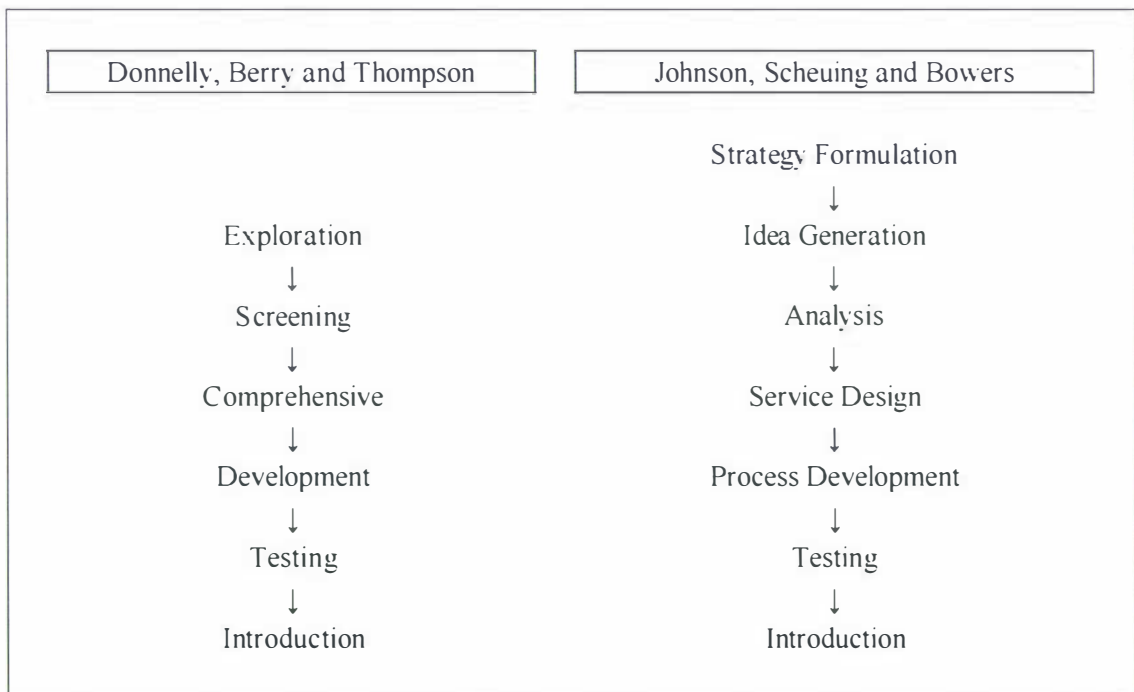


Figure 2.1: New Service Development Models

According to Scheuing and Johnson (1989) service businesses must put more emphasis on new Service Development and must develop systematic processes for this. Langeard et al, 1986 Scheuing, 1989 reported that new services happen without much planning.

2.7 Local government Service Development

2.7.1 Local government Service Culture

It is a known fact that product development takes place within a context and is influenced by it. In the case of the local government, the council structure and the overall management framework exert an influence on New Service Development (NSD). The depth of hierarchy and power, accountability and decision-making affect the speed and flexibility of the development process. The traditional culture of formal meetings, working parties and committees affect the communication aspects of Service Development. The culture of the is more important in the case of services due to the major “social” component in it. Aspects of the service and community are likely to affect the service context (Lane, 2000).

A review of the literature and publications on local government services and culture was carried out. This provided an understanding of the standard procedures and controls, the close adherence to precedent and formal submission procedures for new service ideas. Internally, this may be appropriate to the , but in the case of NSD, processes need to be simple, easy to apply and flexible. This highlights the need for a simple process model for Service Development.

The local government service culture is one of accountability, controlled by social, legal and financial constraints. There seemed to be a low tolerance for trial and error or a high threshold for risk taking. Atuahene-Gima, 1996, has stressed that there should be no fear of failure for successful Service Development. There appeared to be some ambiguity about the “core” services of a local government. One way of defining core services was to eliminate services that are provided currently by private s. The Funding Policy addresses who benefits from Council services, who should pay and how, and also controls the funding allocations for the Council’s services.

2.7.2 Decision-making in Local government Services

The decision-making for any new service within the government body rests ultimately with the Council. The Council to the local government body is like a Board of Directors to a private company. The managers provide their advice and recommendations to the Council, and the Council finally decides on whether to proceed or not.

Council decision-making occurs within a programme of formal meetings. The Council and committees meet regularly while sub-committees and advisory groups meet as required. The Standing Orders regulate the conduct of Council and Committee meetings. The Standing Orders also include procedures for public attendance and participation at meetings. The local government Official Information and Meetings Act 1987 specifies rules of conduct for the meetings.

Each elected member has responsibilities and a role to play, which allows the council to make decisions. Much of the business of council is delegated to committees, but there are some decisions, which must be made by full council.

Service Staff Involvement

Often service staff are not included in the service decision-making process. Inclusion of junior service staff in decision-making processes and meetings would be beneficial in developing acceptable services. Service staff may have a frontline role, yet have little opportunity to contribute to service design and decisions which may have significant impact on consumer perceptions of their role. The level of confidentiality could affect the staff 'buy in' and their co-operation in the development and particularly in the implementation and delivery of a new service.

External consultants

External consultants are used for various projects and reports. This appears to reinforce the perception of large amounts of paperwork and external contracts (Lane, 2000). In some departments such as the Strategic Planning Unit (SPU), there is a preference to have control over projects and engage experts for some aspects to maintain neutrality and confidentiality. Services developed by a multidisciplinary and multi-level team who know the organisation are more likely to win commitment and

support. Whilst there is value in employing consultants for up-to-date expertise and specialist knowledge, there is also the opinion that the organisation could attract managers with these skills and expertise. On the other hand there has been criticism of the private sector not making use of international expertise and consultancies (Vaidyanath, 2000). So, there has to be a balance and a set of criteria for the usage of consultants. Kelly, Donnelly and Skinner, 1990, emphasize that internal communication and teamwork are essential for effective Service Development.

Recently the Council has adopted a more consultative approach to complement their internal central planning process, but would like advice on techniques of involving the public in service decision-making. They would like to involve the community and offer services that they need, rather than the traditional approach of providing only basic services.

2.7.3 Palmerston North Council's Strategy for New Services

The Palmerston North Council Strategic Plan indicates that the Council will focus on the following significant activities and Figure 2.2 illustrates the associated funding. The Council provides through its significant activities a wide range of services for the community.

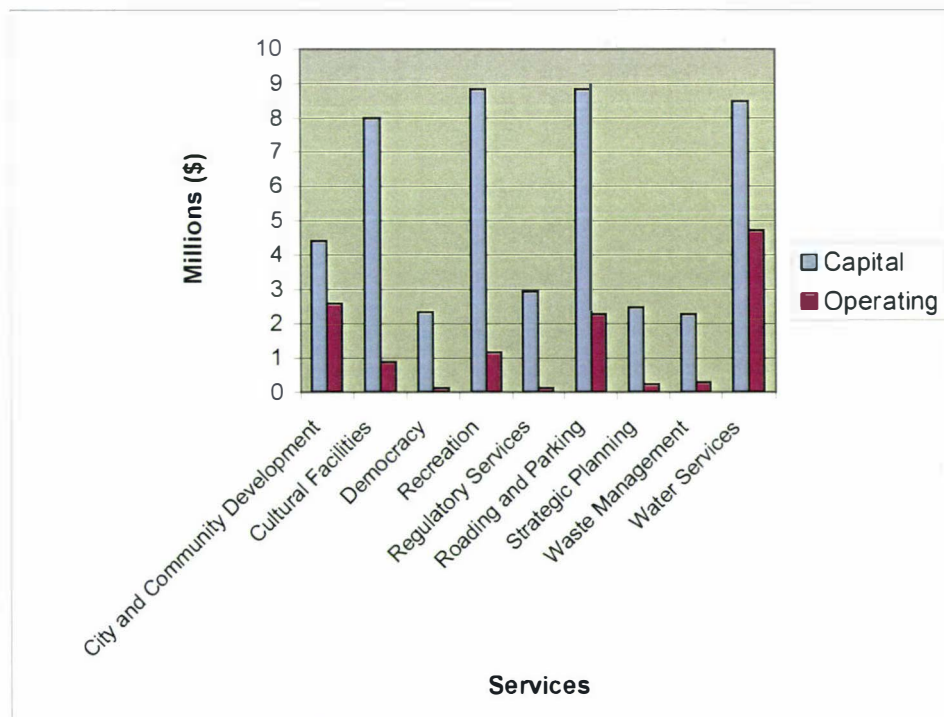


Figure 2.2: Council's Significant Services and Activities Plan

The *Council's Strategic Plan* shows what services the Council will offer to help achieve the City vision. It has a ten-year time frame. The Long Term Financial Strategy (LTFS) is a statutory requirement that sets out the cost of Council services and is reviewed every three years. The Annual Plan, set out from the LTFS, details the information for each year's projects and indicative projects and finances for the next two years. So, any new service initiatives or ideas are required to be submitted to the Council and be adopted into the Annual Plan, if it is to be actioned in the following year. Some may be adopted sooner if the cost is not too high, if there is an urgent necessity and if it fits into existing plans.

2.7.4 Consumer Involvement in Government Services

As well as the Council itself there are many stakeholders affected by the Council's services. The Council's stakeholders include groups of the public, businesses, voluntary organisations, ratepayers, residents, environmental and other lobby groups, tangata whenua (Maori of local descent), recent immigrants, ethnic groups and visitors to the city (Refer to Figure 1.1). The question of how the needs and concerns of these stakeholders are obtained is an important issue in the acceptability and performance of services provided by the Council.

Most local governments have a wide variety of consumers for their different services. Some of these are similar to the private sector consumers paying directly or indirectly for services provided (Sanderson, 2001). Others use services, sometimes unwillingly, but make little or no financial contribution towards their provision. Yet another type of customer may pay for a public service but not experience its benefits through direct use. The role of other stakeholders and elected members is ambiguous in this respect (Donnelly, Dalrymple and Curry, 1998).

There are a range of Council practices for consumer input such as, public forum, radio talkback, submissions (oral/written), public notices and meetings. While these methods allow for public input, they may only include consumers who have strong opinions and therefore may not be representative of the population. Hence, the need for random sampling techniques and consumer research methods that systematically include consumer input - methods that have clear objectives, expected outcomes and

decisions to be made. These techniques help to inform the consumer of their role in the process and the timing of their inclusion, as well as aid in gaining useful consumer information by the Council. Techniques that allow for presentation of material to the appropriate segment of the public for reaction were particularly useful, especially for service concept selection.

There appeared to be a common term of ‘consultation’ used for all types of consumer information requirements. Within the broad term of consultation, there were different practices used in different service projects, starting from basic information collection to participation in public debates. When Councils sought public input for services, there appeared to be a need for clearly defined processes with definite outcomes and an endpoint, so that public interactions are purposeful and meaningful. The traditional public meetings are not well attended (Source: Enterprise New Zealand Trust, 1997). Submissions were the area of consultations in which councils had the most experience but which remain highly unsatisfactory in that only consumers with strong opinions or lobby groups were inclined to make formal submissions. The challenge was to combine flexibility with transparency, efficiency and to make the process user-friendly.

Feedback to submitters is something Councils are grappling with, and the thing most likely to be neglected when resources are tight and staff busy. Councils need to build appropriate on-going systems for community input (Source: Enterprise New Zealand Trust, 1997). Some Council staff realise that properly conducted consultation can save enormous costs in terms of delayed or failed developments and services. They recognize the need for a creative thinking phase, a planning phase, need and evaluation phase, the ability to recognize pressure points and defuse potentially hostile situations.

The following verbatim comments from some Council staff highlighted the need for consumer research techniques in the Council’s Service Development.

“Listening to the Community helps with decision-making”

“We would like to seek and improve citizen input”

“It is vital for the Council to be seen as listening to the public”

"Including public input is a requirement, but Councils need effective techniques and processes"

2.8 Consumer Research Techniques

2.8.1 General Techniques

The task of consumer research is to provide relevant, reliable and current information to aid in decision making. Today's ever-changing environment, and increasing costs attributed to poor decision-making requires that information be gathered early in the Service Development decision-making process. Correcting faults or omissions at later stages in the development process is recognized as expensive and early collection of consumer information and acceptance can save considerable costs later in any development project, and also prevent the cost of product or service failure.

Kulio (1998, as quoted in Ulrich and Eppinger, 2000) reviewed consumer research techniques in the development process and stated the benefits of consumer involvement in different phases of development. In the (manufactured) product area, the consumer has been involved mainly in the evaluation, concept generation and testing phases (Earle, 2000).

Service Development should be planned with a thorough knowledge of the needs and wants of the market (Gummesson, 1999; Gronroos, 1990). According to Cowell (1988) the design of service processes from a *marketing perspective* has received scant attention by many service organisations so far but is increasingly recognised as a major area in which a new service can be differentiated from competitor offerings. *Test marketing* among service companies is limited (Easingwood, 1986).

Several consumer research methods exist in the literature namely, *surveys*, *focus groups*, *conjoint analysis*, *beta testing* (Dolan & Matthews, 1993 – as quoted by Ulrich and Eppinger, 2000; Brennan 1992), *concept testing* (Moore and Pessemier, 1993), *lead-user method* (Urban & von Hippel, 1988; Herstatt & von Hippel, 1992, as quoted in Ulrich and Eppinger, 2000), *Quality Function Deployment QFD* (Ulrich and Eppinger, 2000); *Observation technique* (Greenbaum, 1998). The observation method has been used to observe consumer behaviour in a natural or simulated setting, such as at traffic intersections.

* *The Delphi Technique*

The Delphi technique was developed as a means of obtaining expert input into forecasting. It involves the use of a panel of experts who participate in several rounds of input into forecasts to achieve a consensus forecast of, for example, future technology developments and their implications for new products and processes. Marr and Prendergast, 1993 (as quoted by Brennan, 1992), to study consumer adoption of self-service technologies, used the Delphi technique.

* *Mystery Shopping Technique*

The *Mystery Shopping* or shadow shopping technique has been used to assess service quality, where the researcher (in the case of mystery shopping might be a staff member from another branch) plays the role of a consumer and compares the services provided by the or by different retailers in the case of shadow shopping.

* *Mail Survey*

The *mail survey* method has been used by many Service Development researchers for financial services (de Bretani, 1993; Sheuing and Johnson, 1989). The same technique was employed by Edgett (1993) who sampled British building services. He found that early steps in the development process were poorly conducted, screening procedures were informal and the lack of external information gathering suggested that many firms are conducting very risky product development practices in the early stages, as consumers were not being contacted.

Hoinville, G., Jowell, R (1987) mentioned the importance of the *survey technique* for gauging consumer attitudes. Baim (1991, as quoted in Hoinville, G. and Jowell, 1987) cites from an ESOMAR (European Society of Opinion and Market Research) study that 40% of US consumer research is collected by mail surveys. Mail surveys can provide comparative advantages for surveying widely dispersed samples and for reducing interviewer bias. Additionally they give respondents time for completion and cost advantages for researchers. Surveys addressed to specific persons resulted in better response rates (Boon & Kurtz, 2001; Yammarino, Skinner and Childers, 1991).

The term response rate deserves some definition. It is used to describe the ratio of sample units successfully surveyed (yielding 'acceptable' data) to the number of eligible sampling units. However, it is generally recognized in mail surveys that individuals who never had the chance to complete the questionnaire or do not qualify to be a respondent should be defined as ineligible (Boone & Kurtz, 2001). Gendall, 1996, reported that for most practical purposes a response rate of 50% could be acceptable. This rate is a minimum and researchers should strive to increase the mail response rates to 60% 70% range.

* *Face-to-face Interviews*

Johne (1993) researched insurance companies using the *face-to-face interviews* and concluded that there was a long-term payoff of a strong market orientation.

* *Projective Techniques*

Projective Techniques are useful when there is a likelihood of giving 'socially acceptable' answers to direct questioning, and where consumer reactions to prototypes or simulated services are observed. Gordon and Langmaid (1988) have researched this method extensively and support the use of these qualitative techniques.

* *Self-Administered Surveys*

This technique has been used widely in consumer research when consumers are either geographically spread over a large area or there are time constraints, or when the questionnaire is simple enough for consumers to answer on their own (Greenbaum, 1998).

* *Role-playing Technique*

Role-playing has been used successfully to study interactions between two groups of people such as student-teacher or interviewer-respondent (Gordon and Langmaid, 1988; Greenbaum, 1998).

* *Focus Groups*

Qualitative data collection methods have been well documented for techniques including *focus groups, unstructured direct interviews and observation* (Gordon and Langmaid, 1988). *Focus Groups and in-depth interviews* have been used for

identifying consumer trends (Denzin and Lincoln 1998), product acceptance and customer needs (Yovovich, 1991, as quoted by Kress, 1998). The focus group's popularity is due to its simplicity and versatility. However, it suffers from the inability to project to large populations and can be used only to provide direction and insight. The use of more than one method (Triangulation see below) helps to validate qualitative research (Denzin and Lincoln, 1998). *Projective techniques* and *observational techniques* have been used extensively by Gordon and Langmaid (1988). Denzin and Lincoln (1998) suggested the use of qualitative research with careful planning to eliminate bias.

Undertaking qualitative research to examine service dimensions that underlie certain circumstances or contexts is common in applied research practice (Gremler and Bitner, 1998).

* *Questionnaires*

The design of questionnaires has been the subject of many research studies and text books. In *questionnaire design*, Gendall (1996) highlighted the advantage of close-ended questions both from reducing the respondent's time and the research analyst's time. Hedrick et.al (1993) emphasized the time and cost advantages of the self-administered questionnaires. The general quantitative data collection methods include telephone interviews, mail surveys and structured personal interviews (Greenbaum, 1998). All of these require careful, concise construction of questions, in a logical sequence (Kress, 1998).

* *Scaling Techniques*

Scaling Techniques are commonly used for consumer attitude measurement, usually in quantitative research. Line scales, verbal scales, visual and numerical scales and propensity scales can be used to measure consumer's feelings and willingness to adopt new services. Line scales have been used in food product development (Earle, 1999). The *seven-point Likert scale* was used by Martin and Horne (1995) to capture the respondent manager's perception of consumer participation and innovation success.

* *Triangulation*

Qualitative research is a field of inquiry in its own right. It is usually desirable to use several techniques to be sure that the results are focused and accurate. This technique is known as triangulation (Denzin and Lincoln, 1998). Gordon and Langmaid (1988) suggest the use of a combination of qualitative and quantitative techniques to gather information from consumers. The choice of tools to use is not set in advance. The choice depends on the questions that are asked and the questions depend on the context (Denzin and Lincoln, 1998).

2.8.2 Consumer in the Development Process

The place of the consumer in the development process, although similar, is slightly different for products (goods) and services as shown in Table 2.2.

Table 2.2 Consumer in the Development Process of Products and Services

Development Process	New Product Development	New Service Development
Problem Identification	Contact with consumers helps identify the problem	Contact with consumers and service staff can help identify the problems
Idea Generation	Various idea generation techniques have been used and the consumer may be involved.	Similar techniques could be used, but participation of both service staff and consumers will be beneficial.
Concept Development and Evaluation	Formulation of basic concept definition and presenting consumers with verbal descriptions and or sketches to get their reactions	It is important to seek both consumer and service staff descriptions for the concept. Evaluation should involve both groups
Business Analysis	Analysis of financial, technical and manufacturing issues.	Analysis of economic, technological and operational issues (which includes cost of hiring and training service staff, facility changes and delivery system enhancements).
Development and Testing	Construction of product prototype (technical, marketing, manufacturing, research and development, design functions) and testing	A challenging step in the case of intangibles (technical, marketing, human resources, operations, logistics) - again essential for service staff to play a part.
Market Testing	Tangible product tested on a limited market.	Standard approaches are difficult; therefore, internal testing, simulations or role-playing may be used.
Commercialisation	Internal and external launch preparations required	Excellent internal marketing required to maintain enthusiasm for the new service, due to slow new service adoption by consumers.
Post evaluation	Consider minor modifications and improvements to product based on market reaction.	Customer satisfaction surveys. The service concept definition may provide a focus point for improvements to service quality.

2.9 Consumer Research in Local government Service Development

2.9.1 Importance of First Stage of Service Development

Most service industries have a need to develop a steady stream of service innovations. Very few services are prepared to meet this challenge. The literature revealed that most of the research on NSD has been done on financial services. It is only in recent years that academic researchers have been concerned with the development of a wide variety of services (Johns, Storey 1997). There is a lack of research on the development of services by government bodies. However, there is published literature on aspects such as *service quality* and *service marketing* in the public sector, but the focus of this research is on Service Development. There is a need for empirical research in Service Development as both public and private sectors strive to meet customer demands and customer satisfaction. The literature has emphasised the importance of the consumer in the development process and also the close interaction of the consumer with the service staff, in some services but has not placed a comparable emphasis on the need for a systematic service development process mainly due to the lack of research to address needs.

One of the main conclusions to be drawn from the literature on new Service Development is the importance of the first stage of Service Development. Cowell (1984) stressed the need to first define the core service attributes. Edvardsson and Olsson (1996) suggest that the first stage of development should describe the consumer needs or problems and the ideas or solutions on how these are to be satisfied and thereafter, to define the service system and resources.

2.9.2 Activities in the First Stage of Service Development

In the Service Development area, most of the research has been on financial services and on the success factors involved. Johns and Storey in 1998 concluded that the activities in Service Development can be summarized broadly under three headings:

Opportunity Analysis: Synergy with strategy, existing operations, market and managerial synergy. Market knowledge includes understanding consumer needs and behaviour, clearly identified target segment, use of consumer research and response to changes in the market.

Project Development: Management support, coordination, service staff involvement, preparation of project in a timely manner and launch appropriately.

Offer formulation: To maximize appeal to target consumers in terms of core service attributes and appropriate consumer evaluation, choice and usage elements.

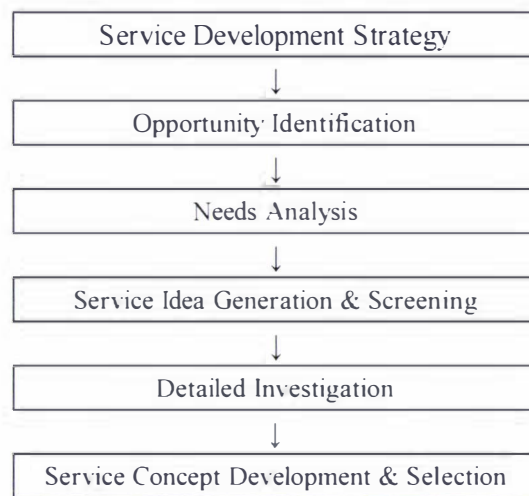


Figure 2.3: Activities in the First Stage of Service Development

The first stage of the Service Development Process involves identifying the development strategy, opportunity identification, needs analysis, generating service idea, detailed investigation and developing service concepts, as shown in Figure 2.3.

2.10 Summary of Consumer Research in Service Development

To sum up, the public is demanding more say in local government services and Councils needed to respond to this in a consistent way, using systematic consumer information-gathering techniques. One of the Council's objectives is to develop effective techniques for identifying community needs and improving consultation methods (Annual Plan 1998, PNCC). Following their comprehensive NSD literature review in 1998, Johne and Storey highlighted the need for investigation into NSD processes in different service sectors. They concluded that leading edge developers approach Service Development tasks from a consumer based view and regard

technical inputs as necessary but in themselves insufficient means for doing well in markets.

From the review of the literature on Service Development and the suggestions for future research by leading researchers, it was concluded that an empirical study of consumer participation in early Service Development would be undertaken within the local government context. Johnes and Storey (1998) have commented that it is in organisations that are not traditionally perceived to be highly innovative that efforts to introduce NSD techniques are urgently required, especially in opportunity identification and idea generation activities. On the other hand, in leading edge service innovators, such as financial services, the greater need is for systematic screening of ideas. The above highlight the need and importance of consumer research in local government Service Development.

The research questions were:

- How can the consumer participate in the early stages of Service Development?
- How can the service staff contribute to Service Development?
- Can a model be constructed that shows the consumer and service staff involvement in the development process?

2.10.1 Researching the Consumer and Service Staff Involvement

Schneider and Bowen (1984) identify four benefits of encouraging *service staff* involvement in new Service Development: to help identify consumer requirements; to increase the likelihood of positive implementation; to help stop process efficiency consideration overwhelm the needs of consumers; and lead to service staff treating consumers better.

Martin and Horne, 1995, stress that it is important to involve *consumers* in the development process and help them articulate their needs. They emphasize that the more involvement in Service Development the better, though consumer involvement in Service Development has been found to be relatively very low.

Edvardsson and Olson (1996) commented on the role of consumers in Service Development: the service interactions with consumers, the physical environment and

the technical systems need to be customer-friendly and adapted to human logic. The best people to judge this are the consumers themselves. The role of the consumer in service production must be made clear to the customer and if necessary the consumer may need to be trained. Schneider and Bowen argue that in this way consumers can become “partial employees”.

2.10.2 Consumer Research and Service Development

The task of consumer research is to provide management with the information needed to identify and solve Service Development problems or make Service Development decisions. In the early stages of Service Development, the research should define the important service attributes, gather consumer evaluation and attitudes towards current services based on these attributes and identify any problems or opportunities to focus improvement on.

The lack of use of consumer research in Service Development has been widespread, despite its importance (Edgett, 1993). This is in part due to the lack of a marketing culture and because management’s perceptions of consumer preferences and needs are frequently wrong Langeard et al (1986). These indicate the need to invest in consumer research early in the Service Development phase.

Langeard et al, 1986, stressed the importance of early qualitative research, as most research in the financial services appeared to consist of “off-the-shelf” reports, which gave no insight into consumer behaviour.

2.11 Research Aims

The aims of this research were:

1. To study the involvement of consumers and service staff in the first stage of government Service Development.
2. To undertake a series of consumer research case studies on the initial stage of Service Development with a local government .
3. To select and apply systematic techniques that allow consumers to contribute to government Service Development

4. To develop and apply techniques that allow service staff to contribute to Service Development
5. To construct a model of the first stage of Service Development that allows for participation by consumers and service staff

CHAPTER 3

Research Planning and Methodology

This chapter starts with the central theme of the research and proceeds to explain the research strategy and methods used. The research focused on the initial stages of Service Development and on methods of eliciting and representing consumer requirements for development of services. Given the focus of the research on Service Development processes and consumer techniques, the *case study method* was considered to be an appropriate strategy. The case study approach takes into account the research context and is set in real-life situations. The research plan and stages of Service Development are outlined below. The four case studies with the City Council that were used to study the application of consumer research techniques in Service Development are introduced in this chapter.

3.1 Case study Method for Service Development Research

Innovation researchers have recognised the suitability of the case study method for studying techniques and processes within their contexts, also known as '*in vivo*' or action research. This method allows for the understanding of the wider context in which innovation occurs. The case study method is used as a means of building theory rather than testing hypotheses and propositions (Hammersley, 1992).

A case study is a comprehensive description and explanation of the many components of a given situation. Whereas most research aims directly at generalised understanding, the case study aims initially at the comprehensive understanding of a single, possibly idiosyncratic, case. The case study should seek to maximise the number of variables considered rather than limit them in the case of most research methodologies (Hammersley, 1992). The aim of the case study approach is to seek insights that may have a more generalised applicability beyond the case study under examination. This is normally confirmed by the use of multiple case studies. Hammersley, 1992, talked about dealing with cases in their 'actual context', preserving the wholeness of the phenomenon studied and retaining the individuality of cases.

Much of the research in Service Development was based on surveys of past practices, whereas the current research applied selected research techniques to 'live' studies and drew conclusions and recommendations from these. This case study methodology was selected as it is an innovative area of study and involves the dynamic relationship with consumers and service staff in the development process.

A systematic approach to consumer research for Service Development, along with some new techniques such as role-playing and joint focus groups, was trialled in the case studies. The findings from each of the case studies reinforced the central theme of the importance of consumers in Service Development, their participation, and the contributions that service staff can make to Service Development. In the present research, the case studies included secondary data collection methods and surveys, which provided a basis for generalisations. (See Appendix 3.1)

Service Development research in practice is similar to action research, which was described by Hedrick et. al (1993) as self-reflective enquiry that involves researchers working on their own practice. It is a form of examination, review and improvement of practice. The New Service Model developed and refined as part of this research is for service managers to use as a guide to the process of development, and incorporates consumers and service staff in the process. The model was tested within the context of the local government services in Palmerston North and reviewed and reflected upon.

The use of multiple case studies enabled comparisons to be made and offered a variety of public sector service situations to explore. Case studies are one way of implementing action research. Hammersley (1992) have observed the greater capability for generalisation of multiple cases over a single case study. Hedrick et.al, 1993, commented that applied case study research in the complex real world is more difficult than working in a research laboratory, but the rewards of teasing out a useful answer to significant research questions greatly outweigh the difficulties.

The *in vivo* method or case study approach provided 'real life' information that offered clear advantages including:

- Working on actual Service Development projects with consumers and service staff in their natural context, rather than simulations or contrived situations.

- Allowing for the discovery of unanticipated aspects and for a more flexible approach to suit the context.
- Recording reactions, attitudes and perceptions at the time of development and dealing with real needs and problems.

3.2 Research Plan for Case studies

The research planning stage involved an understanding of the research context and overall service strategy. Attempts were made to incorporate as much of the previous research and literature in product development, keeping in mind the unique nature of services. Empirical research was carried out on Council services via four Service Development case studies. The research plan was guided by the research themes below:

- Consumers can make a valuable contribution to the early stages of Service Development.
- Service staff can be involved in the development process especially for services where there is a high level of contact with the end user.
- A Service Development model that recognizes the contributions of both consumers and service staff can be developed for the first stage in Service Development.

Planning for the case studies included a consideration of the service characteristics, the research environment (i.e. the Council services) and appropriate consumer research techniques. Matrices of Activities, Outcomes and Decisions were developed for each case study as a guide to the research planning (See Table 6.1 for an example). The matrix helped decide what specific information was required, how it would be used in decision-making, when to stop activities in one stage and when to move on to the next sub-stage. It helped to breakdown the large research project into smaller manageable tasks, so that specific information for each sub-stage could be gathered purposefully and objectively.

3.3 Research Environment and Case studies Organisation

The primary research for the case studies was set in New Zealand, and specifically addressed the first stage of Service Development in four service case studies of a local government Council. Therefore, the aim of this section is to provide context for the studies in terms of the Council's services and the organisation of the case studies.

3.3.1 Stages of Service Development and Case studies

The case studies explored four different services from a range of services offered by the Palmerston North City Council. The City Council had a range of about fourteen service areas and a number of development projects within each of these areas. The service areas for the Council were:

- **Strategic Services**
- **Customer Services**
- **Visitor Services**
- Rooding Services (including **Bicycle Services**)
- Refuse and Recycling Services
- Wastewater and Storm water
- Water Services
- Animal Control
- Parking Services
- Library Services
- Manawatu Art Gallery, The Science Centre and Museum
- Community Development
- Communication

The service areas that were studied were the Strategic Services, Customer (telephone) Services, Visitor Services and Bicycle Services.

The sub-stages of Service Development examined were Service Development Strategy, Opportunity Identification, Needs Analysis, Service Idea Generation and Screening, Detailed Investigation, Service Concept Development and Selection. The first stage of Service Development concluded with a comprehensive Service Feasibility and Development Plan. A range of Service Development and consumer research techniques were applied in the four case studies as shown in Table 3.1. The four case studies were:

- Case study I - Strategic Service Research
- Case study II - Customer Service Research
- Case study III - Visitor Service Research
- Case study IV - Bicycle Service Research

Table 3.1 First Stage of Service Development – Activities & Decisions

Service Development First Stage	Activities	Decisions
Service Development Strategy	Situation analysis Internal data Definition of service and objectives, and match with vision Secondary data collection Problem identification	Goal decisions Information evaluation Synergy with vision Commitment to improve or include new services
Opportunity Identification	Competitive analysis Identification of information gaps Primary research plan	Potential to increase service usage Resources available Go/No Go decision
Needs Analysis	Needs and problem exploration Preliminary investigation Service attribute identification Consumer perceptions and attitudes Target market identification Service attribute analysis	Service area focus
Service Idea Generation and Screening	Service attribute generation Service improvements identified Idea Generation Idea Screening	Review of selected services Evaluation of service ideas
Detailed Investigation	Quantitative research and analysis Consumer problems validation and current service evaluations Important attributes to improve	Important service attributes Go/No Go decision
Service Concept Development and Selection	Consumer Concept Concept Description Concept Selection	New Service Plan for Council review

A comprehensive review of the literature and process models (Figures 1.2, 1.3, 2.1) enabled the selection of appropriate research methods for testing the conceptual Service Development model (Figure 3.1). The proposed model comprised of several sub-stages as explained in Table 3.1 and detailed below. These were tested ‘in vivo’ that is in real time on actual services with a local government body. The services selected for research were based on the objectives of the doctoral research, consumer need and the Council’s commitment to develop these services.

The first stage in Service Development, tested in the case studies, begins with **Service Development Strategy**. In this sub-stage the Service Development aims, objectives and scope were defined with respect to the organisation’s vision and strategic goals. The rationale for the service improvement or new service were understood and established in conjunction with service staff. The specific research objectives were clearly defined, the constraints outlined and agreed upon. A preliminary plan for the research is established and the existing service issues understood, by gathering internal information from service staff.

The **Opportunity Identification** sub-stage involved a thorough evaluation of the current service from a consumer perspective. Service attributes and the importance of the attributes were discussed with consumers and service staff. Service problems and areas to focus improvement were explored. Comparative data, if available, was sourced and examined.

The **Needs Analysis** sub-stage included both internal and external data gathering. This led to the identification and definition of the service problems or needs. This sub-stage included a study of consumer behaviour, needs, attitudes and service usage. *Experts* in the area were consulted (e.g. For the Bicycle Case study, Mr Roger Boulter, Transportation Policy Planner, Hamilton City Council was approached). National and international information was sourced. For the Bicycle Study, several overseas government bodies and transportation research centres were contacted in Singapore and the Netherlands, who provided valuable information on service problems and needs. Important trends in consumer behaviour, consumer demographics, perceptions and interest in the use of services were gathered. The

target market segment was identified clearly, and their specific needs and problems were captured.

Service Idea Generation and Screening included both service staff and consumers in generating service problems and possible solutions. Focus groups with consumers and service staff proved to be a valuable source of practical ideas. Idea-generation and lateral thinking techniques aided in the generation of service ideas. Simple **checklist screening** (Appendix 3.4) matrices and **scoring methods** helped reduce the number of ideas into a few selected categories of ideas. An important point to note is that in the case of Council Service Development, some services can be very large and complex; in which case, it is useful to analyse the data on both macro and micro levels. For instance, in the Bicycle research, a large number of varied ideas were gathered. These were first sorted in terms of the macro level (i.e. transport types, infrastructure, transport management and overall strategy) and micro level (road lighting, road surface, specific Bicycle lanes, signs and Bicycle stands). These were then further categorised into sub-levels: individual level (safety, health, comfort) and community level (environment, road rules, traffic congestion, motorist behaviour.). Twelve criteria were used to evaluate the initial ideas as shown in Appendix 3.4.

The **Detailed Investigation** sub-stage involved in-depth surveys of target consumers to determine the extent of service problems, to build a consumer profile, to gauge consumer perceptions, attitudes and usage and an evaluation of existing services.

Service Concept Development and Selection was based on discussions with consumers and service staff to develop and evaluate service concepts. Once a set of service attributes were selected developed it is possible to develop new service concepts. The service concept was described in terms of the features of the service, target segment, the benefits and the needs satisfied. A brief summary description of this was presented to consumers/service staff for evaluation (e.g. in the bicycle research verbal descriptions were presented to consumers and service staff). Since this research focused on consumer issues, many of the criteria used were from the consumers' perspective. This is not suggesting that other criteria or features such as technical or financial are less important. Internally, the Council could integrate a service concept form that detailed issues such as who the service frontline staff would

be, who the support staff would be (if applicable), the service project champion, demand patterns and the methods of promotion to consumers.

Concept evaluation involved both consumers and service staff, as both are part of a service delivery, especially in cases where the frontline staff interacted directly with consumers. **Preference testing** was undertaken by using ranking and rating methods.

3.3.2 Project Review and Control

Project review sessions were held on a regular basis, approximately once every three weeks, with a multi-disciplinary group of people. For instance, in the Bicycle Study the group consisted of the researcher, Council roading engineers, two Councillors who were interested in the service, and consumers who were cycle advocates. The team met at a central location in the city to assess progress, discuss information gathered and plan future activities. Experts were called in when required. The researcher organised and prepared for the next sub-stage based on these reviews and discussions. The checklist in Table 3.2 is a brief summary of the review tasks, and although it appears to be linear, there were areas where the activities were iterative such as in the opportunity identification and need analysis sub-stages. Gantt charts with clear milestones were prepared for each case study in order to maintain control over the timing of process.

3.3.3 Case studies Overall Organisation

The case studies focused on capturing consumer requirements because any successful product or service must meet consumer needs. Consumer research is fundamental to any product development, including services. There was a lack of reported information on the use of the consumer in developing local government services. Relevance to consumer needs and attitudes is most important, and extensive consumer research has to be undertaken to establish consumer attitudes and service perceptions before development can begin. How these consumer requirements are translated into products or services depends on the organisation, its capabilities its competition and its resources. It is the interaction of these factors that result in the variety of products or services that are developed to meet the same consumer requirements. Some of the case studies also involved the service staff in the development and examined their relationships with the consumers.

Table 3.2 Checklist for Review of Case study Research

<p>Discussions with Service Managers</p> <ul style="list-style-type: none"> ○ Reviewed service literature ○ Gathered current information from experts ○ Identified research areas ○ Examined Council culture and procedures ○ Selected Service Development case studies ○ Clarified objectives, scope and 'fit' to strategy ○ Defined outcomes and decisions ○ Identified problems ○ Research plan was designed and executed ○ Gantt charts were used for project scheduling for each case study ○ Results were analysed using statistical techniques ○ The conceptual Service Development model was tested and revised ○ Consumer and Service staff participation was analysed ○ Ideas and concepts were discussed and improved ○ Service Feasibility & Plan submitted to the Council for review ○ Council to make go/no-go decisions on whether to move to Service Development and implementation ○ Allocate budget and incorporate into Annual Plan, if required ○ Develop and deliver service

The literature stressed the importance of consumer information in successful new Service Development. The Council had outlined its need for improved consultation with the community and its need for better techniques of gathering and understanding the consumers' perspective on a number of service issues (Palmerston North City Council Annual Plan 1997 and 1998). In view of these overall objectives, it was decided that consumer research in local government services would be conducted for those services where the Council was committed and where the Council and saw a need to improve or develop new services.

The long-term al goals broadly defined the service strategy for improvements or developments. In the case of the Council it was defined in their Long-term Financial Strategy (LTFS) and Annual Plan reports. The Council's services plan detailed the areas of operation and the large consumer markets they served. Desk research or

secondary research was undertaken initially to look at trends in local government services in other areas of New Zealand. Where the necessary information was not available externally, internally or in the literature, then primary research was undertaken to gather this specific information. The overall objective in the case studies was to collect preliminary information about the specific target segment that was most likely to use the service, explore their needs and attitudes towards the specific service, their likes and dislikes and identify opportunities for further service improvement. This was done using the researcher's conceptual service model.

A multi-stage primary research methodology was used in the four case studies and the specific methodology application details are in the case study chapters. The case studies were organized in terms of their Activities, Techniques, Outcomes and Decisions. The Service Development process was based on decision-making (Earle and Earle, 1999). At the end of each stage of development, management decisions have to be made that depend on the outcomes of the activities and techniques used in that stage. This interrelationship of decision, activities and outcomes is important to any development project and helps with the planning of a project (Earle and Earle, 2000). This formed the basis for the organisation of the case studies.

3.3.4 Selection of Respondents

Respondents for each of the case studies were different due to the nature of the services offered and the focus of the research. Hence, each case study sourced participants appropriate to the specific research objectives, in the following manner:

* *Strategic Service Research*

A representative sample of the Council Strategic Unit's clients in the previous year was sent the survey questionnaire. Respondents belonged to local businesses, service organisations and community bodies in New Zealand. Reminder calls were made after a week to those that had not responded. This study had a relatively high rate of response (average for the three respondent groups was 69%). The study was a longitudinal tracking research monitor and was carried out for three years in the months of April 1997, 1998 and 1999.

* *Customer Service Research*

A random sample of those people that had contacted the City Council by telephone in the previous three months was contacted by telephone for the interviews. The statistical table of random numbers was used for this quantitative research for the selection from the list of recent consumer enquiries, using the telephone interview method. A selection of the respondents who agreed to attend a focus group was invited to do so for the qualitative part of the study. All of the front-line staff were invited to the focus groups, and they attended the focus group that best suited their time.

* *Visitor Service Research*

The major visitor locations in Palmerston North were identified and face-to-face intercept interviews were conducted on the same days and at the same times at all of these locations. Interviewers were briefed and trained on questionnaire administration. A practice session and guidelines were organized by the researcher, at Massey University, for the interviewers before they went out to these key locations for consumer interviews. See Interviewer's Guide for Survey in Appendix 3.2.

* *Bicycle Service Research*

As this was a major case study involving several stages of consumer research, various methods were used to source participants. An initial fax survey was sent to all schools in Palmerston North to verify numbers of school students who cycle to school. Several focus groups were held with different age groups (details are in case study IV, chapter 7) of consumers and service staff for Idea generation and Concept development. Concept preference was carried out via a quantitative self-administered survey of the target market of likely service adopters.

3.3.5 Selection of Consumer Research Techniques

Within the Council environment, it was clear that systematic, representative, purposeful methods of consumer information gathering techniques would enhance the effectiveness of Service Development projects and save time on decision-making. Factors that needed to be considered before selecting the methods of consumer input

were: the sort of information required, how that was going to be used and what decisions depended on that information.

The research methodology began with **secondary data collection** or desk research, followed by qualitative and quantitative primary research. **Exploratory market research** was carried out to gather secondary data. Preliminary primary research was used to gather consumer data in order to provide background information and in some cases, to profile the target segment. This was followed by **qualitative research**, which included expert interviews, consumer and service staff group discussions for need and attribute identification and then idea generation. **Quantitative techniques** were used to gauge the importance and evaluation of the service attributes, consumer preferences and selection of concepts.

The general approach was not restricted to just a single technique, but a combination of techniques embedded in the decision-making process of Service Development. Techniques were selected on the basis of the likely outcomes and the decisions based on these activities. Some techniques that had already been successful in (manufactured) product development were tested in the Service Development case studies.

- Techniques that allowed for the presentation of tangible stimuli were important since services are intangible and consumers are able to give better feedback when tangible stimuli are used (e.g. verbal descriptions, real-life examples, video presentations, photographs etc).
- Techniques used successfully in tangible product development were tested in the case studies. Some techniques required modifications and some new techniques were trialled.
- The selection of research techniques was also based on the level of contact of service staff with the end-users of the service and the nature of the target market. Table 3.3 explains this for each case study.

Table 3.3 Consumer Characteristics in the case studies

Case studies	Consumer Characteristics	Level of Service Staff contact with Consumers
Strategic Service	Consumers (executives, business people who used the service) Service staff (PNCC)	Medium to high contact
Customer Service	Householders in the Palmerston North catchments Service staff (PNCC)	High contact
Visitor Service	People from other towns/cities	Medium contact
Bicycle Service	High school and tertiary students mainly	Low contact

The consumer research and development literature, the nature of services and the researcher's experience in consumer techniques helped select the most appropriate methods for the case studies. The main techniques used were focus groups for the initial exploration, followed by major surveys that used quantitative techniques. Staff from the Marketing Department at Massey University and a statistician (D. Hedderly, 1997) confirmed the appropriateness of the techniques for the purpose. The new Service Development model guided the type of information to be sought using these techniques, and directed the planning and organisation of the Case studies. The survey techniques developed from mail surveys to telephone surveys to face-to-face methods and finally self-administered surveys. The information gathered followed the Service Development model starting with service strategy and finishing with concept preference in the final major bicycle study. The details of the methods are detailed in each case study chapter. The main techniques used in the entire research programme are presented in Table 3.4.

Table 3.4 Main Research Techniques Used in the Case studies

Case studies	Main Research Techniques Used
Strategic Service	Focus groups - Brainstorming Mail survey
Customer Service	Joint Focus groups - Role playing, Dual-moderation Negative Brainstorming, Telephone Interviews
Visitor Service	Focus groups – Brainstorming, Visual Collage Personal Interviews
Bicycle Service	Focus groups – Brainstorming, Post-box technique, Visual Collage Self-administered Survey, Re-convened Groups Scaling techniques, Rating and Ranking methods

3.3.6 Timing of Case studies

The research time frame for the case studies included primary data collection at one time and over a period of time. These research designs are called cross-sectional or longitudinal, respectively. The cross-sectional study was used to study consumer behaviour and attitudes at any one point in time. The importance and interest in keeping track of changes over time in attitudes or monitoring any problems regularly can be found through longitudinal designs, such as in the Strategic Survey research.

The typical process for product market research, which would be adapted in the case studies for Service Development, is to carry out exploratory research to formulate the problem and then to quantify the findings through major surveys following a planned sequence of activities for development (Earle and Earle, 1999; Aaker and Day, 1990). Exploratory studies, involving the collection of data from both primary and secondary sources, are needed to identify problems and or areas of need in product development (Earle 1971).

The case study research generally started with exploratory secondary and qualitative research. Group discussions with consumers and service staff were held to identify problems and needs. These included service idea generation and consumer screening of ideas, followed by quantitative surveys. The Service Development process model guided the research planning. The quantitative research began with mail surveys in the first case study, followed by telephone surveys in the Customer Service research; the face-to-face method was used in the third Visitor research and finally the self-administered surveys in the major Bicycle study.

The timetable for the entire research programme is presented in Table 3.5.

Table 3.5 Research Time Frame

Research Programme	Dates	Main Research Method	Location	Respondent Number
Strategic Service	March 1997	Focus groups	Palmerston North	15
	Apr 1997	Mail survey	All over New Zealand	41
	Apr 1998			47
	Apr 1999			58
Customer Service	May 1997	Joint Focus groups (3)	Palmerston North	25
	May 1997	Telephone Interviews	Manawatu Region	43
Visitor Service	Aug 1997	Focus groups (2) Personal Interviews	Key visitor locations in Palmerston North	11
	Sep 1997			119
Bicycle Service	Jan-June 1998	Focus groups (6)	Palmerston North	36
		Self-administered survey	Tertiary Institutions in Palmerston North	92

Total number of respondents involved in the entire research = 517 respondents

3.4 Qualitative Research Methods in the Case studies

Gremler and Bitner (1998) suggested that since services are dynamic and exist only while being rendered (the simultaneity of service production and consumption), it is understandable that some traditional research methodologies might overlook important elements of services. Qualitative research techniques and their abilities to spend more time with respondents, to probe further, to clarify statements, to discuss answers and analyse with respondents their feelings, opinions, attitudes and actions make them useful research procedures for services. Qualitative methods encompass a continuum of purposes and activities that can generate interpretative or descriptive information about services (Ap, 1992).

3.4.1 Focus Groups

Kress (1989) suggested that group interviewing has proved durable because it has some important benefits that allow it to compete effectively with other ways of getting information. He listed the advantages as:

- Group interviews are fast and cheap. The cost is less than other attitudinal research techniques.
- It is an excellent method for exploratory research.
- It can reduce the distance between the respondent and the client.
- They are flexible as opposed to survey interviews, which work from rigid question schedules.
- Focus groups give in-depth information and allow for probing.
- There is a synergy, i.e. respondents tend to stimulate one another.
- The outcomes are usually easy to understand.

Greenbaum (1988) described a group discussion as an assembly of several people, usually five to ten, brought together to discuss the different aspects of an issue which is introduced to them by a moderator under whose control they work. Generally this technique is used to collect the different ideas, thoughts and reactions of people in relation to products or services. In so doing, new insights and new dimensions can be uncovered, especially via respondents generating ideas from hearing others' remarks or ideas. Additionally, these discussions can help identify attributes and issues that can be used in the quantitative sub-stage.

The rationale of the qualitative techniques was to explore consumer and service staff needs and problems with regard to the specific services being studied. For example, consumers and service staff discussed features they would like to see in new services and problems they were having with existing services. Organisation for the focus groups involved recruiting the appropriate respondents for each of the different services and preparing a checklist of topics to focus the discussions on (Example of Focus Group Guidelines is in Appendix 3.3). The checklist of topics provided guidance to the discussions, while at the same time the format was flexible enough to

pursue insights and probe into specific areas of importance. All of the focus groups were videotaped and the responses were later transcribed and examined for common themes. Responses were summarized for each of the groups in terms of important service attributes, needs, problems and service ideas.

Most of the focus groups ran for about two hours, except for the school groups, which were deliberately kept short. The groups had mixed representation of gender. The researcher knew none of the participants personally. The discussions helped determine the items to be used in the quantitative phase. A list of important service attributes was gathered. For example, respondents emphasised the importance of both tangible service attributes (the reports in Strategic Service and cycle paths in Bicycle service) and intangible service attributes (staff courteousness, road-use education). During the group discussions, various techniques and self-completion exercises were carried out. One of them was to ask respondents the question "*What things are most important to you in ___ service?*" These responses provided support for service attributes derived from the service literature (Gronroos, 1990; Gummesson, 1999; Zeithaml, 2000) and the Council's prior related internal research. The checklist of topics for focus groups typically included the format in Table 3.6.

Table 3.6 Use of Focus Groups in early Service Development

<u>Identification of Service Attributes</u> Elicit important features of the service from the consumers' perspective Elicit important features of the service from the service staff's perspective
<u>Gain an insight into the Consumer-Service Staff Interaction</u> Explore the roles played by both and their expectations
<u>Determine Service Like and Dislikes</u> Identify characteristics of the service that are liked and disliked
<u>Discuss the Service 'Contact' points</u> Gather information on the sequence of a typical service contact
<u>Explore Service Needs, Problems and Dissatisfactions</u> Understand consumer attitudes and perceptions towards the service Probe into service experiences
<u>Activities within Focus Groups</u> Obtaining service ideas from consumers and service staff using techniques such as <i>Brainstorming and Role Playing</i>
<u>Summarise the Group Discussion</u> Gain consensus from the group on key discussion issues

Some of the techniques used were as follows:

* **Brainstorming**

Brainstorming was selected as an idea-generation method because it is a commonly used technique and is easy to explain to respondents. A brief introduction of the technique was given at the start and all the rules explained to them. The respondents were informed of the objective and the statement: "How can we improve the ----- service?" All of the respondents were encouraged to take part by specifically requesting them for any ideas they may have. When there was a drop in the ideas from respondents, the researcher suggested a few, which stimulated more ideas from respondents. The brainstorming session typically ran for 20 to 30 minutes. The ideas were recorded on a flipchart and typed up later.

* **Negative Brainstorming**

This was a very useful technique to generate service ideas from a negative perspective first and then converting the responses to positive service ideas. For example: "How can we design a poor ---- service?"

*** Post-box Technique**

The post-box technique was used with school children in the bicycle research for two reasons. One is that the researcher wished to keep the sessions short, so that the interruptions to their school time was minimized and also because it was felt that some students may take a while to respond freely as in a brainstorming session, whereas the confidentiality of responses in the post-box technique allowed them to respond quicker. Following this initial 'posting' of responses, many felt more at ease to discuss ideas openly. This method was less dependent on group interaction and enthusiasm, which take time to build up in a group situation. The other techniques that were used as part of the qualitative research, such as the *Joint Focus Groups and Role-Playing* with consumers and service staff, are detailed in the case study chapters.

*** Card-Sorting or Pass/Fail Technique**

The *card-sorting technique* was a simple categorising of the service ideas into Pass/Fail or 'must have now'/'nice to have later' service ideas. The 'Fail' group contained ideas that were on the 'wish' list for consideration later on. This was followed by a discussion of the reasons for their choice. The list of ideas that were screened was taken further into the next stage of development.

*** Solution-Based Screening**

In the focus groups with school students, the researcher gave out ten coloured sticker dots to each of them to stick beside the ideas they favoured most, based on solving the problems identified. This was done to add interest and fun to the session for this age group.

*** Checklist Screening**

Checklist screening was done with service staff who were shown lists of the barriers, the checklist of criteria. They selected the ideas that they thought solved the problems identified and matched the checklist. Those ideas that got high scores were selected (See Appendix 3.4).

3.5 Quantitative Research Methods in the Case studies

The quantitative research confirmed the initial findings of the focus groups, and provided further information on the importance of service attributes, areas to focus service improvement on, consumer attitudes, usage and perceptions. The questionnaires were designed to gather this information, keeping in mind the method of administration, i.e. whether it would be a face-to face interview or telephone method. Prior to the survey, a draft questionnaire was prepared and discussed with the Council's service managers, with colleagues in the Department of Marketing, the statistics consultant at Massey University and supervisors. A pilot survey was conducted on a small sample (about ten respondents) of the target market. These resulted in very minor changes to the positioning of some questions and the clarification of wording on a question. Some of the scales used had to conform to the scales already being used by the Council in some of their other surveys, for purposes of cross-comparisons. However, new scales were also trialled. The main consumer research method selected for the various case studies is described briefly below.

3.5.1 Strategic Service Research

The Mail Survey Technique was most appropriate for this research as respondents were located all over New Zealand. After the initial focus group, the questionnaire was drafted, finalized and approved by the service managers. The questionnaire was mailed to all key clients who had used the Council's Strategic Services in the last twelve months. The survey respondents were executive level managers from various local and national businesses. The mail survey method allowed respondents to answer the questions at a time that suited them best and to think through the issues carefully before responding. Confidentiality was maintained at all times.

3.5.2 Customer Service Research

The Telephone Survey Technique was selected as a suitable method for the Customer Service research as respondents were located in and around the city of Palmerston North. The telephone method generally has good response rates, saves time and is relatively inexpensive. The sample of respondents was randomly selected from those that had recently contacted the Customer Services by telephone. Interviewers were trained and they rehearsed the interview with each other before calling the sample

respondents. A CATI (computer-aided telephone interviewing) facility would have been ideal, but due to unavailability, a large, quiet room with six telephones, at Massey University, was used for the interviewing. The researcher monitored interviews and each interview took approximately fifteen minutes to complete. The researcher was present in the interview room for some of the interviews and as is general market research practice, some respondents were contacted later to verify responses.

3.5.3 Visitor Service Research

The *Personal Interview Technique* or *Face-to-Face Technique* was found to be appropriate for the quantitative research with visitors to Palmerston North, as it was important to meet visitors who had recently come to Palmerston North, to find out their attitudes and needs for visitor services. A list of key visitor locations was identified, in consultation with the Palmerston North Visitor Information Centre, Destination Manawatu and the Palmerston North City Council Marketing Services. Interviewers were instructed to approach every third person that passed by, who was above the age of eighteen. The 'Visitor attitudes and needs' questionnaire was designed based on the information required for key decisions for service improvement. It was then piloted on eight visitors, some of whom were residing at a central motel. A team of interviewers was trained to administer the interviews at key visitor locations. The 'Guidelines for Interviewers' is in Appendix 3.2. The researcher organised a group of Massey University's senior Product Development students and briefed them on the procedures of conducting face-to-face interviews. Students were then requested to try out the interview on each other, as practice before they commenced the actual interviewing.

3.5.4 Bicycle Service Research

The *Self-administered Survey Technique* was the main research method used in this case study. Questionnaires were distributed to school and tertiary students, at their educational institutions and collected back as soon as they were completed. The sample list of intermediate and secondary schools was taken from the directory of educational institutions, 1995. Two intermediate schools, all of the six high schools and all three tertiary institutions were included in the sample. The two intermediate

schools selected were those that had relatively high student numbers (Monrad Intermediate with a roll of 306 students and Palmerston North Intermediate with a roll of 595). Table 3.7 provides the sample school characteristics.

Table 3.7 Sample School Characteristics for the Bicycle Quantitative Research

Educational Institution	Level	Age	Gender
<i>Intermediate Schools:</i>			
Monrad Intermediate	Forms 1 and 2	11 to 13 years	Co-Ed
Palmerston North Intermediate	Forms 1 and 2	11 to 13 years	Co-Ed
<i>High Schools:</i>			
Awatapu College	Forms 3 to 7	14 to 18 years	Co-Ed
Freyberg High School	Forms 3 to 7	14 to 18 years	Co-Ed
PN Boys High School	Forms 3 to 7	14 to 18 years	Boys
PN Girls High School	Forms 3 to 7	14 to 18 years	Girls
Queen Elizabeth College	Forms 3 to 7	14 to 18 years	Co-Ed
St Peters College	Forms 1 to 7	14 to 18 years	Co-Ed
<i>Tertiary Institutes:</i>			
Ucol	Tertiary	18+	Co-Ed
International Pacific College	Tertiary	18+	Co-Ed
Massey University	Tertiary	18+	Co-Ed

Total sample size = 92 survey respondents

3.5.5 Questionnaire Design

Consumer research in the case studies included the collection of demographic and cognitive information such as consumer attitudes, motivations, perceptions and usage behaviour, using questionnaires designed to gather the appropriate consumer information.

Attitude Questions

It was very important to ascertain the consumers' salient attitudes and perceptions towards services for use in service improvement and development. Attitude and usage surveys usually contained the following types of information: the importance of attributes, ratings of important attributes, likelihood of usage in the near future, problems or dissatisfactions from recent trial and suggestions for improvement.

Attitude measurement research has a number of self-reporting attitude-rating scales. The scales are termed self-reporting because consumers express their own evaluation of their attitudes by responding to the scale in the way they think most appropriate. The scales differ mainly in their structure and ease of use. The semi-structured line scale has been used widely in sensory evaluation (Lawson, 1996) in food product development. Baten (1946) showed very early on that a scale word-anchored only at the ends yielded greater product differences than the typical category scale. Category scales such as the Likert scale required the generation of a number of statements and valid testing prior to research. The use of category scales was discarded (by Stone et al., 1974, Moskowitz, 1977) because of the difficulties inherent in such scales. Baten, 1946 mentioned the advantages of the semi-structured line scale for ease of use by consumers, merely requiring them to mark their immediate impression of an attribute on the line. The line scale was used in the Bicycle case study to gauge consumers' own perceptions of the transport modes on various service dimensions. The data from the line scales were plotted on a quadrant plot that was verified by a Massey University statistics consultant, as was the choice of scales. The plots were found to be similar and therefore it was concluded that the semantic sub-stages in the scales were symmetrical (Hedderly, 1997). The use of the scales in quadrant analyses has also been reported in consumer research literature (Garland, 1997) and the Council's in-house previous research on other services (Manson, 1997).

Behavioural Questions

Where relevant and updated secondary data was not available on consumer behaviour, this information was also collected in the surveys. In the Visitor Service Research, consumer behaviour information such as visitor's information needs, length of stay, number of companions, intention to visit again, reasons for visit and visitor attractions seen or planned to see, was gathered.

Closed-ended Questions

Most of the questions in the questionnaires were closed-ended with either multiple choices provided (on show cards) or rating scales or Yes-No type questions. These were developed following the information from the focus group discussions and pilot tested on a small sample of the target market. The closed-ended questions made it

quicker to record responses. Demographic information was also gathered using closed-ended questions.

Open-ended Questions

Open-ended questions were used for likes and dislikes and for suggestions to improve the service. These were then categorised and presented. Some of these direct comments were recorded verbatim, as it provided an insight into the consumers' language.

Ranking Questions

Ranking questions are easy to use and administer. Respondents generally find it easier and simpler to compare service options and say which ones they prefer most to least and give a rank. In the Visitor case study, a list of service ideas was presented for respondents to rank.

* *Validity Monitoring*

As is common practice in professional market research, all of the interviewers were briefed on the administration procedures and confidentiality issues. Interviewers practiced the questionnaire administration on each other first before contacting consumers. Recording sheets were designed for ease of noting down the responses for each respondent. After the interview period, a random sample of 10% of the respondents was contacted to check that the responses recorded were accurate and complete. The researcher was also present in the telephone interview room for the first few interviews conducted by each interviewer in the customer service case study.

With regard to questionnaire design and wording, the importance of simple language and use of respondents' own idiom is acknowledged. Belson's pre-test (1981) has already been discussed in this chapter under methodology. Well-regarded survey methodology researchers like Presser (1986) agree with the necessity for pre-testing survey instruments. Question wording and choice of question type have been tested extensively by researchers who also suggest that open-ended questions be used sparingly (Schuman and Presser, 1991), due to the time it takes to analyse survey data. It is common for survey researchers, because of time and cost constraints, to use closed questions with especially suited response scales.

3.6 Ethical Considerations in the Research

A number of ethical practices were followed in the consumer research including the selection of participants, protecting privacy, guaranteeing anonymity, ensuring confidentiality and procedures that were sensitive to the needs of specific participants.

- For all surveys except the bicycle survey, only people above the age of 18 years were interviewed after obtaining informed consent. Respondents were free to answer or not answer any question. Respondents were assured that no information they provided would be reported in a way that identified any individual's response.
- The research was conducted in accordance with the guidelines specified by the Market Research Society of New Zealand and the Massey University Code of Ethics (Appendices 3.5 and 3.6). Respondents were informed of the intentions of the research and responses were kept confidential.
- The Council obtained permission from local intermediate and secondary schools to conduct research on the bicycle services. The researcher also sent a letter to school principals, detailing the specific research activities (focus group discussions) to be undertaken with high school students (Letter to Principals and Consent Form is in Appendix 3.7 and Appendix 3.8).
- High school students agreed to take part in the survey at the school. The focus group took place in the presence of a school staff member, with prior permission from the school principal and caregiver. A letter explaining briefly the research project and their contribution was given to students before commencement of the research. This was necessary only in the bicycle project, as the other case studies dealt with respondents above the age of eighteen years.
- All participants had the right to anonymity. Some of the high school students in the bicycle study actually wanted their names to be associated with their ideas, particularly if they felt they were good. Focus group participants (Council staff, in particular) were quite happy to participate once they were

reassured that it was an information-gathering exercise only and that confidentiality would be maintained when reporting the results.

- It was carefully explained to the students that they were under no obligation to participate.
- Specific respondent details were always kept separate from the actual responses.

All tape recordings and questionnaire responses from the research were kept confidential and destroyed at the end of the study.

3.7 Analysis Techniques Used in Case studies

The focus groups were analysed for themes, service attributes and needs, and summarized for consensus with the groups. Data from this qualitative research was not converted to percentages, as it would be misleading, as the respondent numbers were small and only indicative of the general opinions. The information assisted with questionnaire design and was validated in the quantitative research.

Survey data was edited entered and analysed using Excel spreadsheets or Statistical Package for the Social Sciences (SPSS - PC version). The significant results were tabulated and graphed. A statistical expert from the Department of Statistics was consulted on the most appropriate statistical methodology, sample size and analysis for the quantitative research. The main statistical techniques used in the case studies were *frequencies, percentages, means, standard deviations, cross-tabulations and quadrant analyses. Correlations, perceptual mapping and Analysis of Variance (ANOVA)* were used in the larger bicycle case study.

The primary purpose of *Perceptual Mapping* was to understand the consumer market and their perceptions of services, as they currently existed. This statistical technique was used in the bicycle case study to map the relative positions of the different modes of travel, in order to gain an understanding of consumer perceptions.

Analysis of Variance was carried out on the items in the bicycle service to test for variation between cyclists and non-cyclists and between age groups.

Principal Component Analysis and Factor Analyses are widely used multivariate techniques in social sciences and development research as analytical tools for data

reduction and investigating underlying patterns in data (Malhotra, 1993). Factor Analysis and Principal Component Analysis (PCA) were considered for the major bicycle study. PCA is a descriptive statistical technique providing a smaller set of components or dimensions that can be regarded as accounting for the observed interrelationships in the data. It creates sets of multivariate data each of which is a particular linear combination of the original variables and analogous to factor loadings. PCA reduced the set of variables that describe the structure of the original set. In the bicycle research, the attributes for modes of travel were reduced to a few that described most of the consumer perceptions.

The *Quadrant Analysis* technique was used to analyse the relationship between attributes on satisfaction and importance, in order to identify the service areas to focus improvement on. When the results are plotted on a graph and quadrants divide the area into four, those attributes that fell in the top left quadrant were important but not satisfactory, those in the top right corner were doing well and were important. Attributes that were in the bottom left quadrant were not very important but could improve in satisfaction. The last quadrant has attributes that should be maintained at the current level of performance.

<p>MUST IMPROVE Attributes that should be improved. These attributes are rated as high in importance but low in satisfaction.</p>	<p>CONGRATULATIONS Performance on these attributes is high and they are considered by consumers as very important.</p>
<p>CAN IMPROVE These attributes are rated as below average in importance but are also performing below customer satisfaction.</p>	<p>MAINTAIN These attributes need to be maintained, but do not need too much attention as they are perceived by customers to be of less importance, and at present are performing above average</p>

This *Key Area Factor* technique has been used by researchers in the consumer product industries (Marshall, 1994), but no documentation of this technique was found in government service literature. This technique was applied to identify those service attributes that required improvement, by using the following formula:

$$\text{Key Area Factor} = \frac{\text{Importance} \times (100 - \% \text{ Excellent})}{100}$$

Importance was calculated for each of the 9 attributes using the following weighting system: Excellent =4, Good =3, Inadequate =2, Poor = 1.

The Key Area Factor technique is a simple, powerful and useful method to measure consumer perceptions of service characteristics for Service Development. Consumer impressions of service features were determined by the interaction of their ratings of the service attribute and the importance they placed on that attribute. The advantage of this technique is that it is easy to use and inexpensive.

3.8 Modelling of Service Development

Service Development literature was reviewed and models developed in other countries and other service contexts were examined. Several product development models were also reviewed and compared with current Service Development models (Figures 1.2, 1.3 and 2.1). These were used as a basis for the creation of a new conceptual model for Service Development (Figure 3.1) that incorporated the contributions of service staff and consumers. The evaluation was carried out by means of four case studies with the local government services in Palmerston North, New Zealand and resulted in the NuServ model in Figure 8.2.

An analysis of the local government procedures from a Service Development perspective indicated that some of the early development techniques needed adaptation to suit the local government environment and timeline for Council's Reviews. The procedures within the local government (as detailed earlier in section 2) could influence the activities of a Service Development project. The Council's formal procedures were taken into consideration when developing the model for Local government services. The literature suggested that Service Development could benefit from the involvement of consumers and service staff (Johne and Storey 1998), but no empirical study of local government services using both parties has been

reported. Because of the important roles of the consumer and the service staff in the service production and delivery, a new model of Service Development that incorporates their contributions was developed, refined and tested in the research. The model proposed shows the involvement of consumers and service staff in the development process.

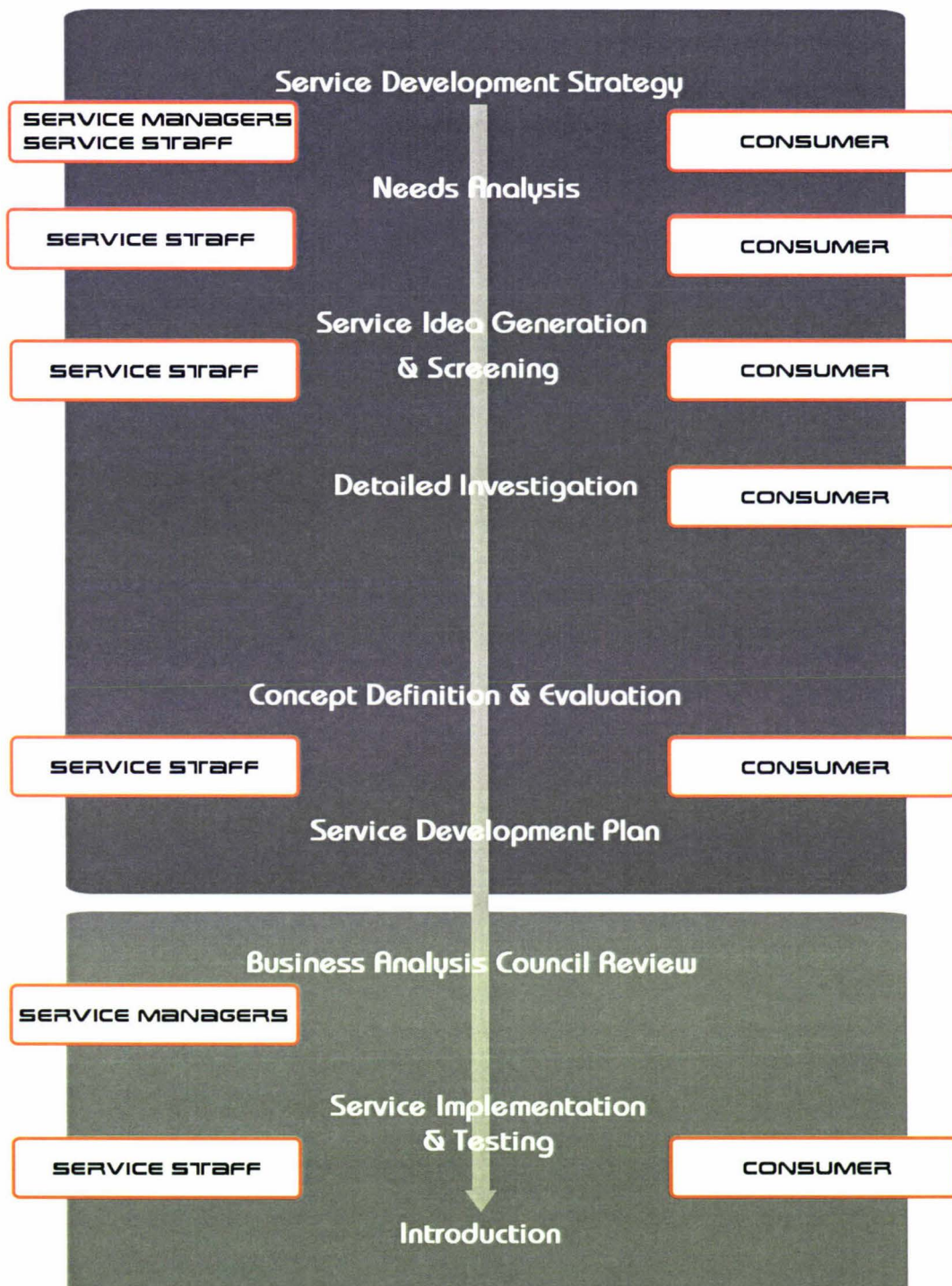


Figure 3.1: Conceptual Model of Service Development

3.8.1 Stages in Service Development Model for Government Services

Based on a review of the extensive literature on product development models and the limited reports of Service Development models, a conceptual model (Figure 3.1) for

Service Development was proposed and tested in the case studies. This was called the NuServ Model. This new model incorporated the contributions of consumers and service staff to the development process. The structure of the model also reflected the unique nature of services and the service organisation. The sub-stages highlight the importance of the interaction between consumers and service staff. It also emphasised the importance of the early stages of strategy development and exploration of consumer issues. The sub-stages were:

* *Service Development Strategy*

Development involved the development of strategy with senior management, which matched the overall goal and mission of the local government. It was about understanding the context of the services, the rationale and direction of development. It involved an overall view of the strategic direction and how various activities fit within this whole. In the case of local government, there are set procedures for Strategic planning and consultation with key stakeholders and the community. The Annual Plan details the annual budget and approved new services. The Service Strategy development outlined the aims of the new service and its objectives in relation to the 's vision. This also helped to evaluate Go/No go decisions, which is an area of weakness highlighted by some government managers. Some of the sub-stages were iterative and some activities were done concurrently, while others were sequential. The systematic development process began with a precise formulation of the objectives and strategy, and it provided guidance for the entire development effort.

* *Opportunity Identification*

This sub-stage involved a preliminary investigation of problems and needs, target market definition, exploration of service attributes and evaluation, characteristics of the most likely consumers and the planning of a complex project into sub-tasks.

* *Service Idea Generation & Screening*

A systematic, coordinated process of seeking ideas for the new service, using idea-generation techniques such as brainstorming. Consumers and service staff were used in the Idea generation and screening methods.

* *Detailed Investigation*

This is undertaken to gather quantitative data from identified target consumers on service usage, consumer behaviour, service problems, consumer evaluations and potential service areas to focus improvements on.

* *Preliminary Concept Definition and Evaluation*

This firstly involved describing (either visually or verbally) the service concept with the help of consumers and then refining them. These are then tested out quantitatively with a large group of consumers for their preferences.

* *Service Development Plan*

The Service Development Plan was the last step in this initial stage of service development. A presentation of all the information gathered, researched and analysed was documented and submitted to the Council's Review Committee for evaluation and implementation. The stages from the Business Analyses onwards were undertaken by the Council as part of their normal procedures.

3.8.2 Consumer Participation in the Service Development process

The model for developing services that was developed allowed greater input from consumers and service staff. Based on the literature on product and Service Development models, the nature of services and the research context, the model was developed and used in the four Service Development case studies. A comparison of product (manufactured) development models and this NuServ Service Development model highlighted the emphasis on the initial stage of development and the contributions that consumers and service staff can make. Greater consultation with consumers and service staff results in more sub-stages in the first stage than previous Product Development models. This new model recognizes the importance of the human elements in Service Development. It acknowledges the differences in the nature of information that is gathered in the early stages and the role of consumers in Service Development. New Zealand consumers' attitudes, perceptions and preferences towards Palmerston North City Council's services were collected and analysed. The more important aspects of their needs were then identified using

techniques such as Quadrant and Perceptual analyses, for service improvements and Service Development.

This model was created to allow local government's Service Development to be more responsive and open to changes in consumer needs. The model proposes a methodology for improving and developing new services within the context of local governments, but could quite easily be applied to other service organisations with slight modifications, if necessary.

3.8.3 Service Staff Participation in the Service Development Process

Formal and informal meetings were held with the service staff for each of the case studies at the Council, throughout the process of development and research. These meetings were recorded in a research journal or logbook for the researcher's own reference. The service staff input was found to be extremely valuable, especially at the initial service attribute identification, idea generation and later screening stages.

CHAPTER 4

Case study 1 – Strategic Service Research

4.1 Introduction & Objectives

This chapter presents the case study on the Strategic Services and focuses on the first sub-stage of the new Service Development model, namely, Service Development Strategy. The study involved the early sub-stages of Service Development, service attribute identification and consumer evaluation of current services. The mail survey method was the main research technique used.

The local government service strategy has as its ultimate goal the satisfaction of key stakeholders and consumers in the community and therefore should try to maintain services at a level that satisfies and attracts consumers to use their services. The Strategic Service Unit provides advice to internal and external consumers on the long-term service provision, service policies and information. The research objective was to develop an effective annual monitor for consumer evaluation of their services and to track any problems or needs they may have. The Council's goal was to continuously improve services or develop new services that meet consumer requirements, hence the need for an annual monitor to detect any changes in consumer evaluations. This research identified the important service attributes, measured current evaluation of services and identified opportunities for new and improved services.

In order to continuously improve services and to keep track of any service problems or changes in attitudes towards the Strategic Service Unit, an annual survey of the key consumers was initiated in 1997 and conducted in 1998 and 1999.

It is extremely important for service improvement and development studies to have a strong management commitment to improve, which is part of establishing the Service Development research strategy. In this case the Council was committed to researching consumers regularly and receiving service improvement information. Discussions held

with service managers and staff, established the role and goals of the project, from which the following objectives were formed. Specifically,

- The identification of important service attributes.
- Consumer evaluation of the service relationship attributes (for example: Ease of contact, helpfulness).
- Consumer evaluation of the service tangible attributes (for example: reports and information).
- A comparison of results between internal and external consumers.
- The interaction between the importance and satisfaction of key service attributes.
- Suggestions for service improvements or need for new services.
- How results from the 1998 survey compared with survey outcomes from 1997 and to measure the changes in consumer evaluation, if any. To be able to detect areas with low ratings for further service improvement and development.
- How results from the 1999 survey compared with the 1998 and 1997 outcomes.

4.2 Activities

The activities included the exploration of service features and problems, identification of important service attributes, understanding the service interaction, gathering consumer evaluations of the service, consumer needs and suggestions for improvement. A longitudinal survey design was used for this case study to monitor consumer attitudes towards the service, to make comparisons and detect any changes that may occur in consumer evaluations. The mail surveys were conducted in 1997, 1998 and 1999. As part of the 1997 research, the service attributes were identified, a questionnaire was designed and the service attributes evaluated by key consumers. Internal consumers were those who worked within the Council and had used the Strategic services during that

year. External consumers were those who were employed in various businesses and had contacted the Strategic Services Unit during the previous twelve months. In the 1998 and 1999 surveys, service improvements and changes in consumer evaluations were monitored. The survey questionnaires were mailed to the consumers, together with a covering letter of introduction and a list of the major services (including new services that were introduced in the previous year). Respondents were asked to mail back their responses to the researcher in the freepost envelope provided. Telephone call-backs were made after two weeks of sending the questionnaires in order to increase the initial response rate, to remind those who failed to respond by the due date.

The activities and techniques were the same for all three tracking survey monitors to enable comparisons between surveys and to note any consumer evaluation changes that may occur.

The questionnaire was kept the same for all three survey monitors for comparison purposes. In the 1997 research survey 41 responses in total were received, 21 from internal consumers (that is staff within the Palmerston North City Council, PNCC) and 20 from external consumers who had contacted the Strategic Service Unit for various services in the previous twelve months, with a response rate of 76%. The 1998 research monitor received 47 responses - 27 internal consumers and 20 external consumers, giving a response rate of 77%. In 1999, 24 internal consumers and 34 external consumers participated in the survey. The response rate was 53%. The response rates for the three monitors are detailed in Table 4.1

Table 4.1 Response Rate in Mail Surveys 1997, 1998 and 1999

	1997	1998	1999
Consumer list (total sample)	58	63	108
Less ineligible	4	2	7
Adjusted sample size	54	61	101
Valid responses	41	47	58
Internal (I) and External (E) consumer response numbers	I=21 E=20	I=27 E=20	I=24 E=34
Response rate	76%	77%	53%

Respondents submitted a list of ideas for improvement of service as part of the mail survey. These were then presented to a group of service staff for their evaluation. They were instructed to use a simple Pass/Fail categorisation technique. This was an interesting exercise as some of the service ideas were rejected as being out of their area of responsibilities, while some others were accepted more readily.

4.3 Techniques

The consumer research techniques included qualitative (focus groups) and quantitative (mail survey) methods. The *mail surveys* were run as a monitor over three consecutive years, at the same time each year in 1997, 1998 and 1999. Initial *focus groups* were held with consumers to identify the attributes and sub-attributes that were important to the service, to include in the mail questionnaire. Two focus groups were held at the City Council meeting room in March 1997, consisting of eight and seven respondents respectively. The first group consisted of external consumers who had recently (in the last twelve months) accessed the Strategic Services Unit – business executives, local retailers, science and educational organisations, voluntary organisations, consultants, councillors, environmental and other lobby groups and tangata whenua (maori of local descent, native New Zealanders). The second focus group consisted of Council staff that had contacted the Strategic Services Unit in the previous twelve months. The *brainstorming technique* was used in both focus groups to generate a range of service attributes, problems and Strategic Services that were seen as important to the service. The discussions were videotaped for analysis and verbatim comments were categorised and then transformed into attributes. These key service attributes were shared with service staff in a separate meeting, and a consensus was reached before including them in the questionnaire.

The service attributes and sub-attributes were then used to design the mail survey questionnaire. The questionnaire was developed based on Service Development literature, qualitative findings of this research, and discussions with the Council's managers and related in-house research. The questionnaire and rating scales were also checked by staff from the Marketing Department at Massey University. The

questionnaire was then pilot tested on a small sample of eight target respondents - four consumers from each group. Feedback from this pre-test was incorporated into the mail survey. A list of the major projects and services undertaken by the unit in the last twelve months was included with the questionnaire and sent out to all consumers who had contacted the Strategic Services in the last year. A covering letter of introduction and explanation of the survey objectives were also included. It must be remembered that most of the consumers were in senior managerial positions and had several demands on their time.

The *mail survey technique* was selected as the appropriate method as consumers were busy executives and were geographically located all over New Zealand. This technique allowed consumers to respond to the questionnaire at a time that suited them and also permitted a well-considered response.

Phase 1 - First Survey Monitor, 1997

4.4 Outcomes of First Survey

4.4.1 Consumer Service Needs Identified at Focus Groups

When asked about their overall expectations of the strategic service, consumers mentioned some general requirements. Several unique consumer requirements were gathered, while most fell into the categories in Table 4.2, and were converted to possible needs.

Table 4.2 Consumer Requirements and Service Needs

Consumer Requirements	Service Needs
They should know what we specifically need	Improved targeting and contact to find out specific service attributes
Value key consumers	Profiling of key consumers
Freedom to choose what information to receive	Improve access mechanisms
Require consistent information	Centralised updated database
We should be treated as important	Build relationships
Do this research more often	Increase frequency of monitor to six monthly

4.4.2 Identification of Service Attributes in Focus Groups

Discussions in the focus groups were then concentrated on eliciting the key service attributes of the strategic service. A number of responses were recorded for the question “What things are most important to you in the strategic service?” The following are some examples of service attributes and their related consumer verbatim statements:

Clear purpose: aim of report stated clearly, meets the required purpose, background clearly set out, clear presentation, jargon free, easy to read.

Logical flow: arguments are logical and coherent.

Accurate Facts: facts are relevant, accurate, error free.

Meet deadlines: timely, produced to agreed deadlines.

Specifies alternatives: provides assessed options, presents a range of options.

Consultation: work is based on good consultation; all views are taken into account.

Achievable proposals: realistic proposals, strategic Services are considered.

Implications assessed: consequences are outlined, problems of implementation are considered.

Service attributes that were not relevant to external consumers such as ‘linked to Council goals’ were not asked.

* *Important Service Relationship Attributes*

Service Relationship attributes were discussed at the focus groups and five attributes were found to cover the area well. The following five service attributes were summarised from the focus group discussions: *Ease of contact. Promptness.*

Helpfulness. Courteousness. Level of knowledge. The seven attributes related to Reports and Information Service were identified as follows: *Relevance. Clear purpose. Logical flow. Accurate facts. Consultation. Clear presentation. Meet deadline.* Seven attributes related to the Policy Service were: *Specifies alternatives. Linked to Council goals. Implications assessed. Achievable proposals. Policy monitoring. Policy effectiveness. Meets legal obligations.*

4.4.3 Consumer Evaluation of Overall Service

The overall impression of the service measured in the quantitative mail survey was positive. The total consumer satisfaction score for Extremely Good plus Very Good was 63%, Table 4.1. However, there was a significant difference between the ratings given by the internal consumers and that given by the external consumers. Internal consumers gave a much higher rating than external consumers did for overall service evaluations.

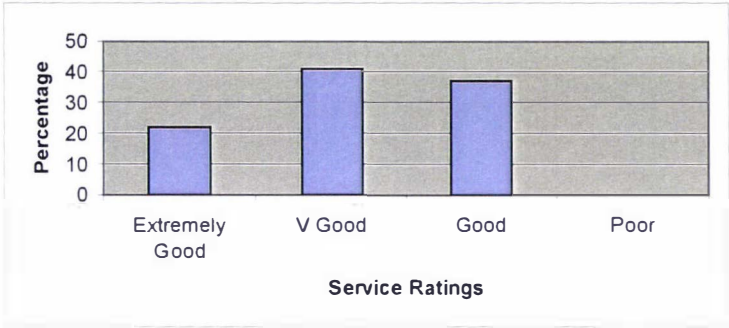


Figure 4.1: Consumer Evaluation of Overall Service (1997)

4.4.4 Evaluation of Service Relationship Attributes

Consumer evaluation of the current service was measured by their rating of the following Service Relationship attributes: *Ease of contact*, *Promptness*, *Helpfulness*, *Courteousness*, and *Level of knowledge*. The Council’s goal was to maximise the Extremely Good plus Very Good ratings and therefore some of the results highlight the combined scores. Telecommunication service research has shown that ‘good is not good enough’ and those consumers who rate a service as being just good were not loyal to the service (Berry, 1991). For the purpose of comparisons with other internal Council research, the percentage scores received for Extremely Good and very good were combined. It is to be noted that the results of the survey were skewed towards a positive rating and there were few Very Poor and no Extremely Poor scores. Relationship attributes such as *courteousness and helpfulness* received high satisfaction scores. Of concern were the ratings given for ‘*Ease of contact*’ and ‘*promptness*’ relative to the other scores.

Table 4.3 Evaluation of Service Relationship Attributes: All Consumers 1997

Attributes	Extremely Good	V. Good	Good	Poor
<i>Ease of contact</i>	9 (23%)	14 (34%)	14 (34%)	4 (9%)
<i>Promptness</i>	8 (19%)	15 (37 %)	18 (44%)	0 (0%)
<i>Helpfulness</i>	16 (39%)	14 (34%)	9 (22%)	2 (5%)
<i>Courteousness</i>	24 (59%)	13 (32%)	4 (9%)	0 (0%)
<i>Level of knowledge</i>	12 (28%)	15 (37%)	14 (35%)	0 (0%)

N= 41

4.4.5 Evaluation of Reports & Information Service: External Consumers

External consumers rated the report and information service quite well, with high scores for Clear purpose. The attributes of Consultation, Logical and Clear presentation could be improved, as seen in Table 4.4.

Table 4.4 Evaluation of Reports & Information Service: External Consumers 1997

<i>Attributes</i>	Extremely Good & V. Good	Good	Poor
<i>Relevance</i>	10 (50%)	10 (50%)	0 (0%)
<i>Clear purpose</i>	18 (91%)	2 (9%)	0 (0%)
<i>Logical</i>	9 (45%)	11 (55%)	0 (0%)
<i>Accurate facts</i>	10 (50%)	10 (50%)	0 (0%)
<i>Consultation</i>	9 (45%)	7 (36%)	4 (18%)
<i>Clear presentation</i>	9 (45%)	11 (55%)	0 (0%)
<i>Meet deadlines</i>	11 (55%)	9 (45%)	0 (0%)

N=20

4.4.6 Evaluation of Reports & Information Service: Internal Consumers

The attributes – ‘*Clear purpose*’ and ‘*linked to goals*’ received a high score. However, ‘*specifies alternative options*’ and the ‘*implications of the options*’ need improvement. The Council should try to reduce the negative ratings. *Monitoring of policies* and *effectiveness* could be improved, as some respondents have mentioned dissatisfaction with these aspects. However, as far as *Meeting legal obligations* was concerned, most consumers were satisfied.

Table 4.5 Evaluation of Reports & Information Service: Internal Consumers 1997

<i>Attributes</i>	Ext. Good/V. Good	Good	Poor
<i>Relevance</i>	13 (61%)	8 (39%)	0 (0%)
<i>Clear purpose</i>	16 (76%)	4 (19%)	1 (5%)
<i>Logical flow</i>	17 (81%)	4 (19%)	0 (0%)
<i>Accurate facts</i>	16 (76%)	5 (24%)	0 (0%)
<i>Consultation</i>	14 (67%)	6 (28%)	1 (5%)
<i>Clear presentation</i>	18 (86%)	3 (14%)	0 (0%)
<i>Meet deadlines</i>	16 (76%)	5 (24%)	0 (0%)

N=21

Table 4.6 Evaluation of Policy Service: Internal Consumers 1997

<i>Specifies Alternatives</i>	14 (67%)	5 (24%)	2 (10%)
<i>Linked to goals</i>	19 (90%)	2 (10%)	0 (0%)
<i>Implications Assessed</i>	13 (62%)	7 (33%)	1 (5%)
<i>Achievable Proposals</i>	14 (67%)	7 (33%)	0 (0%)
<i>Monitoring</i>	13 (61%)	6 (29%)	2 (10%)
<i>Effectiveness</i>	9 (45%)	9 (45%)	2 (10%)
<i>Meeting Legal Obligations</i>	16 (76%)	5 (24%)	0 (0%)

Table 4.6 shows the evaluation of Policy Service by internal consumers in 1997. *Linked to goals* was rated highly by internal consumers. Service improvements could be made in the *effectiveness* of service provision.

4.4.7 Consumer Comments

* Reasons for Negative Ratings

Respondents were asked to give explanations if they rated a service negatively i.e. *Poor, Very Poor or Extremely Poor*. There were very few respondents that ticked these boxes and here are their reasons:

<u>Attribute</u>	<u>Reasons</u>
<i>'Ease of contact'</i>	"phones diverted to front desk", "difficult in mornings"
<i>'Clear purpose'</i>	"education, economic and social reports purpose unclear."
<i>'Specifies alternatives'</i>	"not responsive to external needs"
<i>'Monitoring of policy'</i>	"must monitor effectiveness of policy require feedback from planning services"
<i>'Effectiveness of policy'</i>	"policies prepared in areas where Council cannot have an effect", "need to be proactive", "lack commitment", "market flavour needed"
<i>'Consultation'</i>	"fixed agendas, not listening"
<i>'Implications assessed'</i>	no reasons given for their negative rating

Respondents were invited to offer additional comments about the service they had received and these have been recorded verbatim (indicated in italics).

* **Positive Comments**

- *Well-trained staff, highly committed team, friendly, helpful staff*
- *Generally good quality service*
- *Culture of excellence at Strategic Services*
- *Highest performing service in the Council*
- *Extremely Good leadership and staff commitment*

* **Negative Comments**

- *Reports can be 'jargonised', therefore a concern*
- *Hard to arrange meetings*
- *Information has 'Council' flavour rather than 'market' flavour*
- *Feeling that outside input is unlikely to lead to change*

* *Services that Exceeded Expectations*

Consumers mentioned services that had exceeded their expectations and have been grouped by the researcher into the following, with the number of responses in brackets: Specific services (4), Reports and information Services (2) and Policy Service (1)

4.4.8 Service Ideas and Improvements

The consumer suggestions on service ideas and improvements were categorised into policy services (4 ideas), specific services (6), service role and organisation (9) and better communication services (8- format and frequency of different communication services).

4.5 Analysis of Outcomes (First Survey)

The outcomes and results of the mail survey were analysed by using the quadrant analysis technique to understand where the service attributes were positioned in relation to importance and satisfaction. Comparisons and analysis between service evaluations and groups of consumers were also carried out to detect any significant changes in consumer attitudes towards the service.

4.5.1 Comparison of Internal and External Consumer Evaluations

There was a difference between the ratings given by internal and external consumers to the relationship attributes. Generally, the external consumers rated them lower. The attribute, *Promptness* was rated significantly lower by external consumers than internal consumers. *Courteousness* received a very high score from both groups of consumers.

Table 4.7 Comparison of All Consumer Evaluations of Service Relations

<i>Relationship Attributes</i>	Extremely Good & Very Good	
	Internal (N=21)	External (N=20)
<i>Ease of contact</i>	12 (59%)	11 (55%)
<i>Promptness</i>	16 (75%)	7 (36%) *
<i>Helpfulness</i>	18 (86%)	12 (60%)
<i>Courteousness</i>	21 (100%)	16 (82%)
<i>Level of knowledge</i>	17 (81%)	10 (50%)

(Note: results are to be interpreted with caution when sample is split into small groups)

*Significance of $p < 0.05$ (Refer to Appendix 4.2)

4.5.2 Service Attribute Mapping and Analysis

The interaction between satisfaction and importance of the key relationship attributes were spatially mapped and analysed as follows (Refer to method in chapter 3, section 3.7):

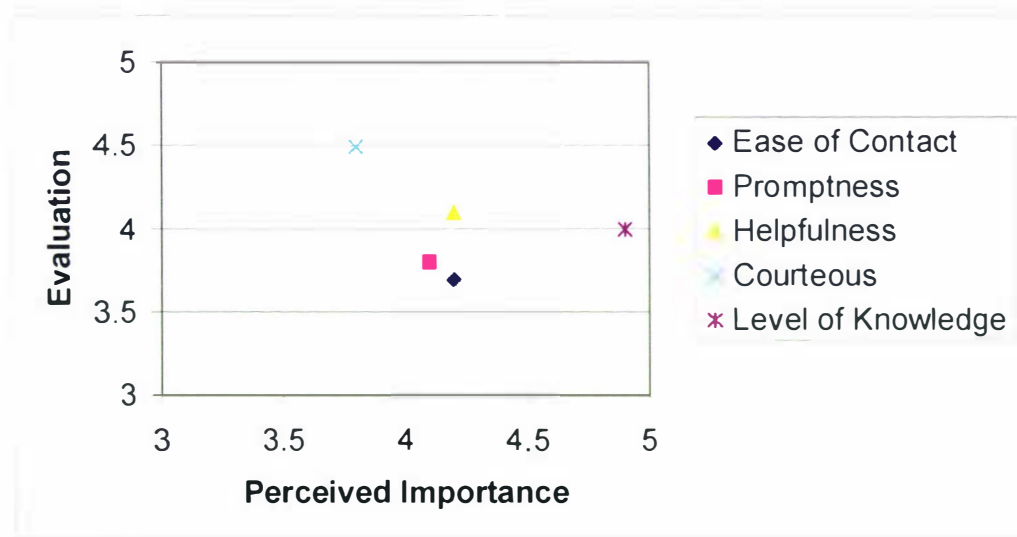


Figure 4.2: Analysis Mapping of Attribute Evaluation and Importance

Evaluation scale: Extremely Good (5) to Very Poor (1), Importance scale: Least (1) to Most important (5)

* *'Congratulations' Quadrant*

Those attributes of the service that were perceived to be important by consumers and were rated very well fall in this quadrant. *Helpfulness* falls in this category because it was rated as important and also got a very high evaluation rating.

* *'Must Improve' Quadrant*

The satisfaction by importance grid revealed that attributes *Level of knowledge*, *Ease of contact* and *Promptness* were rated as highly important, but could do better in the evaluation ratings. The service attributes should be moved from a Very Good score to an Extremely Good score as part of the drive for continuous improvement.

* *'Maintain' Quadrant*

The services in this quadrant were evaluated positively even though consumers did not consider them very important. Attribute *Courteousness* was not perceived as extremely important but received an almost Extremely Good rating. This service attribute should be maintained or otherwise it may go up in importance.

* *'Can Improve' Quadrant*

Attributes that were considered very important and were not being rated as Extremely Good belonged to this category. None of the service attributes fell in this quadrant, therefore the Strategic Service has no major concerns with regard to its service relationship and interaction with consumers. If any attributes fell in this quadrant at any stage, then improvements need to be focussed on these services, as well as those that fall in the problems or 'must improve' quadrant.

4.6 Decisions on Strategic Service Research 1997

This case study tracking monitor identified and measured the consumers' evaluations of the Strategic Service on a range of service attributes. The results showed that, overall, the consumers evaluated the service positively. The internal consumers even more so than the external consumers. The Strategic Service needs to focus improvement on the areas of low evaluations given by consumers. These were the attributes; *information*

provided specifies alternatives, which received a very low *Extremely Good* score (9%) when compared to the other factors of information service. With regard to *promptness of service*, *Level of knowledge*, *information Logical flow*, *implications of the options* and the *overall satisfaction* rating there were obvious differences in the satisfaction ratings of internal staff relative to external staff. Generally, internal staff had a much better opinion of the services. Hence, efforts need to be put into place to improve services to external consumers and to enhance the service perceptions held among external consumers.

The main decisions based on the activities and outcomes of this research were to include new service attributes and service improvements that were suggested by the key consumers of the service. The service improvements identified by consumers were: better community consultation services, improved communication services and enhanced reporting services (using simple language). The main service ideas suggested were new benchmarking services, specific access to particular information.

Phase 2 – Second Survey Monitor, 1998

4.7 Outcomes of Second Survey

4.7.1 Consumer Evaluation of Overall Service

More than three-quarters of the consumers rated their overall evaluation of the service provided as Extremely Good or Very Good. There was no significant difference in the level of satisfaction between Internal and External consumers.

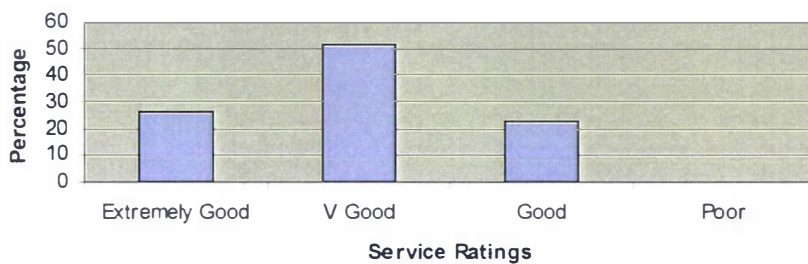


Figure 4.3: Overall Consumer Evaluation of the Service (1998)

4.7.2 Evaluation of Service Relationship Attributes

The consumers' evaluation of their service relationship with Strategic Services was measured by their rating of the following service attributes; *Ease of contact*, *Helpfulness*, *Courteousness*, *Promptness*, and *Level of knowledge*. It was critical to examine those attributes that were rated lower than Extremely Good or Very Good, and look to ways of improving those services.

Table 4.8 Evaluation of Service Relationship Attributes: All Consumers 1998

Attributes	Ex Good & V Good	Good	Poor
<i>Ease of contact</i>	35 (75%)	11 (23%)	1 (2%)
<i>Promptness</i>	32 (68%)	15 (32%)	0
<i>Helpfulness</i>	36 (77%)	11 (23%)	0
<i>Courteous</i>	38 (81%)	9 (19%)	0
<i>Level of knowledge</i>	38 (80%)	9 (19%)	0

N = 47

Consumers were satisfied with key aspects of the strategic service, with each attribute being rated as Extremely Good or Very Good by nearly 70-80% of the consumers. In general, about 20% of consumers rated each attribute as only Good. The lowest scoring attribute was *Promptness*, with a rating of Good by nearly one third of consumers. Only one consumer considered *Ease of contact* to be Poor, the reason given for this was that “*phones are always diverted, even when service staff are in*”.

4.7.3 Evaluation of Reports and Information: External Consumers

The attribute *Consultation* could improve on its Extremely Good scores, as seen in External consumers appeared to be satisfied with the presentation of reports and information. However, *Clear purpose* and *Relevance* of reports could be improved.

Table 4.9 Evaluation of Reports and Information: External Consumers 1998

<i>Attributes</i>	Ex Good	Very Good	Good	Poor	No Response
<i>Relevance</i>	5 (25%)	8 (40%)	7 (35%)	0	0
<i>Clear purpose</i>	9 (45%)	2 (10%)	9 (45%)	0	0
<i>Logical flow</i>	7 (35%)	6 (30%)	7 (35%)	0	0
<i>Accurate facts</i>	6 (30%)	7 (35%)	6 (30%)	1 (5%)	0
<i>Consultation</i>	4 (21%)	7 (37%)	7 (37%)	1 (5%)	1
<i>Clear presentation</i>	6 (30%)	9 (45%)	5 (25%)	0	0
<i>Meets deadlines</i>	7 (37%)	4 (21%)	7 (37%)	1 (5%)	1

N=20

4.7.4 Evaluation of Policy Service, Reports and Information: Internal Consumers

The majority of internal consumers were very satisfied with the policy service, information and reports provided by the strategic service unit. For eight of the fourteen attributes measured, more than three-quarters of internal consumers gave an Extremely Good or Very Good rating. The three attributes *Accurate facts*, *Meets deadlines*, and *Meets legal obligations* were rated especially highly with about 90% of consumers giving ratings of Extremely Good or Very Good.

CHAPTER 4: CASE STUDY I - STRATEGIC SERVICE RESEARCH

The attributes, which did not perform as well, were *Policy monitoring*, *Specifying alternatives*, *Policy effectiveness* and *Achievable proposals* with an Extremely Good or Very Good rating in 58% to 66% of consumers. Three attributes from this group were also rated as Poor by a consumer each. The reason given for the Poor rating for Achievable Proposals was that “*policy is often global and wide ranging - in practice little can be achieved.*” Reasons for the other two Poor ratings were not offered. Two consumers also rated relevance as Poor because “*it is very questionable if all of the reports contribute to Council’s vision.*” Of note in Table 4.11 is the variation in ratings for ‘*Specifies alternatives*’ with a nearly equal proportion of consumers describing this as either Very Good, or Good, and a relatively small number of Extremely Goods.

Table 4.10 Internal Consumer Evaluation of Information and Reports 1998

Report Attributes	Ex Good	V Good	Total	Good	Poor
<i>Relevance</i>	22%	56%	78%	15%	7%
<i>Clear purpose</i>	19%	52%	71%	30%	0
<i>Logical flow</i>	22%	56%	78%	22%	0
<i>Accurate facts</i>	31%	62%	93%	8%	0
Consultation	15%	67%	82%	19%	0
<i>Clear presentation</i>	11%	67%	78%	22%	0
Meets deadlines	26%	63%	89%	11%	0

N=27

Table 4.11 Internal Consumer Evaluation of Policy Service

Policy Attributes	Ex Good	V Good	Total	Good	Poor
<i>Specifies alternatives</i>	15%	44%	59%	41%	0
<i>Linked to goals</i>	33%	59%	92%	7%	0
<i>Implications assessed</i>	21%	53%	74%	26%	0
<i>Achievable proposals</i>	22%	44%	66%	30%	4%
<i>Policy monitoring</i>	23%	35%	58%	38%	4%
<i>Policy effectiveness</i>	26%	37%	53%	33%	4%
<i>Meets legal obligations</i>	29%	58%	87%	13%	0

N=27

4.7.5 Service Ideas and Improvements

Consumers of the Strategic Services suggested many service improvements, which were grouped into communication services (7 ideas), specific services (2), strategic services role and organisation (7) and policy services (5).

* *Services that have Exceeded Expectations*

Nearly 60% of **Internal consumers** felt that there were services that exceeded their expectations. Their responses were summarized as follows: Reports and information services (6), specific services (8), service staff relationship (6), policy service (2) and all services (2).

Of the **external consumers**, 70% felt that there were services that exceeded their expectations. Their responses fell into the following categories: Information services (7), service staff relationship (5) and policy service (3).

4.8 Analysis of Outcomes (Second Survey)

4.8.1 Service Attribute Mapping and Analysis

The interaction between Satisfaction and Perceived Importance of Service Attributes were studied further to analyse the service areas that need improvement. Most attribute satisfaction ratings very closely matched the perceived importance of those attributes. This means that the Council's Strategic Service is providing a higher level of service for those attributes that are considered most important, and a lesser but appropriate level of service for less important attributes. The attributes in which there were mismatches included Courteousness, which was considered least important but has one of the highest satisfaction ratings. In addition, *Level of knowledge* was considered most important and also shares the highest satisfaction rating, but this still falls slightly short of its perceived importance.

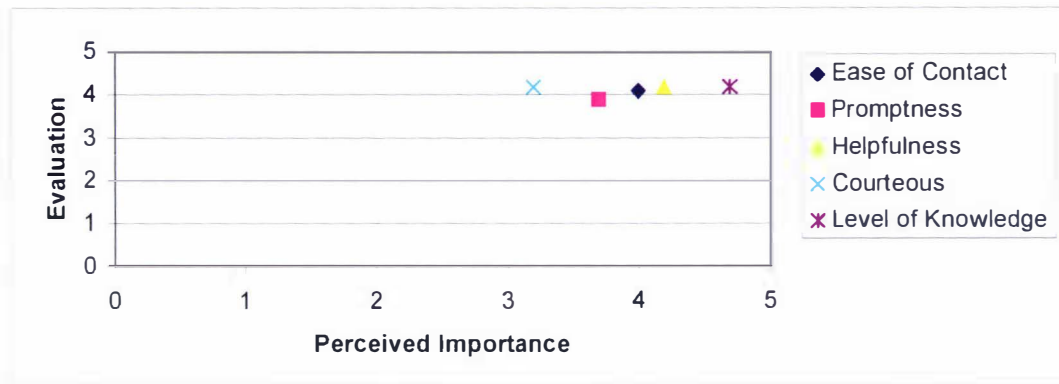


Figure 4.4: Analysis Mapping of Attribute Evaluation and Importance

Evaluation scale: Extremely Good (5) to Very Poor (1), Importance scale: Least (1) to Most important (5).

4.8.2 Comparison of Internal and External Consumer Evaluations (1998)

There was a significant difference in the level of satisfaction felt by Internal and External consumers in three areas. These were: *Accurate facts*, *Meets deadlines*, and *Consultation*. In each case Internal consumers rated these much higher than External consumers. Between 82% and 93% of internal consumers gave these attributes an Extremely Good or Very Good rating, whereas between only 55% and 65% of external consumers did the same.

Table 4.12 Comparison of All Consumer Evaluations 1998

<i>Attributes</i>	Ex Good & V Good		Good	
	Internal	External	Internal	External
<i>Relevance</i>	78%	65%	15%	35%
<i>Clear purpose</i>	71%	55%	30%	45%
<i>Logical flow</i>	78%	65%	22%	35%
<i>Accurate facts</i>	93%	65%	8%	30%
<i>Consultation</i>	82%	58%	19%	37%
<i>Clear presentation</i>	78%	75%	22%	25%
<i>Meets deadlines</i>	89%	58%	11%	37%

4.8.3 Comparison of Overall Evaluation between 1997 and 1998

It appears that there may have been an improvement in the number of External consumers rating Overall Service as Extremely Good or Very Good, however the results were not statistically significant. Of note is that the significant difference that occurred between internal and external consumer ratings for overall satisfaction in 1997 has been eliminated in 1998. In other words, the gap between internal and external consumers has narrowed, since the external consumers' evaluations have increased in this survey monitor, as seen in Table 4.14.

Table 4.13 Change in Overall Evaluations Between 1997 and 1998

	Ex. & V Good		Difference in %	Good		Difference in %	Poor		Change in %
	1997	1998		1997	1998		1997	1998	
Internal	81%	82%	1	19%	18%	-1	0	0	0
External	45%	70%	25	55%	30%	-25	0	0	0
All	63%	77%	14	37%	23%	-14	0	0	0

4.8.4 Comparison of Service Relationship Evaluations between 1997 and 1998

There was a **significant** (at 95% confidence level) improvement in the number of consumers rating *Ease of contact* as Extremely Good in 1998. In general, with the exception of Courteous, all of the attributes that measure evaluation of relationship appear to have been rated more highly in 1998 than in 1997, however these results were not statistically significant.

Table 4.14 Change in Evaluation of Relationship between 1997 and 1998

<i>Attributes</i>	Change in Ex. & VG (%)	Change in Good (%)	Change in Poor (%)
<i>Ease of contact</i>	18	-11	-7
<i>Promptness</i>	12	1	0
<i>Helpfulness</i>	4	10	-5
<i>Courteousness</i>	-10	-16	0
<i>Level of knowledge</i>	16	-12	0

4.8.5 Comparison of Internal and External Consumers' Relationship Ratings between 1997 and 1998

There was a significant increase in the number of External consumers who rated *Level of knowledge* as Extremely Good. Of note also is that the 1997 significant difference between internal and external consumers evaluation ratings for *Promptness* was eliminated, due to the improvement in external consumer satisfaction. Since *Ease of contact* has improved, it has probably had an effect on the perception of *Promptness* as well. Although it appeared that a great deal of the improvement in the 1998 relationship satisfaction ratings (compared to 1997) was due to the increase in the number of External consumers who rated these attributes as Extremely Good or Very Good, this finding did not prove to be statistically significant.

Table 4.15 Comparison of Change in All Consumers' Relationship Evaluation between 1997 and 1998

<i>Attributes</i>	Change in Ex. & VG (%)		Change in Good (%)		Change in Poor (%)	
	Int	Ext	Int	Ext	Int	Ext
<i>Ease of contact</i>	18	27	-9	-6	-5	-9
<i>Promptness</i>	10	21	-18	13	0	0
<i>Helpfulness</i>	1	17	-13	1	0	-10
<i>Courteousness</i>	1	9	-26	-15	0	0
<i>Level of knowledge</i>	11	31	-11	-1	0	0

4.8.6 Comparison of Reports and Information Ratings between 1997 and 1998 - External Consumers only

There has been a significant increase in the number of consumers rating *'Meets Deadlines'* as Extremely Good in 1998. (Refer Table 4.17). The overall positive change in the number of Extremely Good and Very Good ratings combined differed very little from 1997 but movement from Very Good to Extremely Good is noted. On the negative side, the attribute *Clear purpose* shows a significant decrease in its Extremely Good/Very Good ratings in 1998. Other changes since 1997 appeared to be positive, but were not large enough to be statistically significant.

Table 4.16 Change in Evaluation of Reports and Information between 1997 and 1998 – External Consumers

<i>Attributes</i>	Change in Ex. Good (%)	Change in V Good (%)	Change in Good (%)	Change in Poor (%)
<i>Relevance</i>	5	10	-15	0
<i>Clear purpose</i>	36	-72	36	0
<i>Logical flow</i>	17	3	-20	0
<i>Accurate facts</i>	20	-5	-20	5
<i>Consultation</i>	19	-6	1	-13
<i>Clear presentation</i>	21	9	-30	0
<i>Meets deadlines</i>	28	-24	-7	5

4.8.7 Comparison of Policy Service, Reports and Information Ratings between 1997 and 1998 - Internal Consumers only

Overall, the changes that have occurred between 1997 and 1998 with respect to, as far as internal consumers are concerned, are small and are not statistically significant. Please refer to Table 4.17. Satisfaction levels seemed to be about the same as the previous year.

Table 4.17 Change in Evaluation of Policy Service, Reports and Information between 1997 and 1998 – Internal Consumers

<i>Attributes</i>	Change in Ex. Good (%)	Change in Very Good (%)	Change in Good (%)	Change in Poor (%)
<i>Policy Effectiveness</i>	16	2	-12	-6
<i>Relevance</i>	7	10	-25	7
<i>Clear presentation</i>	-12	4	8	0
<i>Accurate facts</i>	1	16	-14	0
<i>Reflects Consultation</i>	-12	27	-8	-5
<i>Meets deadlines</i>	2	11	-13	0
<i>Implications Assessed</i>	-13	25	-7	-5
<i>Meets Legal Obligations</i>	6	5	-14	7
<i>Linked to Goals</i>	-10	12	-3	0
<i>Achievable proposals</i>	8	-9	-4	4
<i>Policy monitoring</i>	8	-11	8	-6
<i>Logical</i>	-2	-1	3	0
<i>Clear purpose</i>	-11	7	10	-5
<i>Specifies alternatives</i>	-3	-5	18	-9

4.9 Decisions on Strategic Service Research 1998

This research found that more than three-quarters of the consumers rated the overall service provided as Extremely Good or Very Good. Unlike in 1997, there is now no significant difference between evaluations given by internal and external consumers. The Strategic Service has improved its services to external consumers, closing the significant gap that existed in 1997.

Consumers were very happy with the relationship attributes with ratings of Extremely Good or Very Good in nearly 70-80% of cases. There was a significant improvement since the 1997 survey in the number of Extremely Good ratings given for the service attribute *Ease of contact*. The number of Extremely Good ratings given by external consumers for *Level of knowledge* also increased. The Strategic Service has improved its *Promptness* towards external consumers so that the gap found in 1997 between the satisfaction ratings of internal and external consumers has been smoothed out. The

service is also matching the appropriate level of evaluation of the perceived importance given to each of these attributes.

External consumers were satisfied with the reports and information provided by the Strategic Service, with these attributes being rated as Extremely Good or Very Good between 55-75% of the time. There has been a significant improvement since 1997 in the ratings given for the attribute *Meets deadlines*. Of concern is a significant decrease in the positive ratings given for the attribute *Clear purpose*.

Internal consumers were very satisfied with the policy advice, reports and information provided by the service staff, with Extremely Good or Very Good ratings for these attributes ranging from 58% up to 93%. It was also shown that three of the attributes *Accurate facts*, *Meets deadlines*, and *Consultation* were rated significantly higher by internal consumers than external consumers.

Suggestions for service improvement were gathered from consumers of the Strategic Services. The results in 1997 indicated that external consumers did not rate the service as highly as internal consumers, in the 1998 monitor, external consumers rated it as well as internal consumers, thus closing the gap between the two groups. This research in 1998 found that nearly two thirds of consumers rated the overall service as Extremely Good or Very Good. There were no consumers who regarded the overall service as Poor, Very Poor or Extremely Poor.

The Strategic Services staff reported on service improvements they had made since the 1997 survey. They reported that they worked hard to improve the attribute *Ease of contact* and implemented some of the suggestions following the evaluation of the 1997 results. These were: to answer the telephone within three rings, to install a staff board that indicated when staff are away and when they are expected back (placed at the telephone reception area for all to see) so that consumers get an accurate, consistent message (Richards-Ward, 1998).

Phase 3 -Third Survey Monitor –1999

4.10 Outcomes of Third Survey

4.10.1 Consumer Evaluation of Overall Service

More than three-quarters of the consumers rated their overall evaluation of the services provided as Extremely Good or Very Good. Only 2% rated the service as poor. The reason for the poor rating was: “*We have only this year received some information. Therefore we can only go on past lack of consultation.*” There was no significant difference in the level of service satisfaction between Internal and External consumers.

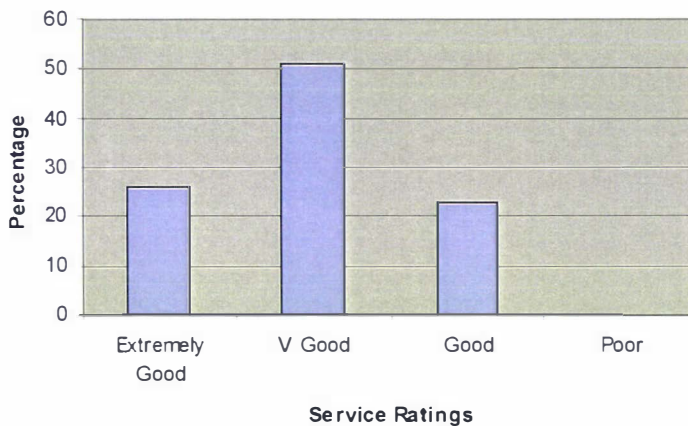


Figure 4.5: Consumer Evaluation of Overall Service (1999)

4.10.2 Evaluation of Service Relationship Attributes

Consumers seemed satisfied with the following service attributes: *Helpfulness*, *Courteousness*, and *Level of knowledge* being rated as Extremely Good or Very Good in over 80% of the cases. *Ease of contact* and *Promptness* rated 73% and 66% respectively. The relatively low scoring attribute was *Promptness*. Two consumers considered *Ease of contact* to be Poor; the reason given was that they often get voice mail when they telephoned the Strategic Service Unit.

Table 4.18 Evaluation of Service Relationship: All Consumers 1999

<i>Service Attributes</i>	Extremely Good	Very Good	Good	Poor
<i>Ease of contact</i>	19 (33%)	25 (43%)	12 (21%)	2 (3%)
<i>Promptness</i>	15 (26%)	23 (40%)	18 (31%)	2 (3%)
<i>Helpfulness</i>	24 (41%)	26 (45%)	8 (14%)	0
<i>Courteousness</i>	27 (47%)	25 (43%)	6 (10%)	0
<i>Level of knowledge</i>	22 (38%)	26 (45%)	10 (17%)	0

N=58

4.10.3 Evaluation of Reports and Information: External Consumers

Most external consumers are satisfied with the quality of reports and information provided as shown in Table 4.3. Between 65% and 88% of external consumers rated as Extremely Good or Very Good the attributes *Meets Deadlines*, *Clear presentation*, *Accuracy of Figures*, *Logical flow*, *Clear purpose*, and *Relevance*. Only the *Consultation* attribute received a lower rating and a comment such as: “*Believe consultation area requires upgrading*”.

The attribute of *Consultation* received one of the highest levels of the Extremely Good rating (30%), but also the highest Good rating (37%). This may reflect a lack of consistency or variability in the service.

Table 4.19 Evaluation of Reports and Information: External Consumers

<i>Attributes</i>	Ex Good	V Good	Good	Poor	V Poor	No Response
<i>Relevance</i>	9 (27%)	16 (49%)	8 (24%)	0	0	1
<i>Clear purpose</i>	10 (30%)	12 (37%)	10 (30%)	1 (3%)	0	1
<i>Logical flow</i>	7 (22%)	16 (50%)	9 (28%)	0	0	2
<i>Accurate facts</i>	8 (24%)	16 (49%)	9 (27%)	0	0	1
<i>Consultation</i>	9 (30%)	9 (30%)	11 (37%)	1 (3%)	0	4
<i>Clear presentation</i>	9 (27%)	13 (40%)	10 (30%)	1 (3%)	0	1
<i>Meets deadlines</i>	10 (31%)	11 (35%)	10 (31%)	0	1 (3%)	2

N=34

4.10.4 Evaluation of Policy Service, Information & Reports: Internal Consumers

A majority of internal consumers are very satisfied with the quality of Reports and Information Services. For five of the 14 attributes measured, more than three-quarters of internal consumers gave an Extremely Good or Very Good rating (Table 4.20). A further five attributes were rated at between 65% and 74% for Extremely Good or Very Good. The attributes of Accurate facts and Linked to Councils Goals rated very highly with 88% of consumers giving ratings of Extremely Good or Very Good. The lowest performing attributes were Policy Effectiveness, Achievable Proposals, Implications Assessed, and Specifies Alternatives with an Extremely Good or Very Good rating of 61% to 64%.

Four attributes recorded Poor ratings of about 4%. Those being *Logical flow*, *Clear presentation*, *Specifies alternatives*, and *Implications assessed*. The reason for the Poor rating given to *Clear presentation* was: “*Clarity of English expression*”. No reasons were given for the Poor ratings for *Implications assessed*, *Specifies alternatives*, and *Logical flow*. The reason for a rating of Very Poor to the *Monitoring of policy* was given as “*Policy in some areas only just addresses the Strategic Services. Complex, or creative policy that can make significant advances in achieving wider goals are rarely approached or considered*”.

Table 4.20 Evaluation of Policy Service, Reports and Information: Internal Consumers 1999

<i>Attributes</i>	Ex Good	V Good	Good	Poor	Very Poor
<i>Relevance</i>	5 (21%)	13 (54%)	6 (25%)	0	0
<i>Clear purpose</i>	7 (29%)	9 (38%)	8 (33%)	0	0
<i>Logical flow</i>	6 (26%)	10 (44%)	6 (26%)	1 (4%)	0
<i>Accurate facts</i>	6 (25%)	15 (63%)	3 (13%)	0	0
<i>Consultation</i>	7 (30%)	10 (44%)	6 (26%)	0	0
<i>Clear presentation</i>	6 (25%)	13 (54%)	4 (17%)	1 (4%)	0
<i>Meets deadlines</i>	4 (17%)	12 (50%)	8 (33%)	0	0
<i>Specifies alternatives</i>	4 (18%)	10 (45%)	7 (32%)	1 (5%)	0
<i>Linked to Council goals</i>	10 (42%)	11 (46%)	3 (13%)	0	0
<i>Implications assessed</i>	6 (25%)	9 (38%)	8 (33%)	1 (4%)	0
<i>Achievable proposals</i>	5 (24%)	8 (38%)	8 (38%)	0	0
<i>Policy monitoring</i>	6 (26%)	9 (39%)	7 (30%)	0	1 (4%)

<i>Policy Effectiveness</i>	4 (17%)	10 (44%)	9 (39%)	0	0
<i>Meets legal obligations</i>	7 (30%)	11 (48%)	5 (22%)	0	0

N=24

4.10.5 Consumer Comments

* *Services that have Exceeded Expectations*

Over 40% of Internal consumers felt there were services that exceeded their expectations. Their comments on **positive** service aspects were summarised as follows: *Reports and information (7), service staff relationship (6), specific services (4), policy services (3) and the current research (1).*

Nearly 40% of External consumers felt that there were services that exceeded their expectations. Their comments fell into the following categories:

Service staff relationship (8), reports and information (7), specific services (7), policy services (3) and Massey’s current research (1).

4.10.6 Service Ideas and Improvements

Consumers suggested the following number of service ideas and improvements: Policy services (2), Communication and information services (11), specific services (10 - such as, new benchmarking services, peer review service... etc.) and service role and organisation improvements (4).

4.11 Analysis of Outcomes (Third Survey)

4.11.1 Comparisons of Internal and External Consumer Evaluations

The attribute of *Accurate facts* showed the greatest percentage difference (15%) between the Internal and External consumers followed by *Consultation* (14% difference), *Relevance* (13% difference), and *Clear presentation* (12% difference) refer to Table. The Internal ratings were all higher than the External ratings on the attributes mentioned above. The other attributes in common between the Internal and External consumers had very similar ratings for the Extremely Good or Very Good categories.

Table 4. 21 Evaluation of Policy Service, Information and Reports: Internal 1999

<i>Attributes</i>	Ex Good	V Good	Total	Good	Poor	V Poor
<i>Relevance</i>	21%	54%	75%	25%	0	0
<i>Clear purpose</i>	29%	38%	67%	33%	0	0
<i>Logical flow</i>	26%	44%	70%	26%	4%	0
<i>Accurate facts</i>	25%	63%	88%	13%	0	0
<i>Consultation</i>	30%	44%	74%	26%	0	0
<i>Clear presentation</i>	25%	54%	79%	17%	4%	0
<i>Meets deadlines</i>	17%	50%	67%	33%	0	0
<i>Specifies alternatives</i>	18%	45%	63%	32%	5%	0
<i>Linked to goals</i>	42%	46%	88%	13%	0	0
<i>Implications assessed</i>	25%	38%	63%	33%	4%	0
<i>Achievable proposals</i>	24%	38%	62%	38%	0	0
<i>Policy monitoring</i>	26%	39%	65%	30%	0	4%
<i>Policy Effectiveness</i>	17%	44%	61%	39%	0	0
<i>Meets Legal Obligations</i>	30%	48%	78%	22%	0	0

N=24

Table 4.22 Evaluation of Reports and Information: External Consumers 1999

<i>Attributes</i>	Ex Good	V Good	Total	Good	Poor	V Poor
<i>Relevance</i>	37%	49%	88%	24%	0	0
<i>Clear purpose</i>	30%	37%	67%	30%	3%	0
<i>Logical flow</i>	22%	50%	72%	28%	0	0
<i>Accurate facts</i>	24%	49%	73%	27%	0	0
<i>Consultation</i>	30%	30%	60%	37%	3%	0
<i>Clear presentation</i>	27%	40%	67%	30%	3%	0
<i>Meets deadlines</i>	31%	35%	66%	31	0	3%

N=34

4.11.2 Service Attribute Mapping & Analysis

There was still a mismatch in the *Courteous* attribute, which was considered the least important but still has the highest satisfaction rating. *Level of knowledge* is perceived as the most important attribute but is rated the third best in satisfaction.

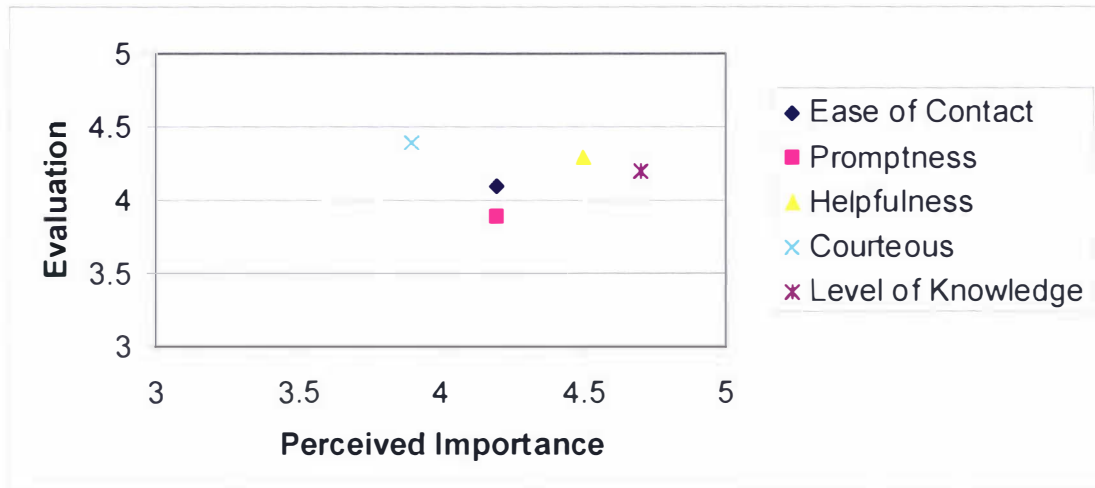


Figure 4.6: Analysis Mapping of Attribute Evaluation and Importance

Evaluation scale: Extremely Good (5) to Very Poor (1), Importance scale: Least (1) to Most important (5).

Overall, the attributes are closely grouped in their ratings, which are generally very good, and are all perceived as important.

Most attribute ratings very closely matched the perceived importance of those attributes as shown in Figure 4.6. This indicated that the Council was still providing a higher level of service for those attributes that were considered most important, and a good level of service for the less important attributes.

The *Courteous* attribute was considered the least important but has the highest satisfaction rating. This however does not mean that they can ignore this attribute as it is perhaps regarded as a basic attribute, which if not provided could a Strategic Services importance. *Level of knowledge* is perceived as the most important attribute but is rated the third best.

4.11.3 Comparison of Relationship Evaluations between 1998 and 1999

The changes in service relationship evaluations were analysed to detect any early warning signs of problem areas in the service and to note improvements. The attributes of

Courteous, *Helpfulness* and *Knowledge* have been rated higher in 1999 for Extremely Good and Very Good, showing slight improvement from 1998. There was a slight reduction in the Extremely Good and Very Good rating for Promptness, while a slight increase in Poor was noticed for both *Promptness* and *Ease of contact*. It was noted however that all of these results were not statistically significant, and could only be a possible indication of a trend.

4.11.4 Change in Evaluation of Reports and Information: External Consumers

There has been a general decrease in the number of External consumers rating the attributes as Extremely Good (refer to Appendix 4.1). But this has been offset by a larger corresponding increase in the rating of the attributes as Very Good. Although it appears that the attribute *Clear purpose* has increased in the Very Good rating, it is not statistically significant.

Table 4.24 shows the overall change for 1998/1999 where all the attributes except *Clear presentation* and *Accurate facts* have increased their ratings for Extremely Good and Very Good combined (largely due to the increase in Very Good ratings). This is a little offset by the corresponding Poor increase in the attributes of *Clear presentation*, *Accurate facts*, and *Consultation*, however these increases are small and not significantly different. The *Meeting of deadlines* had a small increase for Very Poor (3%) as compared to 0% in 1998.

The overall trend is positive with the External consumers generally satisfied with the Reports and Information services. Some improvements may be required for *Meeting deadlines* and *Clear presentation*.

Table 4.23 Change in Evaluation of Reports and Information between 1998 and 1999 - External Consumers

<i>Attributes</i>	Change in Ex Good (% Points)	Change in Ve Good (% Points)	Change in Good (% Points)	Change in Poor (% Points)	Change in Very poor (% Points)
<i>Relevance</i>	2	9	-11	0	0
<i>Clear purpose</i>	-15	27	-15	3	0
<i>Logical Flow</i>	-13	20	-7	0	0
<i>Accurate Facts</i>	-6	14	-3	-5	0
<i>Consultation</i>	9	-7	0	-2	0
<i>Clear presentation</i>	-3	-5	5	3	0
<i>Meet deadlines</i>	-6	14	-6	-5	3

4.11.5 Changes in Evaluation of Policy Service, Reports and Information: Internal Consumers

Overall the changes that have occurred between 1998 and 1999 for the Internal consumers have been small and could be seen as random fluctuations. There appears to be a slight decrease in most of the attributes in the Extremely Good/Very Good levels. However none of the changes in the attributes are statistically significant. The attribute *Meets deadlines* shows a decrease in its Extremely Good and Very Good ratings and indicates that some attention may be required in this area. In general, the evaluations are similar to the previous year.

Table 4.24 Change in Evaluation of Policy Service, Reports and Information between 1998 and 1999: Internal Consumers

<i>Attributes</i>	Change in Ex Good (% Points)	Change in V Good (% Points)	Change in Good (% Points)	Change in Poor (% Points)	Change in V poor (% Points)
<i>Relevance</i>	-1	-2	10	-7	0
<i>Clear purpose</i>	10	-14	3	0	0
<i>Logical flow</i>	4	-12	4	4	0
<i>Accurate facts</i>	-6	1	5	0	0
<i>Consultation</i>	15	-23	7	0	0
<i>Clear presentation</i>	14	-13	-5	4	0
<i>Meet deadlines</i>	-9	-13	22	0	0
<i>Specifies alternatives</i>	3	1	-9	5	0
<i>Linked to goals</i>	9	-13	6	0	0
<i>Implications assessed</i>	4	-15	7	4	0
<i>Achievable proposals</i>	2	-6	8	-4	0
<i>Policy monitoring</i>	3	4	-8	-4	4
<i>Policy Effectiveness</i>	-9	7	6	-4	0
<i>Meets legal obligations</i>	1	-10	9	0	0

4.11.6 Comparisons of Internal and External Consumer Evaluations between 1998 and 1999 Surveys

There has been a slight decrease in the rating by External consumers from Extremely Good to Very Good, except for the Helpfulness attribute, which increased (refer to Table). There has been a slight improvement in the number of Internal consumers' ratings of the attributes as Extremely Good, except for *Promptness*, which decreased by 9%. Overall the Relationship ratings of 1999 compared to 1998 did not show any statistically significant difference. There appeared to be slight variation, but generally the results are consistent with those of 1998.

Table 4.25 Change in All Relationship Ratings in 1998 and 1999

<i>Attributes</i>	Change in Ex Good (% Points)		Change in V Good (% Points)		Change in Poor (% Points)	
	Int	Ext	Int	Ext	Int	Ext
<i>Ease of contact</i>	0	-13	1	14	4	0
<i>Promptness</i>	-9	-1	5	-2	4	3
<i>Helpfulness</i>	2	3	9	9	0	0
<i>Courteous</i>	9	-1	6	8	0	0
<i>Level of knowledge</i>	1	-5	10	3	0	0

4.12 Comparison of Overall Service Evaluation across three Surveys

Comparisons were made of the evaluations for the overall service in 1997, 1998 and 1999, for internal and external consumers. The results showed a slight improvement with time, from 63% in 1997 to 79% in 1999 (combined scores for Extremely Good and Very Good). There was a significant improvement in the external consumer ratings in 1998 and that improvement has been maintained in 1999.

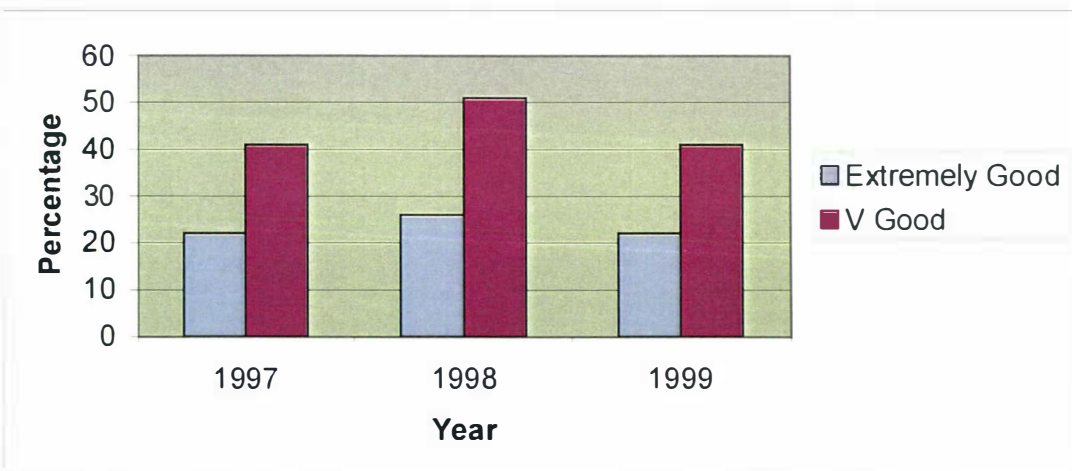


Figure 4.7: Comparison of Overall Service Evaluation across all Three Monitors

4.13 Decisions on Strategic Service Research - 1999

More than three-quarters of the Strategic Service consumers (both internal and external consumers) rated the overall service provided as Extremely Good or Very Good. There was however one Poor rating from an external consumer. There was no significant difference between the overall satisfaction ratings given by internal and external consumers, which support the 1998 findings.

Consumers were very happy with the *relationship attributes* with ratings of Extremely Good or Very Good in nearly 70% to over 80% of the responses. The attributes of *Courteous*, *Helpfulness*, *Ease of contact* and *Level of knowledge* were higher in the Extremely Good or Very Good ratings compared to 1998. The Strategic Services seemed to have maintained the improved ratings achieved in 1998 between the internal and external consumers. There was no significant difference between the two groups in the ratings. There was slight improvement in the 'fit' between the satisfaction of service provided and the perceived importance of the service attributes.

The external consumers were generally quite satisfied with the reports and information provided, with all the attributes being rated between 60% and 88% for Extremely Good or Very Good. The overall results are consistent with 1998 and show minor changes. The attributes of *Meets deadlines* and *Consultation* may require attention as indicated by some consumer ratings of Poor. The majority of internal consumers were very happy with the quality of policy advice, reports and information provided by the service unit, with Extremely Good or Very Good ratings for these attributes ranging from 61% to 88%. Of concern was the Very Poor rating given by one respondent to the *Monitoring of policy* attribute. The attributes of *Accurate facts*, *Meets deadlines*, and *Consultation* were no longer rated significantly higher for internal consumers than for external consumers as in 1998 (the external consumers ratings have improved, closing the gap that existed in 1998).

The consumers provided suggestions for service improvements, which have been summarised below. A considerable number have had their expectations of service exceeded these comments were mainly complimenting specific service staff and the report

and policy services. The service ideas provided by service staff were also submitted to the Council for review and development. Overall the service has performed well, without any major consumer perceived problems, and maintained the service improvement gained in 1998.

The main decisions were to include a new service attribute, namely, *internal communication and teamwork*. The consumer-generated new service ideas were mainly benchmarking services, accessible information services, new Maori services, long-term growth strategic services, better consultation techniques and expert services for Asset Management and Development Plans.

4.14 Discussion & Evaluation of Activities and Consumer Techniques

4.14.1 Modelling of Service Development

The *in vivo* method of testing rather than the *ex post facto* research has enabled the consumer-service staff interaction to be modelled into the Service Development process. The service attributes were initially identified by and with consumer and service staff groups. Consumers, both internal and external to the Council, then evaluated these service attributes.

It is interesting to note that a number of the important service attributes identified by consumers were related to the interaction between the consumer and the service staff. There appeared to be some initial hesitation and tension when service staff was informed about consumer evaluations of the service, but that was overcome by informing them of the benefits of the research and the likely outcomes. Therefore, provided that the Service Development objectives are clearly identified at the start and communicated to both consumers and service staff, then valuable input can be gained from both parties. In this case study, the service staff were prepared to 'listen' to consumers' views, problems and suggestions. They were willing to improve their interactions with the consumer and were enthusiastic about measuring how quickly they can respond to consumers or access and provide the information they required. A general change in attitude was observed among service staff, when they actually saw how the evaluations improved as a result of service improvements (as was seen in the 1998 survey results).

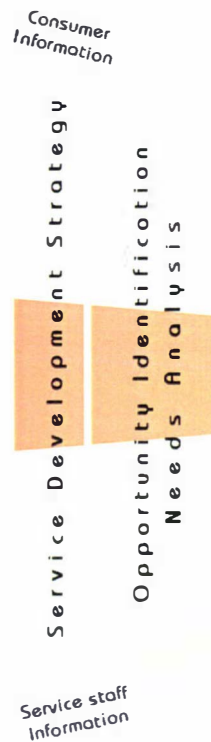


Figure 4.8: First Sub-stage of the Service Development Process

The first case study was on the Strategic services provided to key consumers. It involved service staff and consumers in the identification of service attributes and their evaluation. This was conducted as an annual survey monitor over three years to capture changes in evaluation and to identify opportunities for service development. It was found that consumers and service staff provide valuable information (including synergy with the Council's vision, importance of the service and service attributes) at this sub-stage of Service Development and therefore must be involved at this early stage.

4.14.2 Consumer Participation in Strategic Service Research

Consumers were involved in the initial focus group discussions to identify the important service attributes and to discuss their attitudes towards the Council's Strategic Services. A number of service attributes were discussed and summarised.

It is important to provide the consumer with as much information as possible in order for them to evaluate the service that they recently experienced. In this case, a list of recent (in the last twelve months) service projects was provided to all respondents, and this helped them identify service attributes and also aided the recall of specific events, problems and needs.

Consumers took part in the qualitative and the quantitative phases of the research. Their input provided direction to the service improvements and development required. There could be many areas for service improvements, but it makes sense to focus on those that are perceived as important by consumers of the service. The quadrant analysis technique was found to be simple to use, administer and very useful for the identification of specific service attributes to concentrate improvements on.

It was noted that external respondents commented more about specific service projects undertaken by the Strategic Service and seemed to relate it to the service staff involved in that specific project (names of service staff that were mentioned have been removed from the verbatim comments to preserve confidentiality). Generally, internal consumers rated the service better than external consumers.

In general, it appeared that consumers suggested less entirely new services and more service improvements. Some of the service ideas and improvements were varied and unique due to different consumer needs. However, most were concerned with information and communication services.

4.14.3 Service Staff Involvement in Strategic Service Research

Formal and informal meetings were held with the strategic service staff to discuss the service attributes from their perspective and to verify the important ones that were highlighted in the focus groups with consumers. Consumers tended to focus on service interaction attributes more than the tangible aspects of the service. For example, the relationship attributes were more important than the attributes on reports and information. Generally, internal consumers seemed more interested in service tangibles while external consumers judged the service on the service staff relationship attributes. Service staff were more appreciative of the consumer evaluations, if it meant that they

would receive training (professional development) or their work would be made easier with computer software, databases, hi-tech telephone systems, better resources etc.

Service staff felt more comfortable to receive suggestions from consumers and to note the positive comments as well. The service staff involvement early in the process made them realise how their work was inter-dependent on other internal staff or other departments within the Council, and that they have to be collectively responsible for the service as far as the consumer is concerned. Hence, in the next case study, this aspect was further explored. Consumers were asked to evaluate internal staff service as well, if their enquiries were passed on to them.

4.14.4 Consumer Techniques in Strategic Service Research

The meetings with service staff and the mail surveys provided information on current services, service ideas and areas for improvements. The mail survey enabled respondents to answer the questionnaire at a time that suited them best and to be able to consider their answers before responding. Responses to open-ended questions were collated and analysed.

The tracking of problems over time (three years) was extremely useful to detect any early signs of dissatisfaction that may occur with key consumers. This was important as the Strategic service deals with very important consumers and needs to continuously monitor their feelings about the service.

The tracking surveys also revealed that consumer needs and evaluation of service attributes could vary over time. For example, it was relatively low in 1997, improved considerably in 1998 and then stabilised in 1999. So, one cannot assume that ratings will keep on rising, as consumer expectations can change and new service needs may arise. It is highly necessary for the Strategic services to continue to monitor and improve in response to its consumer requirements, as it is a critical service for the Council.

The responses over time have been analysed for any significant changes or indication of trends. It was good to note that the service problems that were detected in the 1997

monitor were solved by improving the internal telephone systems. This resulted in better scores the following year for the service attributes of *Promptness* and *Ease of contact*.

Another point to note is that external consumers appeared to evaluate the service more in terms of service staff relationships, that is they tended to mention specific service personnel who they had dealt with (names have been deleted from their comments to maintain confidentiality). On the other hand, internal consumers seemed to evaluate the service more in terms of procedures, facilities and projects. They also rated the services generally higher than the external consumers.

The objectives in this case study were to identify key service attributes from discussions with service staff and consumers. The objectives were related to the Council's vision and overall goals. Council service management support and commitment was sought before commencement of the research. The current service was then evaluated by recent consumers of the service by using the mail survey method. The longitudinal design for this case study proved very effective in monitoring any changes that occurred in consumer evaluations and perceptions of the service. Consumers suggested a number of service ideas and improvements that the Council could consider in the future. These activities and techniques met the objectives of this study, but it was felt that the next case study should involve consumers in a more direct role in the research and the process to the next sub-stage namely, Opportunity identification and Needs Analysis.

CHAPTER 5

Case study II – Customer Service Research

5.1 Introduction & Objectives

This chapter covers the case study that mainly focussed on Opportunity Identification and Needs Analysis sub-stages of the New Service Development ('NuServ') model. This research was conducted on the Council's Customer Services. This study used the telephone survey as the main method of consumer research. The case study used new techniques to help define areas for service improvement, identify consumer needs and attitudes, and generate service ideas.

A need to improve and develop the customer services was felt strongly by consumers and the Council service staff. Service Development research to investigate consumer perceptions, current service evaluations and the need for improved customer services was undertaken. This case study focused on the customer service delivery via the telephone as this was identified as the area requiring urgent improvements, due to the complaints received about the service and also because it was an area that had not been researched.

The overall aims of the research were to explore consumer experiences of the Council's telephone customer service and propose service improvement areas and new service ideas. In order to achieve these overall aims, the specific research objectives were outlined as follows:

- Identify service attributes of the customer service that consumers think are most important.
- Investigate consumer attitudes, expectations and needs of the service.
- Gather consumer attitudes towards the current service.
- Apply consumer research techniques that allow both service staff and consumers to participate in the early Service Development process.
- Identify areas for service improvement and suggest service ideas or solutions.

5.2 Activities and Techniques

The activities in this case study began with the service strategy and objectives and then went on to the next steps in the new model namely opportunity identification and needs analysis. The research explored specific service issues with both consumers and service staff via qualitative research. Then an assessment of service attributes via a large telephone survey was carried out. The consumer and service staff problems and needs were identified and some service ideas or solutions were generated. Table 5.1 outlines the activities, techniques, outcomes and decisions in this Service Development case study.

Secondary research pertaining to the proposed objective was conducted throughout the project. Comparative analysis was also undertaken by visiting and reviewing the Hawera (Taranaki, New Zealand) Council's customer services, as their Council had recently won a national award for customer services. Their service staff were interviewed and the service experienced first hand by the researcher. This preliminary research helped to identify the attributes for service evaluation and develop questions to be asked in the telephone survey.

Traditionally service improvement has focussed on internal processes in service organisations (Zeithaml, 2000). It is important for organisations to make improvements that are relevant to the consumer. This was done by identifying consumer needs and attitudes using a non-structured, exploratory approach (focus groups and analysis of suggestions and needs). Only after identifying the most important service attributes, was it appropriate to carry out a detailed investigation using the telephone interview technique to measure the service attributes quantitatively using rating scales.

Table 5.1 Activities in the sub-stages of the NuServ Model

Activities	Techniques	Outcomes	Decisions
Service Strategy	Service staff interviews	Objectives for study	Council's goal of answering 80% of calls at first point.
Opportunity Identification	Secondary research Comparative analysis Focus groups with consumers and staff	Service attributes identification Service attributes confirmation Service attributes to measure	Commitment to improve or/and include new customer services The salient service attributes Attitudes of service staff and consumers
Needs Analysis	Role-playing Joint Focus Groups with consumers and staff Word-storming Negative Brainstorming	Service attributes to evaluate quantitatively List of service attributes and improvements	Service problems Service role perceptions Final service ideas
Detailed Investigation	Telephone Interviews Quadrant Analysis Technique	Satisfaction/ Importance of services Evaluations of service attributes	Profile of consumers Service attributes needing improvement Services to focus improvement on Service characteristics important to the consumers.
Service Idea-generation	Pass/Fail Screening	Ranking of service improvements	Consumers service idea-generation Service ideas to explore further.

5.2.1 Outline of the Activities

Consumers who had contacted the Council customer services in the previous three months were invited to take part in the research. A small sample of these consumers was first invited to participate in the focus groups held at a central location in Palmerston North. Using the table of random numbers, sixty-two consumers were randomly selected from one hundred and twenty six recent enquiries that had been made to the customer service on telephone. Sixty-two respondents were contacted, and forty-three complete responses were obtained, giving a response rate of 69%. *Focus groups* were conducted to explore the relationship of the consumer and the

service staff and to get an insight into the sequence of steps of a 'typical' telephone enquiry. Qualitative data was obtained from three focus groups in the preliminary stages of the investigation. The focus groups were conducted between the 13th and 17th of May 1997. As part of the focus groups, idea generation techniques such as negative brainstorming and word-storming were used to generate new and improved service ideas.

5.2.2 Qualitative Techniques

Word-storming is a simple technique of generating a list of words closely associated with the research topic and is used as an ice-breaker or a warm-up technique at the start of a focus group to help respondents to begin thinking about the area of research (Gordon and Langmaid, 1988).

Negative Brainstorming (also sometimes called Contingency Diagram) is a technique for generating ideas from a negative perspective. Sometimes negative energy flows easily and it seemed easier to think of things that went wrong rather than what or how it could ideally be. This technique proved to be useful in this situation. The statement used for the negative brainstorming was '*what is the worst (not 'ideal') telephone customer service?*' The ideas were brainstormed onto a whiteboard. When all the ideas were up, they were turned around to positive ideas. This session helped consumers to identify important service attributes as well.

Consumer and Service Staff Joint Focus Group was a new technique that was trialled in this case study. Telephone customer services involve a close, direct relationship between consumers and service staff, therefore a new technique – the *Joint Focus Group* was tested in this case study to explore their interaction and understand their role expectations. In addition to this, two more group discussions were held with consumers and service staff separately. The three focus groups consisted of:

1. Six consumers who had recently (previous three months) contacted the Council by telephone
2. Nine Council telephonists (frontline service staff)
3. A combination of the above two groups (6 consumers and 4 service staff) in a joint discussion

There appeared to be some resistance from service staff to attend the joint session. However, when they were reassured about the objectives of the discussion, they felt more at ease. The *role-playing technique* was applied in this mixed group, where service staff and consumers acted out a typical customer services enquiry. The group discussions ran for about ninety minutes, while the role-playing session went for about two hours.

The focus group discussions were videotaped and later transcribed and summarized. The three group discussions gave a good understanding of the issues involved with regard to the customer-staff interaction. The results not only helped design a comprehensive questionnaire but also provided the critical consumer perspective to the discussions and the research. The *joint-focus group* of both consumers and service staff gave a unique understanding of the service relationship, the service staff interaction and their perceived roles. This session also helped generate new service ideas.

5.2.3 Quantitative Techniques

The qualitative stage was followed by a quantitative survey of 43 *telephone interviews* with randomly selected consumers conducted between the 23rd and 26th of May 1997, specifically targeted at recent users of the Council reception services (customers who contacted the Council in the last three months). To ensure that a satisfactory response rate was achieved, three telephone follow-up calls were made to respondents. This resulted in a response rate of 69% (which is regarded as adequate for a telephone survey, keeping in mind the time and sample constraints of the study).

The telephone questionnaire was developed based on the service literature, the qualitative outcomes and the service attributes that consumers and service staff felt were important. The research carried out by the Hawera City Council was examined, as mentioned in section 5.2 and the questionnaire adapted to suit this context. The questionnaire was designed to be simple and easy to administer and respond to. The question wording and scaling methods used were approved by two staff members from the Marketing Department at Massey University. Questions were asked on the service attributes that were important and consumer attitudes towards the overall service. The questionnaire was pre-tested on a small sample of five respondents.

Minor changes were made such as the wording change from ‘staff who are business-like’ to ‘staff who are professional’, and the skip option for some questions were highlighted for interviewers to take note of more carefully. These questions were asked only of those respondents who had been passed on to a second service staff member.

The position of items in a long list of attitude statements can be a concern that respondents can become ‘fatigued’ towards the end and answer without the careful thought that researchers assume Kress (1998). In this case the list was not very long, however, where there was a list of more than five attitude variables, a red dot was placed randomly beside the statements on the questionnaire sheets, and interviewers were instructed to start at the red dot and work their way through all of them. This simple technique was employed to avoid any bias (‘item order effects’) of having the same attribute on the top all the time. This technique saved the necessity of printing a number of questionnaires with different order of items (and entering data for analysis would have needed extra care), which the researcher had tried and tested in her past experience in the market research industry.

The scales used in this questionnaire were adopted from Garland’s research on banking services (1996), since he had researched and tested questionnaire scales extensively. Kress (1998) conducted research on responses to scales and found that when the undecided option was provided, as expected they yielded higher proportion of undecided responses than when they were not specified. The scales in this survey were kept deliberately short as it was administered over the telephone and was easier for respondents to use. Open-ended responses were analysed and categorised into positive, negative and neutral responses for summarizations.

5.2.4 Analysis Techniques

** Quadrant Analysis Technique*

The Quadrant Analysis technique was used to arrive at the most important service attributes to focus improvements on. The Quadrant Analysis technique investigates the inter-relationship between important attributes and plots them on a spatial map. This technique has been detailed in Chapter Three, section 3.7. These were used as criteria for screening ideas. As the focus of this research was on the consumer’s perspective and consumer acceptability, only consumer input was used here. The *Key*

Area Factor method was also used to confirm objectively how consumers perceived the important service attributes and where they felt improvement was needed most.

5.3 Qualitative Research Outcomes

The following includes the major points raised by service staff and consumers at the focus groups. It must however be noted that qualitative findings (such as the focus groups) are not representative of the population but are indicative of the general trend and attitudes held by consumers. The telephone interviews held later in the research provided quantitative information.

5.3.1 Service Attributes Identification

Consumers and service staff participated in service idea generation as part of the focus groups. In the three focus groups it was noted that consumers generated more ideas than service staff, perhaps because they were less constrained in terms of the practicalities of delivery, up-skilling and cost. *Word-storming, brainstorming, and role-playing techniques* facilitated the process. The questions or statements to focus and encourage brainstorming were, “*How can we improve the telephone customer service?*” and for word-storming, *what words would you associate with an ideal telephone customer service?*” The following table provides a summary of the list of words brainstormed by both service staff and consumers, which served as a stimulus for further exploration of the important service attributes.

Table 5.2 Preliminary Attributes for new Customer Services

<i>Cared for</i>	<i>Courteous</i>
<i>Consistent</i>	<i>Keeping informed</i>
<i>Knowledgeable</i>	<i>Communication</i>
<i>Assistance</i>	<i>Clear instructions</i>
<i>Feel important</i>	<i>Trustworthy</i>
<i>Speed</i>	<i>Helpful</i>
<i>Convenient</i>	<i>Flexible</i>
<i>Responsive</i>	<i>Confidential</i>
<i>Solve problems</i>	<i>Listen</i>
<i>Follow up</i>	<i>Polite</i>
<i>Keeping promises</i>	<i>Prompt</i>
<i>Simple</i>	<i>Honest, straightforward</i>
<i>Value consumers, care</i>	<i>Help us access information</i>
<i>Share information between departments so we don't have to repeat details</i>	<i>Update their files</i>
<i>Explain issues fully</i>	<i>Provide all information</i>
<i>Attentive</i>	<i>Approachable</i>
<i>Available</i>	<i>Personal</i>
<i>Modern, up-to-date facilities equipment</i>	<i>Efficient</i>

The preliminary attribute list in Table 5.2 helped stimulate solutions and service ideas. Negative brainstorming was useful to generate service needs from both consumers and service staff. The problems and needs expressed by consumers and service staff are categorised and presented below.

The important service attributes were explored based on the question, “*What things are most important to you when you deal with the telephone customer service?*” The following list was summarised after a consensus was reached with the group participants. These attributes were supported by service literature (Zeithaml, Berry and Parasuraman 1996), with very slight variations on some words. However, it was decided to proceed with the wording that the consumers of this specific service produced and were familiar with.

* *Service Attributes for Telephone Customer Service identified in Focus Groups:*

The attributes identified as being of importance when evaluating the customer service were found to be the following attributes related to the staff service:

- *Staff are keen to help, are understanding of consumer needs, provide prompt service, are attentive and ready to listen, give simple and clear explanations,*
- *Staff who make you feel that your concerns/enquiries matter, are polite and courteous, are professional and show flexible attitude.* In addition to these specific service attributes, respondents were also asked about what was important to them when they assessed the overall service. The following general service attributes were generated: *Keeping their word, completing work by required date, keeping consumer informed, internal communication, consistency of information, customer friendliness and efforts to make themselves personally known to the caller.*

5.3.2 Service Staff Needs

The discussion began with the objectives of the study, service staff roles, needs and problems. There appeared to be some confusion in the minds of service staff about the responsibilities of the Palmerston North Council and the Manawatu Regional Council and their respective roles and services. The departmental nature of the Council structure often lead to service staff having to ask consumers probing questions to uncover the callers desired department. The following verbatim comments by service staff highlight their expectations of the consumer's 'role' when they ring in.

“99 times out of 100 when it's the first call, they [the consumer] don't know where they want to go (i.e. which department they need).

Half the time they [consumers] don't know what service they want in the first place.

Direct Dial lines are misused by leaving phones off the hook or using a Do Not Disturb button, causing callers to be bounced around the phone system. This leaves the frontline service staff to have to deal with the consequences.

The Council is receiving a number of general information inquiries that could be dealt with by an Information kiosk.

There is no backup staff if a frontline service staff is away.

Tuesday morning 9.30 AM starts are often chaotic as the consumers are not aware that the phones are not answered until then.

... Telephonists get abused for the 9.30 start!”

The telephone number for some services such as the Palmerston North Airport, Lido recreation services and library were connected to the Council building instead of the respective direct locations. This had the tendency to cause confusion and added waiting time for the consumer. Some department DDI (Direct Dial In) lines were not printed in the telephone directory. If these numbers were made available, the interaction with the receptionists would not be necessary, saving the consumer time.

5.3.3 Consumer Attitudes Towards Customer Service

The consumer group was able to generate more ideas and service problems than service staff. Perhaps the service staff felt constrained by the practical possibilities within their context and work environment. Problems or needs mentioned by consumers were as follows:

“The information received by consumers does not always suit the nature of the problem and often no solution is offered.

Getting access to the information is not always easy. For example, in order to use a microfiche, the staff member has to bring up the files then hand it over, and often there is only one copy creating a lot of waiting to be involved.

In some cases there is only one interview room, which often requires booking in advance.

Things don't always get done unless there are many people wanting it to get done.

Due to the lack of interview rooms, it is hard to have a private conversation when consumers visit the Council.

When it comes to making appointments, the Council does not always keep their word.

Even the simplest procedures seem to take ten working days, and even then they sometimes need a reminder.

Once the Council is notified of a problem, then the action taken should be left up to them.”

There were also positive comments:

“If the required person is not available there is usually someone else in the department who is willing to help.

If appointments are made over the phone, then visiting the Council will result in a fairly smooth process.

Gave sound advice.

Been officious in the past but not snobby any more.

The staff is courteous, even when they are saying they won't do something.

Better service than in most shops.

Keep up the standard!

The consumers' general impression was that the Council was easy to contact. The majority of people looked up the Council number in the phone directory. However, some improvement could be made in the layout of the page and numbers in the telephone book as some consumers had a problem. There was general satisfaction about the quality of service received by customers. The recent placement of a playpen for children was appreciated.

“...There are more positive words to say about the people and services at the Council and very few negative, but I do have some suggestions, such as keeping us updated on the status of a service...”

Overall, the focus groups indicated that although improvements in the quality of service in some areas could be made, there was a general positive attitude towards the service the customers received in their encounter with the Council telephonists. The main problem with the receptionists' service in the interaction with consumers appeared to be the process by which information is transferred and obtained. This included poor communication between departments and relevant people, which inevitably leads to a poor impression of the service by consumers.

“...You are only wanting a simple answer, the more people you get passed through the more the consumer thinks that no one knows what they're doing.”

Consumers are often put through to several operators before reaching the right department:

“Who ever picks up that initial call should know who they’re going to put you on to... this is a problem.”

“The front-line introduction could be improved as receptionists can be abrupt and do not always introduce themselves.”

“The first person spoken to cannot always answer the query”.

“People do not like being put on hold especially if they are on a cell phone.”

The positive comments from consumers were:

“The department being transferred to by the receptionists usually introduce themselves and state which department they are in.

The receptionists are prompt in answering the telephones.

The process of dealing with the enquiry appears to be the problem, not the receptionists at the Council.

“... The attitude of the Council officers. and being put through to the right people. I’ve got no problem with it in general - I think a lot of it is caused by the design of the building and how everyone’s put in it.”

5.3.4 Consumer and Service Staff Interaction

The new technique of *Joint Focus Groups* which combined consumers and service staff at an integrated discussion was trialled in this case study to explore service interactions. At the beginning, there appeared to be some uneasiness on the part of the service staff to attend the session, until the objectives of the session were detailed. It was made clear that the whole purpose was to discover together service areas for improvement. Service problems were described from both their perspectives and then discussions on service ideas and solutions were explored.

The *Role-Playing Technique* was also trialled in this session where service staff and consumers were requested to act out their roles based on a typical telephone enquiry service situation. This was an interesting technique as it generated discussions on roles and role-expectations. It was evident that there was confusion over role

expectations, which lead to perceived service problems. The group also discussed service needs related to the scenario and generated service ideas.

5.4 Quantitative Research Outcomes

5.4.1 Consumers in Survey

** Profile of Consumers*

A typical consumer of the telephone customer service lives in Palmerston North (90%), mostly from the (medium to low socio-economic) areas of West End, Highbury, Ashhurst and Terrace End, is male (49%) or female (51%), and is aged between 40 and 49 years (32%). A sizeable proportion was elderly consumers (26%), which is noteworthy.

** Nature of Enquiry*

Consumers were asked about the nature of their enquiry and it was found that a majority of the enquiries (65%) were related to water, sewerage and building services. Further analysis of the responses revealed that these were also the enquiries that had a large proportion passed on to internal service staff to handle. This information provided insight into the service areas that could perhaps be improved.

5.4.2 Overall Evaluation of Customer Service by Consumers

Consumers were invited to evaluate their experience of the telephone customer service that they had experienced recently. They provided their overall impressions (Figure 5.1). 82% of the consumers rated the overall customer service as being either good or excellent.

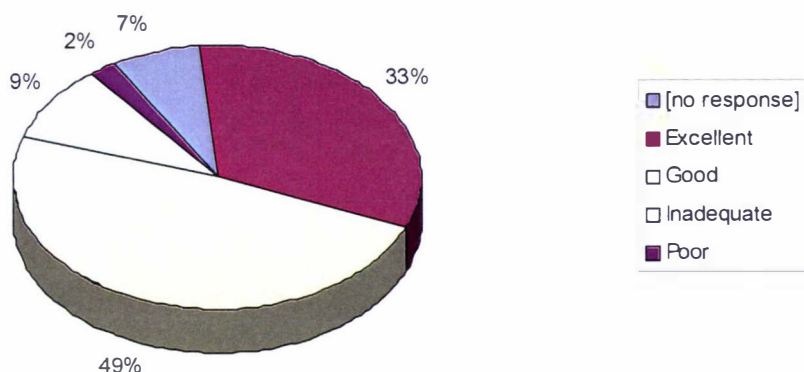


Figure 5.1: Overall Evaluation of Customer Service

5.4.3 Consumer Attitudes towards Personal Service Attributes

The consumers’ attitudes towards the service attributes, which were identified in the qualitative research, were measured by consumers rating each attribute on a scale from excellent to poor, as seen in Table 5.3. The attribute ‘courteousness’ was perceived to be positive, with a combined excellent and good score of 87%.

Table 5.3 Evaluation of Service Attributes by Consumers

Attributes	Excellent No. (%)	Good No. (%)	Inadequate No. (%)	Poor No. (%)	Don’t know No. (%)	NA No. (%)
<i>Courteous</i>	19 (44)	20 (47)	1 (2)	1 (2)	1 (2)	1 (2)
<i>Understanding needs</i>	17 (40)	19 (44)	3 (7)	2 (5)	1 (2)	1 (2)
<i>Attentive</i>	15 (35)	22 (52)	3 (7)	1 (2)	1 (2)	1 (2)
<i>Professional</i>	14 (33)	19 (44)	4 (9)	3 (7)	2 (5)	1 (2)
<i>Keen to help</i>	13 (30)	21 (49)	5 (12)	2 (5)	1 (2)	1 (2)
<i>Clear explanations</i>	12 (28)	18 (42)	5 (12)	6 (14)	1 (2)	1 (2)
<i>Prompt</i>	11 (26)	16 (38)	10 (23)	4 (9)	1 (2)	1 (2)
<i>Flexible attitude</i>	10 (23)	15 (35)	9 (21)	1 (2)	6 (14)	2 (5)
<i>Enquiry matters</i>	8 (19)	21 (49)	4 (9)	4 (9)	3 (7)	3 (7)

N=43

NA=Not applicable, cannot judge due to limited experience

Consumers were asked to evaluate the service received from the reception staff and internal staff, if they were passed on to them. The service attributes of importance and their ratings are outlined below. The service attributes that rated well were: *understanding needs*, *courteous* and *attentive* (Table 5.3), while those that were rated as important were *prompt service* and *giving clear explanations* (Refer Table 5.4).

5.4.4 Importance Rating of Service Attributes by Consumers

The interactions of service attributes on the two main dimensions of importance and satisfaction were analysed. The consumers' rating of the importance of service attributes showed that 'keen to help', 'prompt' and 'clear explanations' were the most important service attributes, Table 5.4.

Table 5.4 Importance of Service Attributes to Consumers

<i>Attributes</i>	Very important No. (%)	Quite important No. (%)	Not very important No. (%)	Not at all important No. (%)	Don't Know No. (%)	NA No. (%)
<i>Keen to help</i>	29 (67)	11 (26)	0 (0)	0 (0)	0 (0)	3 (7)
<i>Clear explanations</i>	29 (67)	9 (21)	0 (0)	1 (2)	1 (2)	3 (7)
<i>Prompt</i>	29 (67)	10 (23)	1 (2)	0 (0)	0 (0)	3 (7)
<i>Enquiry matters</i>	25 (58)	12 (28)	1 (2)	2 (5)	0 (0)	3 (7)
<i>Understanding needs</i>	25 (58)	14 (33)	1 (2)	0 (0)	0 (0)	3 (7)
<i>Attentive</i>	24 (56)	14 (33)	2 (5)	0 (0)	0 (0)	3 (7)
<i>Courteous</i>	23 (54)	13 (30)	2 (5)	1 (2)	0 (0)	4 (9)
<i>Professional</i>	22 (51)	10 (23)	7 (16)	0 (0)	1 (2)	3 (7)
<i>Flexible attitude</i>	17 (39)	11 (26)	7 (16)	0 (0)	5 (12)	3 (7)

N=43

NA =Not applicable, cannot judge due to limited experience

5.4.5 Consumer Attitudes to General Service

Consumers were also asked about the total handling of telephone enquiries. The following general service attributes were given a good or excellent rating of greater than 74%: *friendliness*, *consistency of information*, *efforts of staff to make themselves personally known to the customer* and *keeping their word*. The following attributes were given a good or excellent grade of less than 60%: *keeping in contact with customer*, *completing work by required date* and *the Council's internal communications*, Table 5.5. It must be noted however, that although these three

factors had the lowest percentage of good or excellent grades, there were a number of 'Don't Know' responses. It may be possible that this section did not apply to their enquiries and therefore did not have adequate contact to assess these particular areas.

Table 5.5 Consumer Attitudes to General Service

<i>Attributes</i>	Excellent No. (%)	Good No. (%)	Inadequate No. (%)	Poor No. (%)	Don't know No. (%)	NA No. (%)
<i>Keeping word</i>	16 (37)	16 (37)	5 (12)	1 (2)	5 (12)	0 (0)
<i>Completing work by date</i>	7 (16)	17 (40)	6 (14)	5 (12)	7 (16)	1 (2)
<i>Keeping informed</i>	8 (19)	14 (32)	8 (19)	3 (7)	10 (23)	0 (0)
<i>Internal communication</i>	8 (19)	17 (39)	7 (16)	5 (12)	5 (12)	1 (2)
<i>Consistency</i>	9 (21)	24 (56)	5 (12)	2 (5)	3 (7)	0 (0)
<i>Customer Friendliness</i>	21 (48)	16 (37)	2 (5)	2 (5)	0 (0)	2 (5)
<i>Efforts to make themselves known</i>	13 (30)	20 (47)	3 (7)	3 (7)	3 (7)	1(2)

N=43

NA=Not applicable, cannot judge due to limited experience

5.4.6 Service Improvements Needed

Additional Customer Service areas identified for service improvement from the quantitative survey were as follows:

- Respondents were asked about the follow-up from the Council on whether their enquiry was resolved successfully. This yielded interesting results for further new services or improvements as 37% said that they did not receive a follow-up call, 30% said they did and an equally large proportion admitted that it did not apply to their enquiry. This is certainly an area that could be improved, that is, a regular follow-up service system, as consumers are likely to feel 'well-cared for' if this were done for appropriate enquiries.
- The related attribute of 'keeping consumers informed' also received a significant score of 'inadequate' rating. These results indicate the need for new or improved services in this attribute.

- Internal communication within the Council could be improved as it was not perceived by consumers as rating very well, and received a relatively high 16% score for inadequate.

It was found that half the respondents (51%) used the district telephone book as the source and first point of finding the number to call the customer services. As the objective of the research was to detect areas for service improvement, the researcher probed consumers on the sequence of events related to a typical customer service enquiry. This simple question revealed that the layout of the telephone numbers in the book could help solve some of the confusion and reduce a number of unnecessary calls to the customer service.

Consumer comments and service improvements to the open-ended question in the survey on the Customer service recently received are given in Table 5.6. Although many respondents had no comments, the following are the comments that some respondents made:

Table 5.6 Consumer Comments about the Customer Service

Comments about Customer Service	No.	%
Should be more responsive to customers	5	6%
Effective communication required	7	9%
Desk staff approach and public relations	9	12%
Better services for the elderly	3	3%
More information to be available to public	6	7%
Excellent service	6	7%
Too quiet, need to be more proactive	2	2%
No response	44	54%

N=82

5.4.7 Evaluations of Frontline Service Staff and Internal Service Staff

An overall service rating of the service received by the customer from the Reception staff (1st person) and Internal staff (2nd person) were analysed. The following percentages represent the number of respondents rating the staff service as either good or excellent: Reception staff service 88%, Internal staff service 82%.

A very positive factor is the 86% of respondents who rated their overall experience, based on their 'expectations', with the Council as *the same or better than they*

expected. A few of the respondents compared their service experience with what they received at other Councils, and were very positive. The overall experience of the respondents based on the 'actual' service received was 82 % for *good* and *excellent*. Although these values are similar, ideally the *actual* service received should be rated equal to or higher than the *expectation* of the service.

5.5 Analysis of Outcomes

The results of the survey provided interesting data on the service attribute evaluations and gave quantitative information on service areas for improvement. The outcomes of the telephone survey were analysed further using techniques such as the quadrant analysis and key area factor analysis (refer to Chapter Three, section), which provided a spatial map of the attributes and key area factors that confirmed the attributes that required improvement.

5.5.1 Comparison of Importance and Satisfaction of Service Attributes

Quadrant Analysis was used to compare mean scores of service attribute satisfaction and importance. This technique helped to identify the service attributes that needed to be focussed on for service improvements or new service developments. The interaction between the importance and satisfaction of the attributes was mapped spatially to represent the relative positions of the attributes on these two important dimensions. In quadrant analysis the map is divided approximately into four quadrants namely *congratulations*, *maintain*, *can improve* and *must improve*.



Figure 5.2: Importance-Satisfaction Grid

A1= Keen to help, **A2**= Understand needs, **A3**= Prompt service, **A4**=Attentive, **A5**= Clear explanations, **A6**=Enquiries matter, **A7**= Courteous, **A8**= Professional, **A9**= Flexible attitude. [Note that the positions of the statements in the graph are relative rather than absolute. That is, a factor that is twice as far away from the origin (the centre) as another is not performing twice as poorly nor is it twice as important.]

The MUST IMPROVE quadrant has two factors in it: “prompt service” and “simple clear explanations”. Improvements need to be focused on these areas. The area of greatest concern appears to be with the *time that it takes to resolve* an enquiry, with 90% of customers regarding this as either quite important or very important. 64 % of customers felt that their enquiry was resolved in adequate time. Consumers mentioned that it was important to be kept informed about the status of an enquiry. The intense importance placed on these two factors signals an issue to consider as the verbatim consumer comment indicates: “*I like to be told what’s happening. I understand that things take time to resolve, but need to be informed of the status. Then I don’t think I’ll feel so bad to wait*”. The attribute ‘*keeping in contact with customer*’ did not get a very high rating, reinforcing the importance of keeping the consumer informed.

In the CAN IMPROVE quadrant (that is those factors which are less than average in importance but which are perceived as performing below average) were the “*flexible attitude of the staff*” and “*having staff who make you feel that your*

concerns/enquiries matter". Although at present consumers do not rate these attributes as important (in comparison to the other 7 attributes), it is still a concern that needs to be addressed in order to improve services.

In the other two quadrants CONGRATULATIONS and MAINTAIN service staff were outperforming consumer expectations. The Customer Service should:

<p>Focus Service Improvement on</p> <ul style="list-style-type: none"> - <i>Prompt service</i> - <i>Staff giving simple clear explanations</i> <p>Also Improve</p> <ul style="list-style-type: none"> - <i>The flexible attitude of service staff</i> - <i>Making the customer feel as though their concerns/enquiry matters</i> <p>Maintain Status Quo</p> <ul style="list-style-type: none"> - <i>professional attitude of staff</i> - <i>Staff politeness and courteousness</i> <p>Be Congratulated On</p> <ul style="list-style-type: none"> - <i>understanding of customers needs</i> - <i>Staff being attentive and ready to listen</i> - <i>keenness of staff to help</i>

5.5.2 Identification of Service Attribute Improvement

The Key Area Factor technique was used to test and confirm the service areas to focus improvement on.

The two main attributes in need of improvement identified using the Key Area Factor analysis technique were: *Prompt Service (A3)*, and *Give simple clear explanations (A5)*. The key area analysis compared favourably with the Importance/Satisfaction Grid. Although the attribute *Staff are keen to help* fell into the 'Congratulations' sector the high importance placed on this attribute by customers indicated that there was still need for improvement.

Although the primary data gathered showed that greater than 58% of the respondents were satisfied with each of the nine attributes (up to 91% for *Staff are polite and courteous*). Service researcher, Berry, 1991, has said that excellent ratings are what services should aim for and that a 'good' rating is not enough to retain consumers.

Consumers like to be made to feel that any concern or enquiry that they have is of importance. In the case of this survey, 68% of respondents were satisfied with

regard to this attribute. This however, left 32% of respondents for whom the service could be improved. The importance of continuously improving and innovating services in order to increase consumer satisfaction and loyalty has been stressed by service researchers Zeithaml and Berry, 1991.

The two critical service attributes that required service improvement by both techniques - the Quadrant analysis technique and the Key Area factor technique were: *staff give simple clear explanations* and *prompt service*.

5.5.3 Service Idea Selection

Service idea selection was based on the quantitative results of the consumer research. The following service attributes required improvements: *flexible attitude of staff*, *making the customer feel that their enquiry matters*, *staff give simple clear explanations* and *prompt service*. The last two service attributes were identified as “problem” areas and therefore received greater weighting in idea screening. Several ideas generated earlier by consumers and service staff in the focus groups were screened down to those that were related to the identified problem areas, as shown in the example below:

Service Attributes & Related New Service Ideas or Improvements

<p>‘Prompt service’ <i>Employ more staff</i> <i>More telephone lines to connect to internal staff</i> <i>Dedicated customer telephone service area (*selected and implemented in 1998)</i> <i>Staff training</i> <i>System for ‘tracking’ of enquiries etc.</i></p>	<p><i>- Keeping consumer informed regularly</i> <i>Contracting out service</i> <i>Set up central database, so that any internal staff available can respond</i> <i>Telephone system that allows consumer to reach the required department by selecting options etc.</i> <i>Staff incentives for promptness of response</i></p>
<p>‘Give simple clear explanations’ <i>Cross-functional group meetings</i> <i>Set up flowcharts</i> <i>Appoint special customer service officers</i> <i>Update standard procedures manual</i></p>	<p><i>Set up software with clear explanations to simple, frequent enquiries</i> <i>Staff training</i> <i>Staff exposure to various departments etc.</i> <i>Inter-department communication systems</i></p>

5.6 Decisions on Outcomes

In general, most consumers were satisfied with the service they received from the telephone staff in particular. There appeared to be only 2% of consumers surveyed

who rated the telephone staff service as being inadequate or poor, with 51% and 37% rating the service staff as good or excellent respectively. There is always room for improvement and service innovation, as seen by the ideas presented at the group discussions.

The Quadrant analysis highlighted that the low ratings were mainly a result of the service areas of 'prompt service' and 'clear explanations' (high importance, but low satisfaction). This indicates that improvements concerning how quickly a problem is resolved and how clearly options are presented to consumers would be worthwhile areas for service improvement. Consumers felt that if they were kept frequently informed of the status of a request, they did not mind it so much if it took longer than expected.

There were many areas where the service rated above average. These included being *keen to help*, *understanding of consumer needs* and staff that were *attentive and ready to listen*. Therefore, these areas do not need much attention, resources or additional commitment. The analyses techniques used were extremely useful for Service Development and improvement as it clearly identified service areas to focus on.

5.6.1 Service Improvement Suggestions

All of the information collected through the qualitative and quantitative techniques were examined and analysed for problems and possible service improvement suggestions. One of the goals of the Council is to answer 80% of calls at the first point of contact. The survey data showed that 45% of enquiries were answered in this way. This can be increased through a number of possible new service ideas, as suggested below. The data representing the nature of the enquiries indicated that 65% of calls were made in relation to water, sewerage, building services and planning. This showed that basic information in these three areas were important to have readily available and accessible to frontline staff.

Service ideas included training staff and providing new software that assisted in quick information access. This could be done by training telephonists to understand and be able to respond to the basic queries concerning these areas. A new service idea is to develop a computer database where this information can be easily accessed. In

addition to these service ideas, the receptionists should be given clear guidelines about who can answer specific customer queries in the various departments.

Another service improvement is to allot a specific person for the three main areas and publicise their DDI (Direct Dial In) lines for the respective sectors in the phone book. The layout and highlighted numbers in the telephone book need to be improved. The proportion of calls to the Council making up these areas show that they are significantly large enough to warrant the advantages of having their specific phone numbers highlighted. Consumers said that the telephone book was the most often used source when looking for the number to ring the Council.

5.6.2 Important Areas for Service Improvement

The analysis also showed that the telephonists were receiving a number of calls with reference to areas that were not located in the customer services building, which from a customer's point of view, may be better handled by persons in the respective locations. Some examples of these were callers with queries concerning the Lido recreation centre and the Library. Again the idea of a centralised database should address this problem. Although the Library and the Lido swimming pool were separately listed in the phone book, they were still accounting for 7% of the calls made to the Council. Ringing the direct number to these locations may help reduce some of the calls being handled by the Council reception staff and reduce the consumers' waiting time. At the same time customers can deal directly with the concerned services (Lido, Library) rather than be transferred from the Council. Some customers mentioned that they were not answered promptly when transferred to these locations.

A suggestion for eliminating this problem is redesigning the layout of the Council phone number listing in the directory. It is important that the information presented is clear and easily attainable as over half the customers use the phone book as their first source of contacting the Council.

In particular, more emphasis needs to be placed on the words "All services except those listed below," before the Council phone number. By doing this, customers will be made more aware that there are DDI lines for certain services. Because the Council telephonists received the Lido and the Library enquiries, bolder print could be

used to make these numbers more distinguishable amongst the others in the telephone book.

5.6.3 Physical Area for Service Improvement

From the analysis of the focus groups it was suggested that it might also be beneficial to facilitate a more private enclosure in which consumers can discuss queries. This could be achieved through private rooms or through the use of booths. Seating and provision of a drink (coffee/tea/water) may be seen positively by some customers (especially the elderly who have reported that they feel the Council does not provide adequate services for them). This is important to consider, as the demographics in New Zealand is moving towards a larger elderly population (Statistics New Zealand, 1997). The ergonomic and interior design elements of the reception area also need to be considered. However, this would be more important for consumers who visit the Council personally. As this study concentrated on the telephone customers, those issues were not investigated in detail. However, proper design of the telephonists' workstation would positively impact on their telephone handling and answering manner. By making customers feel more comfortable in discussing their queries, a better service encounter is experienced.

Another opportunity is to offer special services to the elderly segment as they have expressed a need and a significant proportion (26%) of the respondents were in the age group of 60 years and over. The actual population breakdown in Palmerston North as per the Census was 23% (Statistics New Zealand, 1997) and it also showed that this segment is rising. Hence, it is important for service managers to take note of this consumer segment for future new services.

Ultimately however, overall customer satisfaction is largely determined upon the outcome of the enquiry. This was an issue that was identified in the focus groups and reiterated in the customer survey. If a problem is promptly acted upon and solved, then the Council has served the consumer well. This highlights the need for a coordinated, integrated team effort by service providers, in conjunction with consumers to meet consumer requirements.

5.7 Discussion and Evaluation of Activities and Consumer Techniques

5.7.1 Modelling of Sub-stages in the Service Development Process

The conceptual model of development proposed at the end of Chapter 3, based on Service Development literature, was applied to the case study and assisted with the research planning. As per the model, both consumers and service staff were involved early in the development, starting from understanding the strategy and objectives to identification of service attributes, service evaluations and areas to improve or develop. Both consumers and service staff participated in service idea generation.

The activities corresponded to the conceptual model of Service Development as broadly outlined below. The model helped with the planning of activities and techniques as described earlier in the chapter.

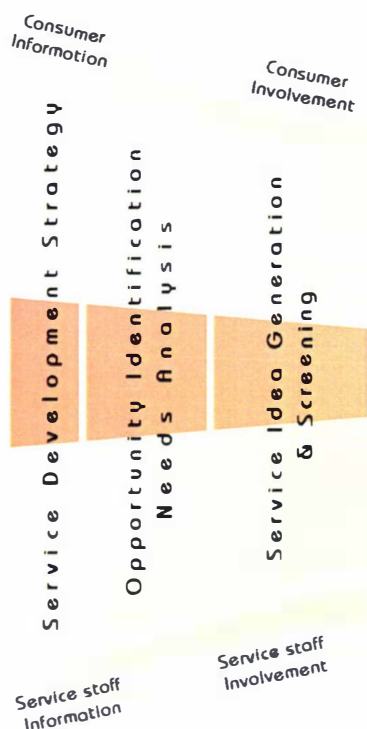


Figure 5.3: Building the NuServ Model of Service Development

5.7.2 Consumer Participation in Customer Service Research

Consumers participated in the focus group discussions and in the new technique of Joint Focus Group with the service staff. Consumers shared their recent experiences of the Council's telephone service, discussed the positives and negatives. They spoke about their expectations, their problems and how they were handled. These sessions were extremely useful in identifying the important service attributes from the consumer's perspective. They also highlighted areas of the service that could have been overlooked if the entire sequence of their contact was not traced and explored fully (e.g. the telephone number listing in the telephone book).

The Joint Focus Groups were useful especially to understand the interaction between service staff and consumers. It was very clear from the role-playing that consumers and service staff have expectations of each other's roles and these need to be clarified and explained, if a service encounter is to go smoothly. It also provided insight into the importance of both tangible and intangible aspects of the service.

This was the very first study that looked at the telephone customer service evaluation and improvement of the service. The Council had never researched this specific

service ever before, so it was a benchmark study. Another major unique feature of this study was the fact that it also gathered information about *internal service staff* performance related to the initial enquiry, as well as general Council service evaluations. Many of the consumers who were contacted expressed their happiness that their opinions were sought.

Consumer input is critical to finding out service attributes that are important and identifying areas that are perceived as problems. In this case study, it was found that consumers are more than satisfied with the courteousness of service staff, but would like to see improvement in promptness of service and providing clear explanations. This provided clear direction for service improvements and development.

5.7.3 Service Staff Participation in Customer Service Research

Service staff involvement was found to be valuable for several reasons. It was important to firstly establish a friendly atmosphere in the Joint Focus Group along with consumers. Once the objectives of the discussion were explained, the two groups were more open to discuss their experiences and elaborate on their expectations and problems.

Consumers more than service staff readily took on the role-playing. The role-playing was interchanged for different scenarios of typical enquiries, which contributed a lot to understanding each other's roles. Specific examples were used and service staff could explain the problems they faced when consumers request the information they typically do. These sessions provided a wealth of information and were very interesting as they uncovered a number of issues about the consumer-service staff interaction, which would not have been possible through a structured survey method alone. When these insights were presented to service managers, they understood better the need to improve services and where and how to focus improvement. Several of these service improvements are presented in the recommendations section. An important outcome of the Joint Focus Group was a better understanding of each other's problems and concerns by both consumers and service staff. This was evident in the comments made by the focus group participants towards the end of the session. Many of the important attributes of a service that were mentioned by consumers in the focus groups appeared to be related to service staff roles. The service was

assessed on a number of service staff attributes, showing the important role that service staff plays in the production and delivery of the service. This is one of the unique characteristics of services – simultaneity of production and consumption. The qualitative and quantitative outcomes of this case study clearly support the crucial role that service staff has in the consumers' perception of a service, especially in this case, where the relationship is direct and definite role expectations were evident.

5.7.4 Consumer Techniques Used in Customer Service Research

This chapter covered the consumer-oriented techniques used to explore service attributes and evaluation in order to identify service areas for improvement and development. The case study provided the natural real world setting to explore consumer techniques and benefits. A brief review of relevant academic literature on customer services and findings from the focus groups provided direction and support for the larger quantitative research phase. The outcomes of the case study showed clearly that consumers could provide valuable information on service attributes, needs and problems, at the first stage of Service Development that can assist with the identification of service improvement areas. The study also demonstrated how service staff participated in service problem identification and idea generation.

The main purpose of the research case studies was to explore the involvement of the consumers and service staff in the first stage of Service Development. Although the case studies gathered information relevant to the service, the research focused on examining the participatory style of development used, rather than the specific details of the study outcomes. Hence, this section is common to all case studies and focuses on the consumer techniques used and the general steps of development. It examines and discusses how the consumer and service staff were involved and contributed to Service Development. The outcomes of the research showed how the consumer techniques used provided valuable information and a consumer perspective to the service, which led to a more focussed development, than not having any consumer input. It would have been very difficult to proceed with the development and to make key decisions (such as key service areas for improvement, consumer problems, roles and perceptions) without this information.

The research especially the *Joint Focus Group* was a new technique that was selected to maximise the contributions of the consumer and service staff and to observe the interaction between the two. The *role-playing* was a form of service simulation that allowed for the exploration of roles and expectations of service staff and consumers. It definitely helped examine the relationships and it resulted in a better understanding of each other's perspectives of service problems. In this situation the use of a neutral moderator such as the researcher was an advantage.

Joint Focus Groups

The new technique of using Joint Focus Groups with both consumers and service staff at the same time and place proved very useful in understanding the service interaction. It was extremely effective for service problem identification and generation of solutions and service ideas in a joint discussion with both consumers and service staff. It provided important insights into their perceptions, their service needs and their attitudes (See section 5.3.4).

Role-playing

The *role-playing* technique was selected for this case study as the interaction between consumers and service staff is direct, and the technique allowed for observation of and exploration of the sequence of a transaction. *Dual moderation* was trialled for part of the session, where the researcher allotted a service staff member and a consumer to moderate the discussion from their perspectives, during the role-play. This dually moderated session lasted for about twenty minutes. The discussion centred on the respective roles and clarification of expectations, which resulted in a better understanding of why some services were delivered in a certain manner. These techniques proved extremely useful as they uncovered significant insights into the service relationship, which would not have been possible otherwise. It was also found that consumers found it easier to discuss service issues and problems when specific or typical service experiences were shared.

Telephone Interview

The telephone interview method was suitable as consumers were spread throughout the city. Questionnaire development was preceded by a review of existing literature, interviews with service managers and the qualitative phase with consumers and service

staff. Consumers were being questioned on the customer-telephone-service recently experienced by them. The telephone surveys allowed for a number of surveys to be completed in a short time, the response rate was fairly good and it gave a quantitative measure of the importance of service attributes.

Quadrant Analysis

For successful development it is crucial to know the product/service attributes and how consumers view them on important dimensions (Moore and Pessemier, 1993). Each consumer rated each service attribute on an importance scale and a performance scale. The results were plotted on a spatial map, which consisted of four quadrants namely; high importance-low performance, high importance–high performance, low importance–low performance and low importance–high performance. This technique allowed for objective calculations of consumer perceptions of service attributes. The implications for service managers are that it provides consumer representations of service features that help identify opportunities and areas for Service Development.

Key Area Factor Technique

The *Key Area Factor Technique* was used in this case study, as part of the consumer survey, to objectively confirm the opportunities for service improvements. The technique was appropriate for application in early Service Development and proved to be effective, as the results compared favourably with other outcomes of the case study.

Service Development in the subsequent stages could be enhanced with advanced technology and experts in information management, but the initial consumer-oriented service areas to focus on have been built on the results of user research and service staff endorsements demonstrating the benefits of this approach.

Limitation of this case study:

One of the questions on ‘flexibility of staff’ had a large number of ‘no responses’, either because respondents did not have sufficient experience to be able to answer or because they did not fully understand the attitude variable. This may require further exploration and testing in future research. It was also felt that the sample sizes should

be larger. Specific techniques and tangible stimuli that stimulated idea generation were to be tested in the next case study.

CHAPTER 6

Case study III – Visitor Service Research

6.1 Introduction

This chapter mainly covers the detailed investigation sub-stage of the NuServ Service Development Model, gathering information on consumer behaviour so as to identify potential service areas for development. The main consumer technique used was the personal interview method to gather comprehensive quantitative consumer data. There were also focus groups for Service Idea-generation, using specific techniques such as word-storming and visual collage.

The research project was on visitor service development in Palmerston North, New Zealand. The research was undertaken to assist in the planning for service improvements and new visitor services and to test out the sub-stages of the proposed model. The first objective was to identify the types of visitors to Palmerston North, and in particular, those visiting the main attractions – Science Centre, Museum, Art Gallery, Esplanade Park. A detailed investigation included a study of consumer behaviour such as, what visitors did during their visit, how long they stayed and where they generally came from. It also included a quantitative survey of their needs, attitudes and opinions on the current visitor services. From this knowledge and consumer input, ideas were developed for new and improved services.

As a result of the outcomes of the previous case studies, it was decided to include tangible stimulus material in focus group discussions in order to make it easier for consumers to think about the specific service. It was also decided to increase the sample size for the quantitative phase, as the consumer population size was larger than for the previous case studies.

6.2 Objectives

The specific objectives were to gain an insight into visitor perceptions of and attitudes to, the Palmerston North region and to obtain information on the demographics, main visitor activities and the sources of information on visitor attractions. The detailed objectives were:

- To gather demographic (age, gender, size of groups, length of stay) and psychographic information (attitudes, opinions) about the people who visit the region.
- To determine the service attributes of interest and importance to visitors.
- To investigate why visitors choose to come to the region and what are the key sources of available information about the region's attractions available.
- To find out what activities or attractions visitors participated in during their stay in Palmerston North.
- To determine what services visitors liked and disliked.
- To understand consumer motivations and behaviour that could lead to sources for new service ideas and planning.

The information on visitors was essential to the planning of service improvements and for developing new visitor services. Existing secondary data only provided information at a macro-level or national level, and the Council's Visitor service managers and Marketing manager felt that there was a need for information down to city/town level i.e. Palmerston North visitor information. This information was required to develop suitable services for these consumers.

6.3 Activities

The Service Development Model guided this research. The focus was mainly on the Detailed Investigation sub-stage. The activities included gathering consumer behaviour information, investigation into the target markets' needs, their likes and dislikes, an exploration of service attributes and an identification of service areas to focus improvement (Table 6.1).

Table 6.1 Matrix of Activities in Visitor Service Development Research

Sub-stages	Techniques	Outcomes	Decisions
Service Development Strategy	Secondary Research	Specific project objectives and problem identification	Synergy with vision, capabilities and image
Opportunity Identification Needs Analysis	Focus groups	Salient service attributes and consumer needs Strengths/weaknesses of service Service issues to explore quantitatively	Consumer information and needs Important consumer needs
Service Idea Generation	Word-storming Visual Collage	'Ideal' generic service attributes, ideas and improvements	Service ideas to carry forward to next sub-stage
Service Idea-screening	Pass/fail Staff review	Screened service areas for improvement	Service areas to improve further
Detailed Investigation	Face-to-face intercept interviews Attribute Analysis Technique	Consumer profile Service Evaluation Consumer attitudes, usage and behaviour Consumer likes/dislikes Service areas to focus improvement on	Market knowledge Visitor behaviour information Decide on market segment Important service attributes

6.4 Techniques

The main techniques that were used in this case study were focus groups and face-to-face or personal interviewing of consumers (See Appendix 6.1).

6.4.1 Secondary Research

Some visitor information statistics were available from Statistics New Zealand (source: <http://www.stats.govt.nz>). This only gave commercial visitor numbers by accommodation type such as motels, hotels, and backpackers. It also provided national statistics, but no specific details on Palmerston North visitors and their attitudes and behaviour. Hence, primary data collection was necessary to gain specific, current information on visitor attitudes and needs in order to improve or develop specific services for these consumers. Initially, qualitative information on what service attributes were important to visitors was collected, followed by quantitative research using personal interview techniques.

6.4.2 Focus Groups with Consumers

Two focus group discussions were held with small groups of visitors (5-6 visitors) to identify the service attributes, needs and opportunities. These were held at one of the centrally located motels in the city and included recent visitors to the city, some of whom were residing at the motel, the rest were staying with friends and family. The participants were approached at significant visitor locations and invited to participate in the group discussions. A number of topics were explored at the focus groups including consumer attitudes, needs, perceptions and visitor attractions. The discussion sessions lasted for about one hour and thirty minutes each. The first group consisted of five participants and the second group had six visitors. The outcomes are presented below. The information gathered was also used to design the quantitative survey questionnaire.

In order to define *visitor service needs*, it was necessary to understand as much as possible about the relationship of the consumer to the visitor service category in general and their service needs. The *word-storm and visual collage techniques* were used as open stimuli allowing consumers to respond freely.

* *Visual Collage Technique*

A visual collage was created with photos taken of key visitor locations and mounted on a board for presentation at the group discussions to stimulate thinking, discussion and idea generation.

The important point to make about this type of open-ended projective stimulus material was that the interpretation of what it all meant was dependent on the consumers. They explained to the moderator their feelings and how they related to the service. This technique was simply a trigger in the same way as projective techniques. Consumers commented and explained what they meant. The researcher evaluated whether or not these explanations were relevant to the research objectives.



Figure 6.1: Visual Collage used in Consumer Focus Groups

* *Word-storming Technique as Stimulus for Further Discussions*

This technique was used at the start of the focus group to generate a range of initial attributes that visitors associated with the service. The question to focus and encourage respondents to think about the research area and to word-storm was – “*What words would you associate with an ideal visitor service?*” Consumers were probed to explain their responses in relation to specific visitor services, which stimulated further discussions among participants. This technique along with direct questioning led to the identification of important attributes for visitor services. The word-storming technique has been used in product development by Gordon and Langmaid (1988) with children.

6.4.3 Focus Groups with Service Staff

The service staff in this case study included staff from the Visitor Information Centre (who provide information to visitors as part of their service) and those staff from the Council who were involved in the planning and promotion of visitor services. Service staff were involved at an early stage of Needs Analysis and then again re-convened at the Idea-screening stage of service development. Service staffs were involved in defining the objectives of the research, in accordance with the Council’s Service Strategy and in explaining the current situation from their perspective. In the reconvened session, the service staff participated in reviewing the consumer information, suggesting solutions and ideas and participated in the preliminary screening of service ideas. This sharing of consumer information with service staff was extremely useful. The service staff could understand better and relate to some of the consumer attitudes and opinions. They assisted in idea generation and preliminary screening of service ideas by judging each idea against the consumer criteria of importance and their own experience with visitors. The service ideas and improvements suggested by service staff were relatively few and more concerned with service provision (such as providing more and better visitor information, creating visitor websites, organising new events, collaborating with other Councils to provide services, upgrading facilities).

6.4.4 Face-to-face Intercept Interviews

A quantitative questionnaire was designed to gather information that met the objectives of the case study. This was done in conjunction with meetings held with Council service managers and staff from Destination Manawatu. Interviewers were trained on the administration of the survey and a number of key visitor locations were selected for interviewing. Face-to-face intercept interviews were completed at a number of key visitor locations in Palmerston North. These locations included the airport, railway and bus stations, the Visitor Information Centre, visitor accommodation venues and local attractions such as the Science Centre, the main shopping Plaza and the Esplanade (botanical gardens) Park. These sites were selected after discussion with the service staff and were considered to be the most appropriate for the objectives of this research. A total of 119 surveys were conducted over a period of eight days, at the same time slots, across weekdays and weekends.

The quota sampling method was considered, but could not be used, as there was no recent Palmerston North visitor information to base the quotas on. Hence, the non-probability intercept method was used, where respondents at key visitor locations were approached. Those respondents who qualified (i.e. were visiting the region and in the case of groups, those that had the next birthday) were selected for the interviews. It is common practice among market researchers to select the respondent with the next birthday when they approach a group of target respondents. Respondents under the age of eighteen were not interviewed unless accompanied by an adult. The adult's permission was sought and the interview held in the presence of the adult. However, this was rarely necessary as most respondents were between the ages of 21 and 30 years old. Children (below the age of 15 years) were excluded from the research, as the Council only wanted information about adult visitor opinions and attitudes as part of this study. Children were to be included in a separate study in the future, as part of the City Council's recreation services.

6.5 Qualitative Outcomes

6.5.1 Attributes of Visitor Services

Table 6.2 shows the outcomes of the word-storming technique that resulted in a list of trigger words and preliminary attributes that encouraged discussion among participants. At times the discussion went quickly due to two very articulate visitors and at times the conversation slowed down, which was when the preliminary attribute list was useful to stimulate further interaction. Visitors were probed on the meaning and description of some of the words and to provide service examples to illustrate their comments.

Table 6.2 General Word-associations for Visitor Services

<i>Word-storm</i>	<i>Activities</i>	<i>Needs</i>
Relaxing atmosphere	Shopping	Accommodation
Exciting, Dangerous	Plenty to do, Variety	Easy parking, Accessible
Adventurous	Eating out	Interactive
Company	Walks	Special
Awesome, Fantastic	Rural	Transport
Entertaining	Music, concerts	Good food
Pleasant	For all ages, Suitable for family	Value for money, Affordable
Comfortable	Outdoor	Group activities, social activities
Stimulating	Sports	Get away from routine
Challenging Interesting	Meet people, friends	Wind down, relax
Unique, Changing, Dynamic	Evening entertainment	Everything done for you
Informative	Events, cultural festivals	Welcoming, Friendly
Attractive		Hi-tech, Modern facilities
Safe		Well –organised
Refreshing		Convenient parking
Involving		
Fun, Cool		

* General Service Attributes

The general visitor attributes were explored and expanded in the focus groups and summarised from verbatim consumer responses in Table 6.2.

Consumers also mentioned some *service staff* attributes, but only when thinking about specific visitor attractions. These were; courteous and helpful, knowledgeable staff, good farewell to make you want to return, little queuing, relaxing atmosphere,

social atmosphere, modern environment. Consumers indicated that the *most important* attributes for generic visitor services were *entertainment, value for money, variety of leisure activities, general atmosphere, accommodation, good food and transportation.*

* *Specific Service Attributes and Sub-Attributes*

Visitors were asked to comment on aspects or features of the Science Centre that were important to them as a visitor attraction. Their comments have been summarised into Science Centre Exhibits, Service staff interaction and general service attributes, as in Table 6.3.

Table 6.3 Service Attributes for Science Centre

Science Centre Exhibits:	Service Staff Interaction:	General:
Interactive	Friendly, make you feel	Value for money
Different	welcome	Convenient
Updated frequently	Knowledgeable	Central location
Variety	Responsive, helpful	Large
For a wide age range	Committed	Modern
Informative	Enthusiastic	Attractive
Topical, current	Farewell	
Hi-tech		
Safe for children		
Challenging		
Involving		
Enjoyable, fun		

6.5.2 Strengths and Weaknesses of Services for Visitors

The general strengths and weaknesses of the study city in relation to visitor services were also explored in the focus groups and have been summarised in Table 6.4.

Table 6.4 Focus Group Summary on Strengths and Weaknesses of Palmerston North for Visitors

Strengths	Weaknesses
The city's central location, compact	The region has a low visitor profile
The rural and urban setting	Climate
The city is surrounded by flat land, ideal for expansion	The city's lack of identity and strong image
The city's size offers lifestyle advantages	The city's inland location, limits access to sea and coastal recreational opportunities
Good research and educational links	Limited size of local population means that some visitor facilities are not viable
The city is well serviced by road, rail and air transport	Distance from snow and ski fields
High proportion of young adults due to the number of tertiary institutions	Manawatu river as the only natural feature, but limited recreational potential
The city's proximity to other neighbouring towns and cities	Too small for variety in eating-out and shopping options

Service improvement and service innovation should focus on reducing the weaknesses and taking advantage of the strengths. Some of the weaknesses could just be misperceptions, such as the comments on weather. That can be overcome by indoor visitor attractions or seasonal attractions to suit the best time of the year. New visitor services should serve the needs of the high young adult population, as the target market. A unique 3-day event publicized in neighboring cities/towns could attract visitors, as they mostly come for 1-3 days and live in towns close by.

The focus group analysis revealed four main themes on visitor perceptions of the region – an educational/knowledge theme, a relaxed friendly atmosphere, a natural/rural/scenic theme and the central, compact location with easy access to visitor attractions.

6.5.3 Visitors' Ideas for Service Improvements and New services

The discussions and brainstorming held with visitors highlighted many areas for new or improved services. Increased publicity of events and more information about visitor attractions were mentioned as a service improvement. Integrated efforts by retailers and restaurants/cafés/pubs to support visitors by offering variety and 'value for money' in shopping, to improve visitor services was suggested.

General Visitor Information:

Visitors mentioned that they would use the Information Centre as their second source of information, but depended more on 'word of mouth' or the Internet. Respondents mentioned that visitor information should be more easily accessible to them (such as via telephone or signposts, videotapes, visuals). Some suggested that information services should be more freely available such as via the Internet, and to increase awareness of the location of the Information Centre. Also, to make the Information Centre a more interesting place with more dynamic promotions. A number of visitors suggested that a short video clip placed at key locations (such as the Plaza shopping Centre, Information Centre, Bus and railway stations, City Council reception etc.) for information on places to visit, would be useful and interesting. The promotional video should be aimed at the target segment.

Event Information:

Information about attractions and special event details were definitely sought after. Major events in the region need to be promoted and updated constantly as respondents were mainly domestic visitors and do not have too far to come for the events.

Physical Improvements:

Since the target market was found to be mainly young adults, promotions suitable to their interests and activities need to be focussed on. Service improvements that were suggested were related to the dislikes that were mentioned. Examples were better and more variety in shopping, less traffic lights, better lighting in the Square (i.e. central city). A few suggestions were received on developing more adventure and recreation areas, skateboard parks, a lake, and re-development of the Lido. In the survey, visitors expressed that the service would improve if there were better and more restaurants, cafes, pubs, good shopping (trendy shops, more music shops) and to a lesser extent a variety of new services (such as skate-board parks, casinos, ice-skating rinks, leisure parks, aquatic features, sporting events, outdoor activities etc.).

6.5.4 Service Staff's Ideas for Service Improvements and New Services

The ideas suggested by service staff were more to do with service provision and delivery improvements such as improved visitor information services, specific events and educational tours. They appeared to be more in favour of the educational theme and related services and suggested new services for business visitors (e.g. new conference facilities and services). They suggested new services that could be offered jointly with other Councils (e.g. organising car races/rallies, horse races, various exhibitions) or suggested adopting services that other Councils had introduced for visitors.

6.5.5 Service Staff's Screening of Service Improvements and New Services

A preliminary service idea screening was carried out by using a simple technique of pass/fail, based on the service attributes. The total list of about 92 ideas (both from the qualitative and quantitative techniques) were screened down to 57 ideas by accepting or rejecting the ideas based on whether or not they contributed to any of the important service attributes. This was a simple way of reducing the large number of ideas based on consumers' needs. Further screening should include financial and technical implications and constraints as criteria for selection or rejection of service concepts.

6.6 Quantitative Research Outcomes

A total of one hundred and nineteen visitors to Palmerston North were questioned on various visitor service issues and their attitudes and opinions were analysed for input into service improvements and development.

6.6.1 Profile of Visitors

** Age Profile*

A majority of the visitors were under thirty years of age. The average number of companions a visitor to Palmerston North would bring with them was also asked of the visitors. This had planning implications for visitor services. The most common number was one companion, closely followed by single visitors without any companions. The average was about 2 persons. This is probably because of the large number of people who came to visit friends or relatives. Visitors do not appear to

come in large groups. 88% of people travelled in small groups of less than four people.

* *Travel Companions*

Visitors were asked whom they generally travelled with. See Figure 6.2. Almost all of the companions were friends or relatives. Only 11% made up the rest. People travelling with family tended to be young families with children. This was supported by the age distribution of visitors to the city.

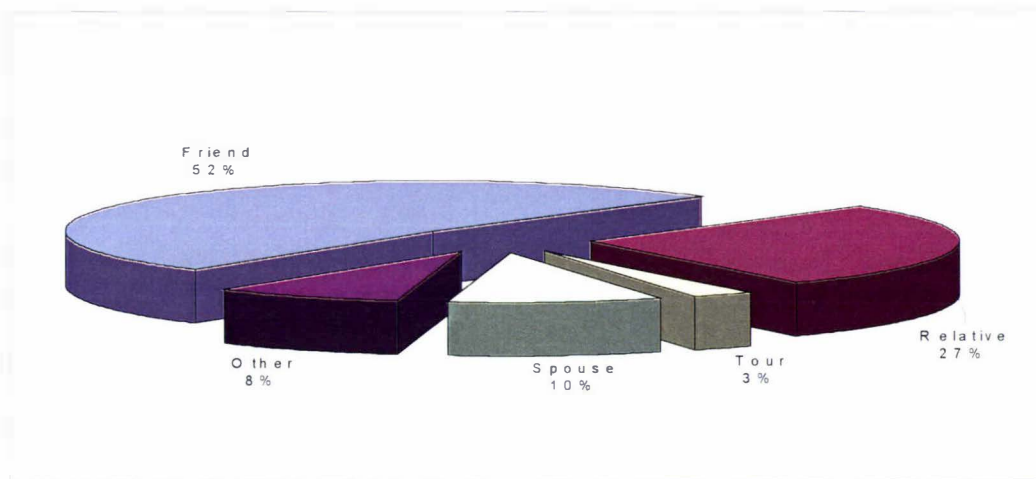


Figure 6.2: Companion Type

Figure 6.3 shows the age distribution of the visitors. The age distribution showed that visitors to Palmerston North were mainly in the younger age groups of 20 years to 40 years old.

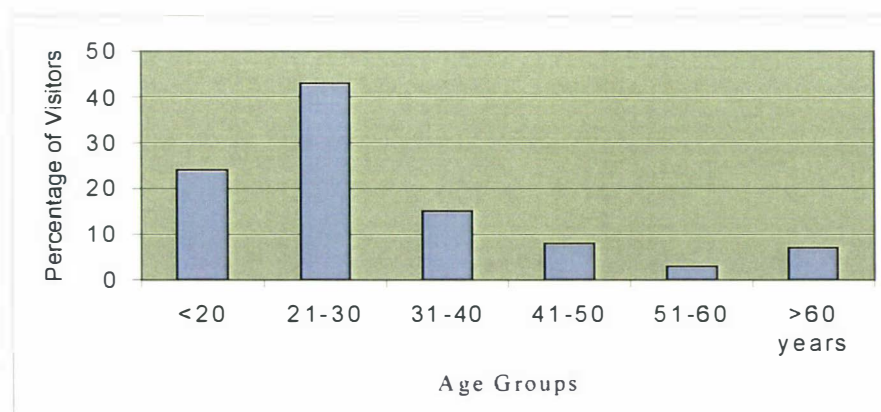


Figure 6.3: Distribution of Visitors' Ages

* *Travel Origin*

Respondents were asked where they came from and where they reside normally. See Figure 6.4. 81% were domestic travellers, while only 19% of the respondents were overseas visitors. The locations were categorised into districts, for ease of viewing. The most common home areas were Central Districts and Wellington City. There were visitors from various areas (main towns) in the North Island. This highlights Palmerston North's central location. Overseas visitors included a wide range of countries: USA, Hong Kong, Japan, Fiji, UK, and Australia. There were a varied range of occupations that visitors had, and there were no specifically large group represented. Relatively speaking, there appeared to be more students than any other occupation. The range of occupations included receptionists, electricians, architects, nurses, accountants, teachers, truck drivers, office workers and auto technicians. 59% of the respondents were male, 41% were female visitors.

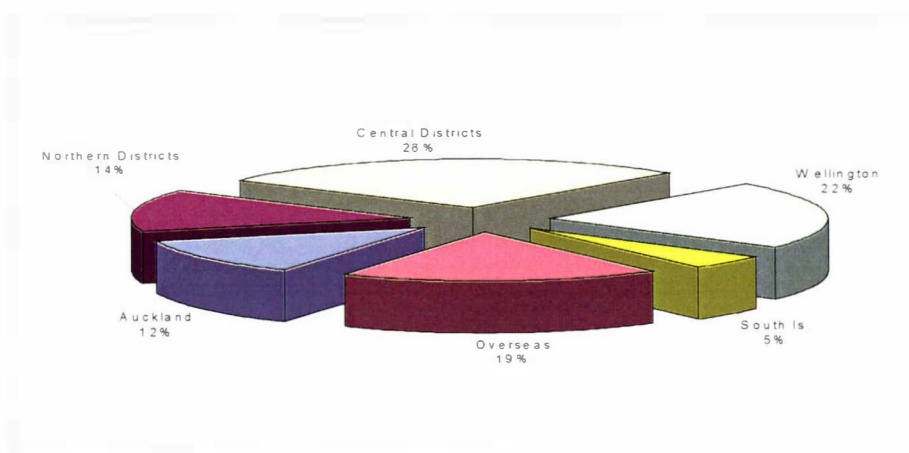


Figure 6.4: Home Districts for Visitors

6.6.2 Visitor Activities

Visitors were questioned on their interests and the activities engaged in during their visit to Palmerston North. The most popular activities were shopping 59% (70 visitors), spending the evening out 58% (69 visitors) and visiting friends and relatives 52% (62 visitors). The reasons that each of these rated highly can be explained by the number of young people and the number that came to visit friends and family. All other activities: visiting The Science Centre, Esplanade, Art Gallery, Library was less than 25%. The average number of activities per person was only 3.2 activities (a total

of 385 activities by 119 visitors). Areas for service development would be in the three popular activities and to promote other activities to get more involvement.

* *Length of Stay*

Visitors were asked how long they stayed in Palmerston North, on a visit. Two thirds only stayed for one to three days, as can be seen in Figure 6.5. This was supported by the fact that people mostly came for weekend trips. The location and centrality of the city make driving distances convenient for a weekend trip. The number of people who brought their own transport also backs this up. Another reason for the short length of stay could be that Palmerston North is sometimes a stopover for tourists, as planes and trains that run between major tourist centres in New Zealand pass through Palmerston North.

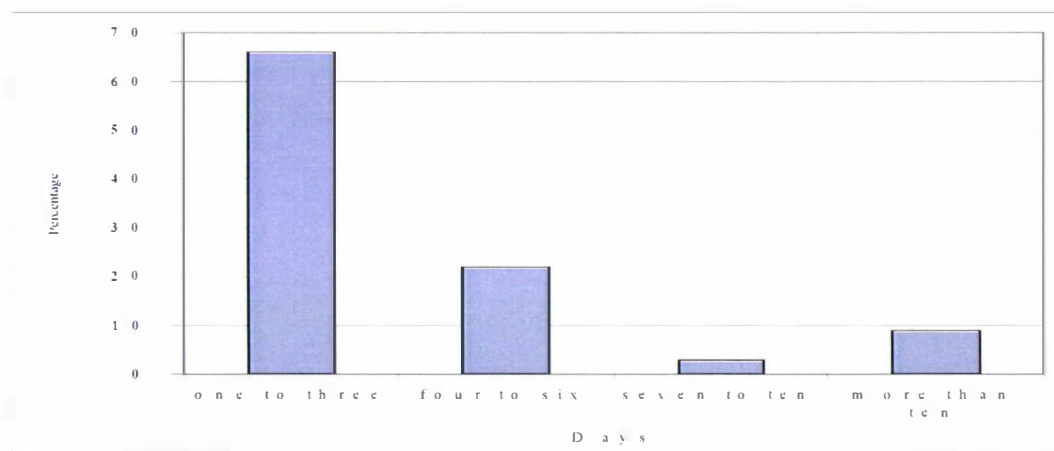


Figure 6.5: Visitors' Length of Stay

* *Reasons for Visiting*

This question was intended to help identify the most preferred services and find out visitor motivations and reasons for preference. See Figure 6.6. Leisure services and family activities were the most preferred services with a total of 73%. Most people said they spent time with friends and relatives in leisure activities and recreational services. Business visits contributed a sizeable amount (22%).

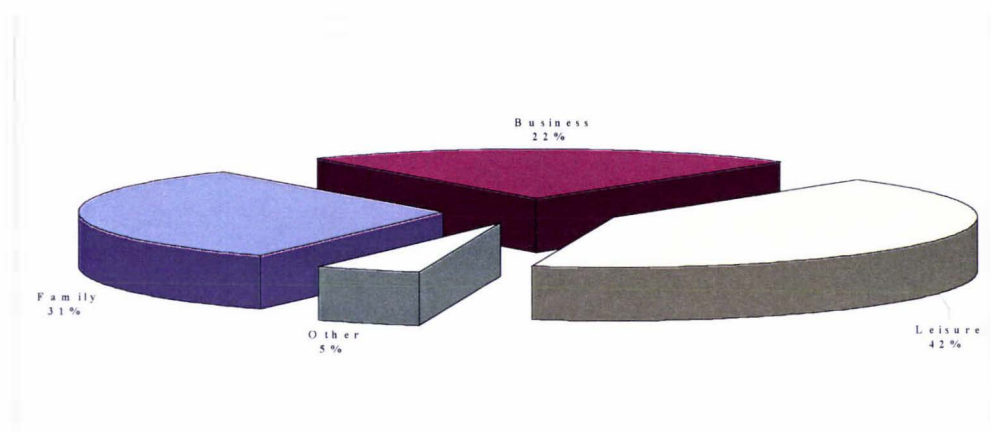


Figure 6.6: Reasons for Visiting Palmerston North

6.6.3 Visitor Use of Transport

Visitors were asked about their transport needs because it was one of the attributes mentioned in the focus groups. See Figure 6.7. The results showed that half the people came with their own transport (50%). Most people came by car, rather than by other modes of transport such as bus, aeroplane or train. In the city, only 12% used public transport. Walking within the city to various visitor locations was reasonably popular at 20%. This relates to visitor's comments that Palmerston North is compact, has most of its attractions (such as shops, Science Centre, Esplanade park, Lido, theatre etc.) within a small distance of the central city.

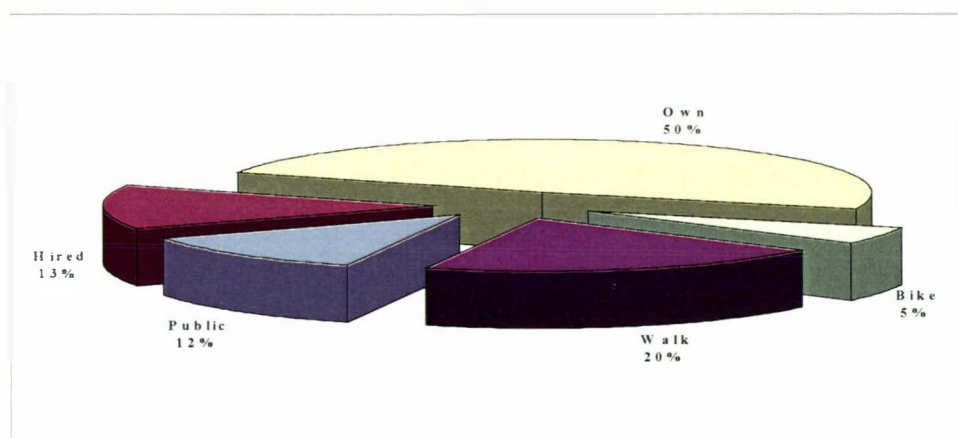


Figure 6.7: Means of Transport in the City

6.6.4 Visitor Perceptions of Palmerston North as a Visitor Destination

It was important to get an idea of consumers' image and perceptions of Palmerston North as a visitor destination. It was an open-ended question to capture visitor impressions in their 'own words'. There were a great variety of answers from this question, ranging from cold and windy to nice and friendly. Some commented on the need for better student and visitor orientation of the town, and others provided positive comments relating to the compact size, central location or the liveliness of the town. The overall results from this question were good, with just over half of the replies being positive. Some believed there was *'little for visitors to do'*. This has implications for new services or service improvements. Some saw the region as an educational, conference or 'stop over' centre rather than a tourist destination. Some simply wanted more information about the things there are to do, what and where the visitor attractions are. These outcomes were supported by the scaled question that was asked at the end of the survey on visitor attitudes towards Palmerston North as a visitor destination. All of the responses were coded as being positive, neutral or negative. The proportion of each of these categories is shown in

Figure 6.8. For example: *'friendly place'* was coded as positive, *'nothing much to do, boring'* was coded as negative and *'just like any other place really, average', 'it's OK, neither good nor bad'* were categorised as neutral comments.

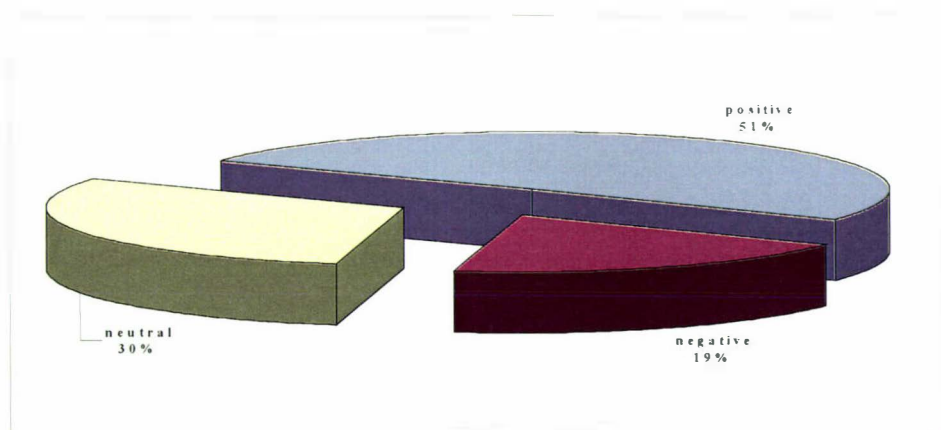


Figure 6.8: Visitor Perceptions of Palmerston North as a Visitor Destination
Visitor's Perception of the City's Branding

Of all the visitor service marketing management tasks one of the most important is to develop or maintain the destination's image (Lumsdon, 1998). Image is defined as an

overall evaluation based upon a set of perceptions concerning an entity (Kotler, 1994). Image is considered integral to a visitor destination's success. Unaided as well as aided awareness of the "positioning slogan" used for Palmerston North was gauged among visitors. The positioning words were "Knowledge City" as Palmerston North has a concentration of "knowledge" centres such as Massey University, The Crown Research Centres and other Dairy and Food research clusters. Unaided awareness was about half, which was reasonable considering that there was a small proportion who were overseas visitors and the rest were domestic visitors who had visited Palmerston North earlier. 61% of the visitors were aware of the "Knowledge city" brand when prompted.

Visitors were asked for branding suggestions, based on their impressions of the city. They mentioned the following: *Provincial Peace, Balmy Palmy, Natural Getaway, Green with Envy, City of Roses, Place to be, High on Life, The Source...of opportunity, education, natural beauty, Passionately Provincial, Intelligent Life, Come to Manawatu, Larger than Life, More to see than you think, City of Learning*. Generally, the older visitors preferred the education theme as they saw the City as a University town with a number of research centres. The younger visitors preferred the 'High on life' slogan and the 'Come to Manawatu' phrase.

The message or impressions that the 'Knowledge City' slogan gave about Palmerston North was that it is a place of learning, for students, with good educational facilities. The negative impressions were that the city is boring and only an academic destination. This has implications in that it may deter visitors from coming to the region thinking that there is little for tourists to do. Overall, the slogans did not rate very highly, indicating that more research is required with other groups of people, such as residents. As this was not the focus of the present study, further research on this aspect was not carried out.

6.6.5 Like/Dislike Rating of Service Attractions

Visitors mentioned that although the activities they most engaged in were shopping and spending the evening out when they visited the city, the specific visitor attraction that they liked was the Science Centre. The attractions that rated highly were *The Science Centre* and *the Esplanade Park*. The reasons mentioned were that some of

the special programmes at the Science Centre were suitable for a wide age range and that there was always something new displayed at the centre. The Park was liked because it is suitable to go in groups and spend time outdoors. Respondents from bigger cities such as Auckland and Wellington did not rate the shopping very high. At the same time it was one of the activities in which most participated.

Table 6.5 Rating of Likes and Dislikes of Specific Visitor Service Attractions

Service Attractions	Mean score Rating (1=Dislike and 5=Like)	Ranking (Top three attractions)
The Science Centre	4.5	1 st
Esplanade (botanical gardens)	4.4	2 nd
Shopping Plaza	4.3	3 rd
Evening Entertainment (Pubs, cafes, nightlife, movies)	4.2	
Library	3.9	
Lido swimming pool	3.8	
Art gallery	3.4	
Regent, Globe theatres	3.2	
Research Institutes	3.2	

6.6.6 Visitor Use of Information Sources

The aim of this question was to ascertain how visitors to Palmerston North sourced information about the region. Combining friends and relatives together gave 49% for communication by 'word of mouth'. From the surveys conducted, *word of mouth* was the main contributor to how people discovered places of interest in Palmerston North. Information centres, travel guides, and holiday shops catered for only 10% of the respondents surveyed. 18% of the visitors already knew the information due to past experience. The remaining information was gathered by means of asking friends and business colleagues.

From the results, it appeared that the Information Centre was not a major information source to visitors. Perhaps more advertising of its location or more attractive stands with information at bus/train stations and the airport would be useful in trying to remedy this. A number of respondents (15%) mentioned that an Internet site with the details of visitor services in Palmerston North would be very useful to them. Perhaps

the Council should advertise their website (www.pncc.govt.nz) to visitors and include updated information specifically on visitor services.

* *Interest in sourcing more information about Visitor Services*

There was a definite interest indicated by visitors about finding information on visitor attractions. Over two thirds of the visitors wanted to know more about the attractions the city had to offer visitors. This was certainly an area for future new services and information provision such as to provide video footage of attractions and information at key visitor locations. Respondents were also probed into the methods that people used to find more information about visitor attractions in Palmerston North. From the data, the information centre, Internet and travel guides were found to be sources of information. Other sources were newspapers and retailers. See Figure 6.9

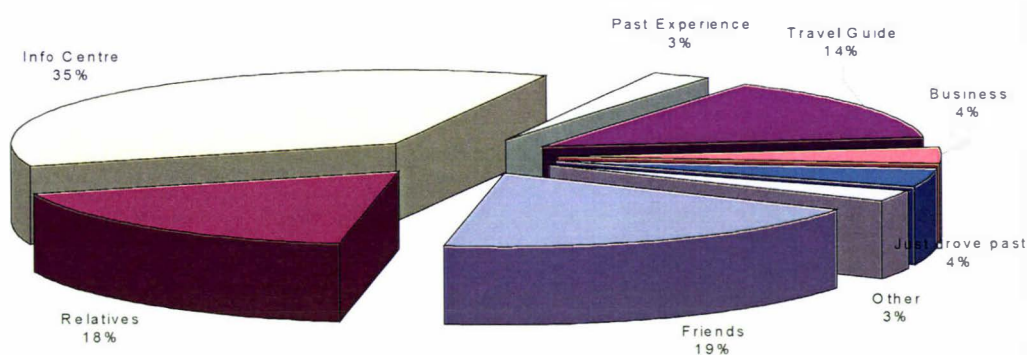


Figure 6.9: Sources of Visitor Information

6.7 Importance and Evaluation of Service Attributes

Respondents evaluated the main service attributes on a scale of Excellent to Poor and indicated how important they considered these attributes to be. The outcomes are presented in Table 6.6 and Table 6.7. When the combined results of Excellent and Good are considered, the attribute of *accommodation* received the best rating. Relatively speaking, visitors did not rate the *general atmosphere* very highly. With regard to the importance of attributes, *value for money*, *general atmosphere* and *eating out options* appeared to be the most important attributes to visitors. *Value for money* was rated far ahead of the other attributes.

Table 6.6 Importance of Service Attributes by Visitors

<i>Service Attributes</i>	Very important No. (%)	Quite important No. (%)	Not important No. (%)	Not at all important No. (%)	Don't Know/NA No. (%)
<i>Value for money</i>	72 (60)	27 (23)	8 (7)	2 (2)	10 (8)
<i>General atmosphere</i>	57 (48)	42 (35)	6 (5)	2 (2)	12 (10)
<i>Eating out options</i>	53 (44)	43 (36)	8 (7)	4 (4)	11 (9)
<i>Entertainment</i>	49 (41)	33 (28)	6 (5)	3 (2)	28 (24)
<i>Suitable accommodation</i>	46 (39)	31 (26)	14 (11)	8 (7)	20 (17)
<i>Variety of leisure</i>	44 (37)	39 (33)	14 (11)	2 (2)	20 (17)
<i>Transportation</i>	43 (36)	33 (28)	16 (13)	6 (5)	21 (18)

N=119

Table 6.7 Evaluation of Service Attributes by Visitors

<i>Service Attributes</i>	Excellent No. (%)	Good No. (%)	Inadequate No. (%)	Poor No. (%)	Don't Know No. (%)
<i>Suitable accommodation</i>	44 (37)	42 (35)	7 (6)	4 (4)	22 (18)
<i>Eating out options</i>	35 (30)	44 (37)	19 (16)	3 (2)	18 (15)
<i>Entertainment</i>	24 (20)	46 (39)	16 (13)	2 (2)	31 (26)
<i>Transportation</i>	23 (19)	43 (36)	17 (14)	7 (6)	29 (24)
<i>Value for money</i>	17 (14)	60 (51)	22 (18)	2 (2)	18 (15)
<i>Variety of leisure</i>	11(9)	46 (39)	35 (29)	5 (4)	22 (18)
<i>General atmosphere</i>	5 (4)	19 (16)	51 (43)	28 (24)	16 (13)

N=119

A number of 'don't know' responses were recorded, perhaps because visitors had no experience of the particular service, as most visitors were found to stay in the city only for a brief period and may not have had the opportunity to experience all the visitor attractions.

Suitable accommodation and *eating out options* were rated as Good, others were between Inadequate and Good. *General atmosphere* was rated as being Inadequate to Poor. Hence, service improvements are required particularly with the *general atmosphere*.

6.7.1 Ideas for New Visitor Services and Improved Services

Respondents were asked for ideas on what services could be offered in the future for visitors. The open-ended question generated few but varied responses. Some of the more common ones were adventure activities such as rafting, bouldering and mountain biking (10 visitors, 8%), a casino (6 visitors, 5%), and leisure parks of various sorts, such as water-park (4 visitors, 3%), ice-skating, skateboard-park (2 visitors, 2%), amusement parks and markets.

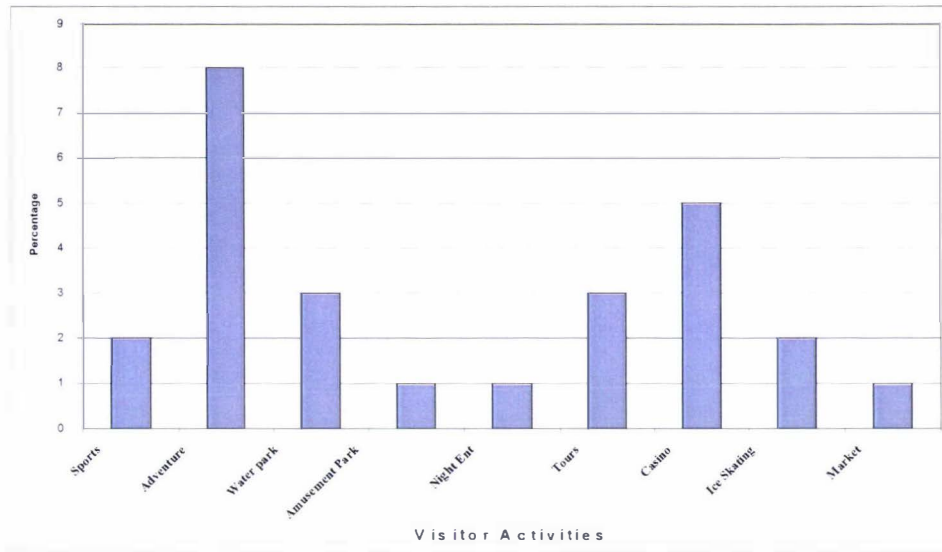


Figure 6.10: New Visitor Services

* *Tour of Educational Institutions*

Visitors were asked whether they would be interested in a guided tour of educational institutions such as Massey University and New Zealand Dairy Research Institute, just for general interest. 19% of those surveyed were interested and they were mostly overseas or business visitors. This probably reflected the interests of the number of younger visitors who were generally more interested in outdoor activities and shopping.

Visitors were also asked what visitor services, they would like improved. The main areas they felt could be improved were shopping (24%), and evening entertainment (16%). These were the activities they engaged in and therefore would like them to be better.

• *Visitor Attitude*

63% of visitors said that they would revisit Palmerston North in the next six to twelve months, when asked about their likelihood of re-visits. Visitors also rated the visitor service based on their expectations. This question used a five-point scale, where one represented 'much worse than expected' and five represented 'much better than expected'. The mean rating score of 3.3 was slightly positive, representing 'same as expected' or 'better than expected'. There were no responses to 'much worse than

expected. However, there is room for improvement to increase this rating in the future. 36% of the respondents said that they would recommend the city as a visitor destination. (Please note a limitation here - there were a few respondents that did not answer this question.) Taking note of the low response rate to the question, if 36% were willing to recommend the city as a visitor destination and 63% were likely to revisit, and about half of the visitors felt positively about Palmerston North, then overall there were positive aspects to the current visitor services. However, it is important to improve services, particularly in those areas suggested by the research.

*Rating Scale: 1=much worse than expected, 2=worse than expected, 3=same as expected, 4=better than

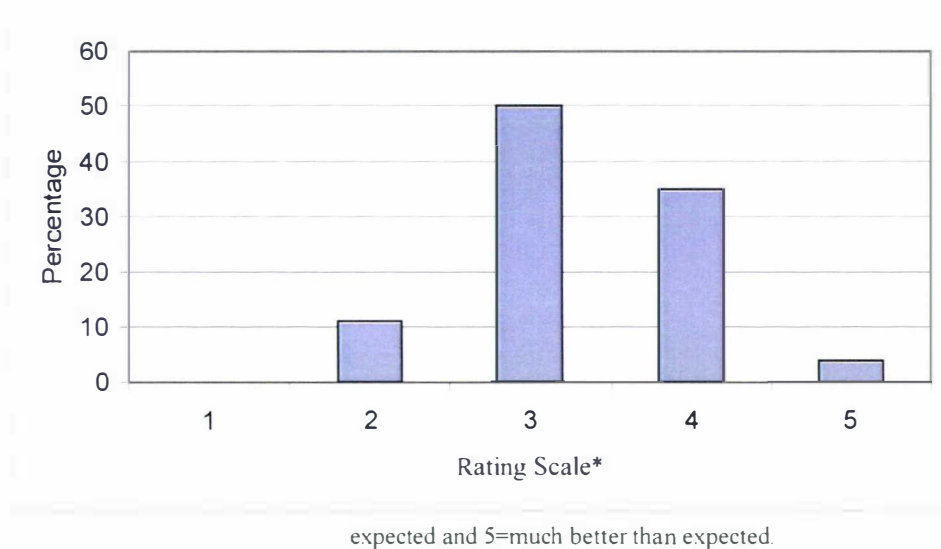


Figure 6.11: Perceptual Rating of Visitor Experience based on Expectations

6.8 Analysis of Outcomes

6.8.1 Identification of Target Visitors

A cross-tabulation analysis of two of the questions in the survey namely, the reason for visit and their hometown revealed that there was a strong correlation between the distance people travelled to Palmerston North and their activities. The shorter the distance they travelled to the city, the more likely the purpose of their trip was for shopping. Those from longer distances generally visited friends and relatives. This

and the case study's other findings provided additional evidence for supporting improvement and development of shopping services.

6.8.2 Service Attributes – Importance and Improvements

The attribute analysis helped to analyse the features or characteristics that consumers most desire in a service. Consumers were asked which attributes were most important or most desirable and to rate their satisfaction with the service on those attributes. The question was split into two parts, with people being asked to rate both *importance* and *an evaluation of the main service attributes* of a visitor location. The ratings were fairly consistent over both importance and evaluation. The plot of the differences in mean score ratings, Importance – Satisfaction (refer Figure 6.12), showed clearly that only the accommodation attribute lived up to what was expected. Of the others, *value for money*, *variety of leisure activities* and *general atmosphere* rated relatively low.

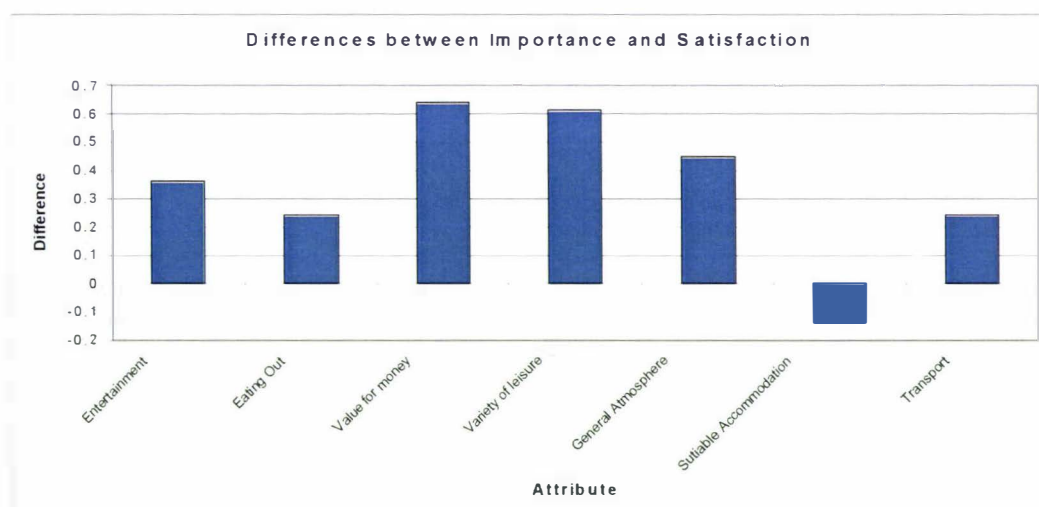


Figure 6.12: Difference between Importance and Satisfaction

6.8.3 Comparison of Service Ideas obtained using two Techniques

A comparison of the ideas provided by consumers using two different techniques, namely, an idea generation technique - brainstorming and an open-ended question in the survey, was carried out and the results are given in Table 6.8.

Each service idea provided was given a score of one if it was a service improvement and two points if it was a new service idea. For example, better visitor parking

facilities would be a service improvement, while a new service would be a skate park or new mountain biking service or casino.

Table 6.8 Comparison of Service Ideas obtained using two Techniques

Technique	Number of ideas	Innovation Level of Ideas
Brainstorming	42	54
Survey	19	25

N=11

Since the survey sample size was much larger than the focus group sessions, a random sample (of equal size to the focus groups i.e. 11) was selected from the survey responses and then the following analyses were carried out. As could be expected, the brainstorming sessions yielded many more ideas per person than the survey questionnaire. A comparison of the total number of ideas generated in this survey (31 ideas) and in the focus group (38), again confirms the above finding. Ideas per person in the survey were 0.3 ($31/119=0.3$) and 3.5 ideas per person in the focus group ($38/11=3.5$).

It was also found that specific idea generation sessions yielded a better quality of ideas. That is, there were more innovative and unique ideas rather than improvements to existing services. These results highlight the importance and need to conduct specific idea generation sessions and to train consumers or service staff in these techniques for service development. Examples of some service ideas: *To develop the Rugby Institute to include the Museum, Café and rugby memorabilia, Cable car rides, Leisure parks, Tararua wind farm tours, William Colenso Walk track, Massey and Research Centre tour of interesting facilities, River rides.*

6.9 General Conclusions, Discussion of Outcomes and Decisions

The consumer information gathered as part of the Detailed Investigation sub-stage was valuable to plan future services. It also enabled the researcher to apply and evaluate selected consumer techniques. The techniques employed allowed for significant consumer participation, particularly as the main technique was a direct face-to-face interview method. Service staff were involved in idea-generation and screening.

In general, visitor perceptions about the services were positive. The sources of information that most visitors used to find out about visitor services were from friends, relatives, past experience and business contacts. 50% of the visitors said they would use the Information Centre and Travel Guides if they wanted more information about the city's visitor services.

Since it was found in this study that a significant proportion of the visitors were domestic visitors (81%) and many were from the larger cities of New Zealand (more than 34%), it is recommended that new service design and planning should offer services that are different to those in these cities. This could be done by focussing on the service attributes that were found to be important, building on the strengths of the city, service ideas provided and ignoring services that were not important to consumers.

The **consumer profile** identified and detailed the segment to target services at. The target segments were visitors who were between the ages of 20 and 40 years old and who were mainly domestic travellers. This has significant implications for the design of services as it provided information on number of visitors, visitor group sizes, the main reason for their visit, the most common activities they participated in, the age group of visitors and where they came from.

6.9.1 New Service Ideas and Improvements

- **Potential areas for service development**

A range of ideas was gathered from the qualitative and quantitative research. Shopping and social reasons were the main reasons for visits, and therefore, these were mentioned as potential areas for service development. When rating the main service attributes, only on *accommodation* the visitors' evaluation score was higher than importance. These outcomes have significant implications for service design and planning, in that new or improved services will be successful only if they meet consumer requirements. The outcomes of the research also highlighted services that consumers did not require any improvement on such as, *accommodation and transportation*.

- **Main areas for new or improved services**

The discussions and brainstorming held with visitors highlighted that the main areas for new or improved services were in the *shopping, eating out and evening entertainment experiences*. Most of the ideas and suggestions put forward fell into these major categories.

- **Major service improvements**

The major service improvements that visitors would like were an improved shopping experience (more shops, easy parking, more variety, value for money) and places to meet and share a meal, in the evenings (pubs, restaurants, cafes). Visitors were keen for visitor information to be made available on the Internet and the site advertised at key locations. Consumers' needed the Information Centres to be more attractive, prominent and easily accessible. It was suggested that the location of the Visitor Information Centre should be well signposted and advertised.

In conclusion, the research provided valuable information about visitors, their activities and interests and their demographics. Information on services that were liked, the most common activities and services to focus improvement on based on the requirements of visitors was gathered. The research also highlighted services that were doing well such as accommodation, which indicated that planning for new or improved services in this area were not important to visitors of the city.

6.10 Discussion and Evaluation of Activities and Consumer Techniques

6.10.1 Modelling of the Service Development Process

The overall research objective was to study the consumers' attitude and service usage behaviour in order to elicit information useful to the improvement of the service. The activities included the identification of service attributes, visitor attitudes towards the current services, identification of the target segment and their profile, important attributes and areas to focus improvement on. In this case study, the main quantitative consumer technique used was the personal interview, where the survey instrument gathered in-depth consumer information on a number of visitor service issues and visitor behaviour.

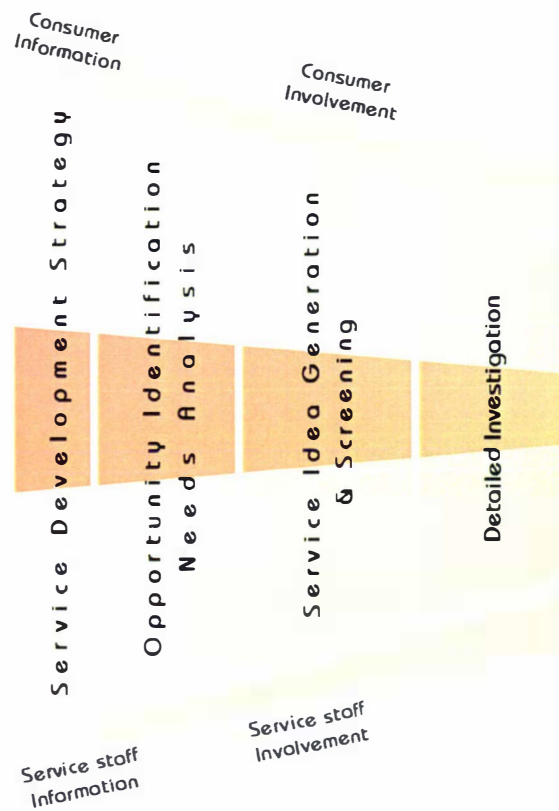


Figure 6.13: Building the NuServ Model of Service Development

6.10.2 Consumer Participation in the Visitor Service Research

Consumers participated in this research by providing information about their service usage, taking part in service attribute identification, generating service ideas, sharing attitudinal opinions and detailing their demographics. Consumers suggested 31 ideas in the quantitative survey and about 38 ideas in the focus group. The consumer generated service attributes were used in the preliminary stage of screening ideas from a large general list to a more consumer relevant list. The consumer information gathered laid the foundation for the rest of the stages of visitor services design and development.

Consumers participated in idea generation both in the focus groups and in the survey. It was found that consumers generated service attributes for specific services more easily than thinking of generic attributes for the overall visitor service. Therefore future service development projects should preferably focus on particular specific services as much as possible.

6.10.3 Service Staff Involvement in the Visitor Service research

Service Staff (managers and frontline staff) were involved in the service strategy stage, service attribute identification and screening, idea generation and preliminary idea screening. The number of service ideas mentioned by service staff were less than those generated by consumers. Service staff suggested about 23 ideas, while consumers generated 38 ideas in the focus group. The attributes suggested by consumers included features of their experience with the service. Some attributes were unique and specific to particular visitor attractions. The salient attributes were narrowed down to those that applied to most visitor services, in conjunction with consumers and service staff. Service staff benefited from the consumer information gathered in this study. It made them aware of the regions that visitors came from, the types of activities they participated in and the service ideas suggested by visitors. The outcomes of the study resulted in key areas of the service to improve on, from a consumers' perspective.

In the next stage of service development (not researched in this case study) following concept development, service concept screening should use technical and financial criteria along with consumer criteria. In this case only the preliminary screening of ideas was done based on consumer criteria. This was found to be extremely useful by the service staff as they felt more confident that services developed in the areas identified will have better consumer acceptance and knowing this as early as in this study provided direction that they required.

6.10.4 Consumer Techniques used in Visitor Research

The use of tangible stimuli helped consumers with the exploration of service attributes in the focus groups. Consumers were able to relate to the main visitor services presented on the collage, as most had visited them. There was a bit of difficulty in gaining a consensus of opinions with regard to visitor service attributes as it varied slightly depending on specific services. Therefore, the discussion was focussed firstly on generic visitor service attributes and then on a specific attraction such as the Science Centre.

The analyses on the service ideas generated revealed that specific brainstorming sessions were more effective than survey questionnaires in gathering service ideas. It

was also found that the brainstorming session in the focus groups was more useful than the survey method for consumer ideas. Hence, in Service Development, it is recommended that specific idea generation techniques be used to capture a range of ideas from target consumers.

The visual collage and the word-storming techniques were found to be useful in getting the consumers to start thinking about the service experience and the service attributes. It provided tangible stimuli to encourage discussion among respondents. The personal interviews held with visitors at key locations gave direct feedback on a number of visitor service issues and a depth of information about visitor behaviour and demographics, which was critical for visitor service development.

CHAPTER 7

Case study IV – Complete Stage 1 in Service Development

7.1 Introduction

This chapter presents the complete Stage 1 of the Service Development Process Model. The sub-stages in Stage 1 formed the basis of the case study: *Service Development Strategy, Opportunity Identification and Needs Analysis, Service Idea Generation, Service Idea Screening, Detailed Investigation, Concept Development and Evaluation*. A multi-stage process of several consumer research techniques for information gathering was used. The main objective of this research was to involve consumers and service staff in service development and to develop new or improved service concepts from the consumer perspective, by applying the Service Development Process. The research methodology used to achieve these objectives was a combination of secondary data search, qualitative and quantitative research, idea generation and screening, and consumer preference evaluation.

This fourth and major case study was on bicycle services in the ‘study city’, Palmerston North. The City had the highest proportion of people in the country using bicycles as their mode of transport to work (Census, 1996). The City Vision stated: ‘*Together we will make the city an exciting place in which to live, learn, work and play.*’ As part of the “Eco-City 2010 Scenario” the Council planned to cater to the needs of cyclists by providing an extensive network of walkways and cycle tracks, with some areas as cycle-only zones (Council Vision 1995). The Council’s Strategic Plan 1996 documented the focus of improvement on cycling services: “We will revive our cycling policy and services; we will look at the provision of services to encourage the use of cycles as a means of transportation around the city.”

This research was initiated in order to investigate consumer needs for bicycle services, consumer perceptions towards cycling and to identify the advantages and the barriers to cycling. The study segmented the consumer market for bicycle services, and identified service problems as perceived by consumers and potential consumers. From this, new service ideas and service improvements were generated, and then screened by both consumers and service staff. The remaining ideas were developed into service concepts and evaluated. The final concepts were presented to the Council as a Service Development Plan.

7.2 Objectives

The research objectives were to test the service development sub-stages, as per the conceptual model and to measure the effectiveness of various techniques in the first stage of the Service Development process. The specific objectives of this case study were:

- To determine the level of current bicycle usage within the city.
- To determine the consumer segment most likely to adopt or increase bicycle usage.
- To identify the problems or barriers to bicycle usage.
- To identify how people perceive cycling as a mode of transport, their attitudes and needs.
- To develop and select new service ideas.
- To develop and evaluate service concepts with consumers and service staff.
- To present a Service Development Plan so that the project could go to Stage 2 of the Service Development Process, i.e. Service Design & Implementation.

Consumer research was required to determine the needs of bicycle riders and the opportunities for improving bicycle services as a means of regular transport within the city. To assist in successfully accomplishing this, detailed consumer and service development research was undertaken, with the specific objectives to identify consumer attitudes, perceptions, service ideas and service concepts. A detailed outline of the

research methodology, the matrix of activities and techniques and the case study's role in the doctoral research programme was submitted to the Council and approved. As mentioned earlier, one of the reasons for selecting the case studies was to be able to research actual service developments, rather than simulations that had no actual consumer demand, strategic need or top management commitment.

The research methodology used to achieve this objective was the application of the Stage 1 of the proposed NuServ Service Development model. The research involved a combination of secondary data research, qualitative and quantitative primary research, idea generation and idea screening and consumer evaluation of service concepts. It also involved both consumers and service staff in the service development process.

7.3 Activities

In this case study, the problem detection approach was used since there is just as much to be gained by eliminating service problems in a process of continuous improvement as by providing new services. Small group interviews were used to generate a list of service problems and needs. Service staff insights and past consumer complaints were also gathered for this purpose. Following this identification of problems and the general consumer attitudes to the service in the focus groups, a large-scale survey was undertaken to find out how big a problem some of the issues were for consumers. Finding solutions to major problems can lead to successful service improvements or new services.

The stages of the NuServ Model of Service Development formed the basis for the planning of the total process. The sub-stages were *Service Development Strategy, Opportunity Identification & Needs Analysis, Service Ideas Generation, Service Ideas Screening, Detailed Investigation, Concept Development and Evaluation*. The generic stages have been discussed in Chapter 3, the specific application in this case study explained below and shown diagrammatically in Figure 7.10.

* *Service Development Strategy*

The first sub-stage examined the rationale for the project, in particular, the role of this research in the overall vision and plans of the Council. The Council's Annual Plan included the need for research into bicycle services and a commitment to improve bicycle services based on consumer information. A Bicycle Service Plan was required which incorporated this consumer study as well as the bicycle infrastructure and policy planning in order to implement new services and or improvements in the following year.

* *Service Opportunity Identification*

This sub-stage involved the identification of growth potential for the bicycle service. Comparative data from overseas and other New Zealand cities and the bicycle usage in these places was gathered (See appendices 7.1, 7.2 and 7.3). Trends on cycling behaviour and consumer data were also sourced to gauge whether there was any scope to increase cycle usage by improving or introducing new bicycle services.

* *Service Needs Analysis*

This sub-stage identified the target market, and researched the current consumer needs, problems and attitudes. The research activities consisted of two major phases, with several steps within each. The first phase was a collection, a review and an analysis of existing research and available information in this area. In the second phase, a large primary research study was conducted, using both qualitative and quantitative research methods. The qualitative phase included the identification of key service attributes in focus groups. The quantitative research gathered information on consumer behaviour, evaluation of problem as seen by the consumer and Council staff along with their perceptions of and preference for new services or service improvement ideas.

* *Service Idea-Generation*

This sub-stage involved the generation of ideas for new services and service improvements. Focus groups of consumers and service staff were held. Idea generation techniques such as brainstorming and post-box techniques were used to generate service

ideas. Brainstorming was found to be more useful when approached from the negative perspective, that is, exploration of problems and needs and then to think of service solutions or improvements. It was also useful for consumers to think of the ideal service outcomes. Both consumers and service staff mentioned several problems from their perspectives, which then led to discussions on what could be done to avoid the problems or eliminate most of them, by understanding the problems fully. Several service ideas were generated and the next activity consisted of grouping or categorizing the ideas.

* *Service Ideas Screening*

This sub-stage involved selection of ideas for new services so as to identify the service ideas most preferred by consumers and service staff. Focus groups were held with four different groups of consumers and with two groups of service staff. Card-sorting technique, consumer-based multi-voting and solution-based screening techniques were used to bring the varied number of ideas down to a manageable number that were most important to the target consumers and related to the service attributes or problems identified earlier.

* *Detailed Investigation*

A survey of target consumers was undertaken to gather quantitative information on service problems, usage, perceptions of the service and consumer behaviour relevant to the service. This may be undertaken along with concept preference testing.

* *Service Concept Development*

This sub-stage involved the development of new service concepts from the ideas remaining after screening. The selected service ideas were explored further and described in detail by small groups of consumers and service staff in *sequential discussion groups*. These were held sequentially in order to build on information gathered in the small groups and to refine the concepts. The service attributes and features were identified. These were then summarized and reduced to a refined consumer concept definition. These brief verbal concept definitions were presented to a much larger group of consumers for evaluation and selection.

* *Service Concept Evaluation*

This sub-stage evaluated the service concepts to identify those most suited for Stage 2 Service Design. A quantitative survey questionnaire was designed that included the brief service concept definitions. Target consumers were surveyed to find out the likelihood that they would use the service and their ranking of the most important and most preferred service concept.

* *Service Development Plan*

This was the last sub-stage in the initial stage of the Service Development Process. A service development feasibility and plan was submitted to the Council's management for review and implementation. The next stages of development and implementation require large financial and time commitments. To date some of the concepts have been approved and implemented as detailed in the last chapter.

The activities, techniques, outcomes and decisions in the research plan are shown in Table 7.1. Techniques within the stages included segmenting, propensity scaling, focus groups, brainstorming, post-box technique, perceptual mapping, rating and ranking.

Table 7.1 Bicycle Service Development Research Plan

Sub-stages	Activities & Techniques	Outcomes	Decisions
Service Development Strategy	Information gathering Desk research Internal data collection Situation analysis	Objectives and scope of study	Strategic fit Go-No Go decision
Opportunity Identification	Secondary research Literature search, internet, e-mail, CD ROM databases, keyword search, Census	current bicycle usage statistics, comparative data- and cycling strategies from other cities Service assessment	Assess the potential to increase usage
Needs Analysis	Identification of problems/attributes Experts – national & international Focus Groups with consumers/service staff Qualitative research	List of barriers/enhancers Service problems Areas for improvement of cycling services	Major service problems, needs Areas for service improvements Service attributes
Service Idea Generation	Consumer/service staff idea-generation and grouping Visual Collage, Brainstorming, Post-box technique	Service ideas categorised into major areas	Service problems and ideas
Service Idea-Screening	Sequential discussion groups – consumers & service staff, Problem-related, solution-based selection	Most preferred ideas Rating of service ideas	Acceptance of service ideas and attributes to develop into service concepts
Concept Development	Service concept definition Sequential group discussion	Concepts that can be tested by consumers and service providers	Final service concepts Go-no go decision
Detailed Investigation	Quantitative research	Service usage and consumer behaviour	Service feasibility
Concept Evaluation	Service concept selection Consumer preference testing Ranking and rating of concepts	Most preferred concepts	Important concepts
Service Development Plan	Documentation and analysis	Detailed feasibility and plan for Service Development	Council to review and develop service Go-No Go

7.4 Techniques

7.4.1 Secondary Research

The secondary research included the following areas of investigation:

* *Statistical Information*

This involved research into relevant background information and comparative analyses. Some of the sources included the Council's internal records, the Land Transport Safety Authority, the Internet, other New Zealand and overseas Councils that either have, or are considering implementing services to promote cycling within the central city region. This extended not only the findings of the consumer research to include what are the major barriers to cycling in the city, but also yielded additional service ideas. A very useful source was identified in the Netherlands, where a comprehensive Bicycle Plan had been established. The information provided by them proved valuable to the research and to the Council. The Land Transport Safety Authority provided cycle accident data that showed that cyclists in the age group of 20 to 24, and traffic intersections were key areas on which to focus safety development and improvement. These were confirmed in the outcomes from the primary research and the concerns that consumers expressed.

* *Reported Information*

This involved consumer demographics, psychographics and seasonal information on cyclists and cycling in the City. The goal of this research was to determine the number of cyclists in the 'study city' (Palmerston North) and to gain an understanding of the consumers - who they are, how old they are, where they cycle and how often they cycle. From this, it was possible to determine not only who cycles, but also who does *not* cycle. The aim of this phase was to identify target segments of the market that are *most* likely to be interested in new or improved services and to identify whether there is potential to increase cycling.

* *Expert Information*

This involved identifying similar services for benchmarking, investigating consumer problems and service strategies used by other Councils in New Zealand and overseas, and

their results. Several useful sources and *experts* were identified and approached for this information. Transportation experts within the country namely, Mr Roger Boulton, Mr Brian Baxter and Mr Alix Newman were consulted on service strategies and opportunities. International experts were also consulted including Mr Tom Welleman and Prof. Rob Donovan. The Internet proved to be a valuable resource for comparative data on cycling services. Details for Benchmarking Material and Expert Information are in Appendices 7.1 and 7.2.

The objectives of most other research on this issue focussed more on the cycling infrastructure, whereas the main focus of this research was to understand consumer issues related to cycling services in order to plan for appropriate cycling services. This research approach was appreciated by many cycle advocates for its uniqueness and valuable information (Tanguay, 1998).

* *Fax survey on current usage*

A brief questionnaire was faxed to all intermediate, secondary and high schools for current numbers of their students who cycle in the city, to update and confirm the secondary data that was sourced and to have a breakdown by age groups. The results of data supplied from the schools within the target area were combined with secondary data to reveal the current rate of cycling. Secondary research helped to determine the size of the (working) adult cycling population in the city.

7.4.2 Focus Groups on Consumer Needs and Service Barriers

The predominant method of qualitative research employed was the *focus group*. The focus groups were divided into several parts and consumer research techniques:

The goals of this stage were to determine the needs and attitudes of both cyclists and non-cyclists or potential cyclists, to determine current barriers, service attributes, and to generate service ideas to improve the current service. The groups were composed of consumers from five different consumer segments. The groups used were: Intermediate school students Form 1 and Form 2, Secondary students Form 3 to Form 7, Tertiary students (University and Polytechnic), Working people and Retired people.

The consumer focus groups were held between 16th February 1998 and 10th March 1998. The sessions with the Intermediate and Secondary students were held at the school with permission from school Principals and parents (Letter to Principals and Consent Form are in Appendices 3.7 and 3.8). The discussions with students took place in the presence of the school staff. These sessions were of shorter duration than the adult focus groups, and lasted for one hour.

Idea generation techniques such as *negative brainstorming* (section 3.4.1) and *post-box techniques* (section 3.4.1) were used. Screening techniques included *card sorting into Pass/Fail categories* (section 3.4.1), *solution-based screening* with consumers and *checklist screening* (section 3.4.1) with service staff. The *Visual Collage* technique (section 3.4.1) was also used in the focus groups to provide tangible stimuli for the discussions on service needs and barriers. The collage presented images of several bicycle services in the City. A short videotape sourced from the Netherlands on the benchmarked bicycle services was also shown to the focus group members to stimulate service ideas. The focus groups were videotaped, transcribed, analysed and summarised.

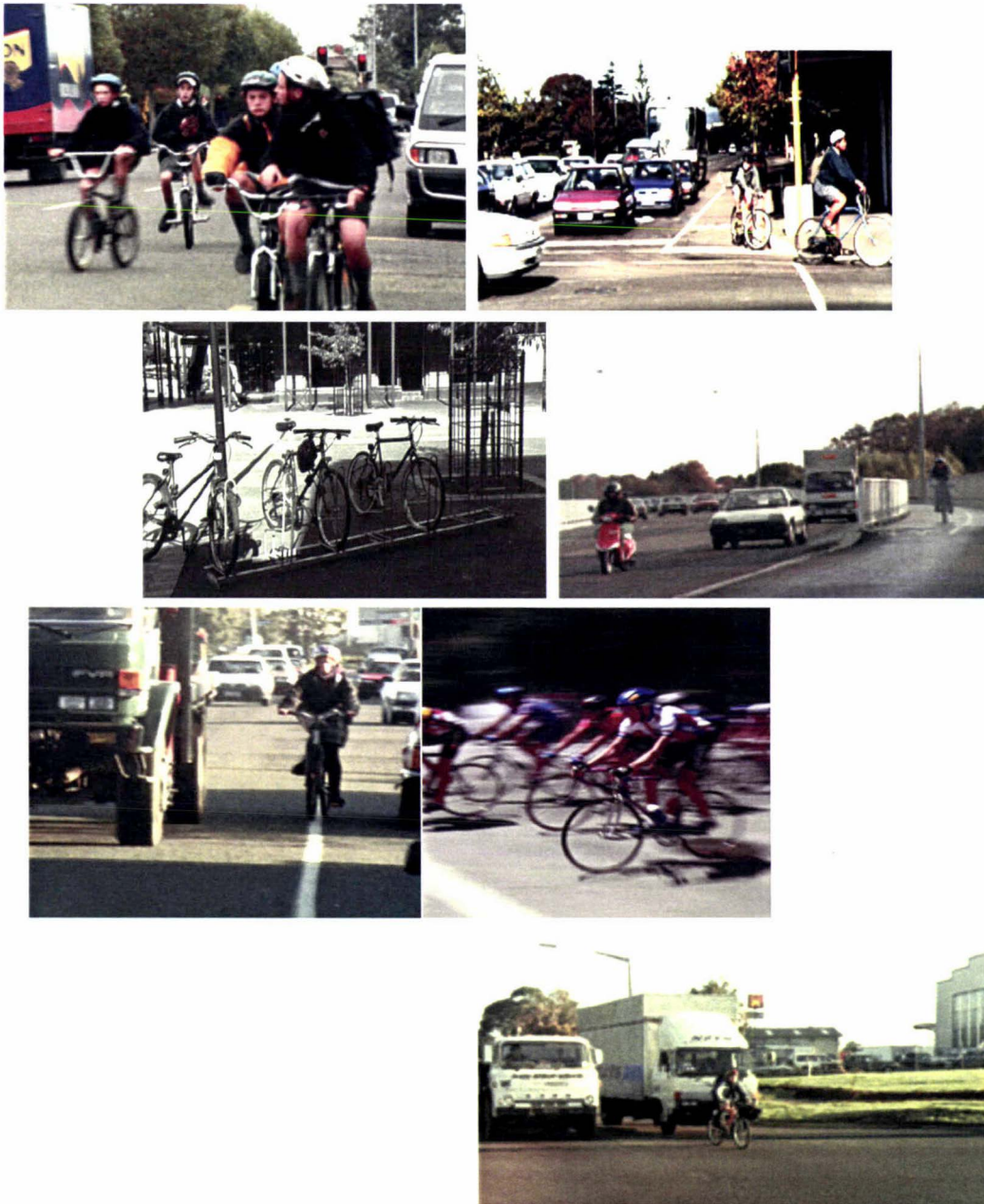


Figure 7.1: Visual Collage used in Consumer Focus Groups

* *Intermediate and High school students*

It was important to motivate and encourage the students to participate freely. The *post-box technique* helped overcome their initial hesitation, as they each had a turn first, after which they felt more comfortable to respond freely. They were told that there were no right or wrong answers and all responses were treated positively without any criticisms. They were all given stationery gift items as a token of appreciation, for which they were surprised and thankful. They did not expect this and mentioned that they enjoyed taking part in the research.

* *Tertiary students, Working and Retired people*

These three separate focus groups were held at a central location in the city and the typical duration was about two hours, with about 6-8 participants in each group. A checklist of topics was prepared prior to the focus groups and the researcher moderated the discussions (Refer to Focus Group Guideline in Appendix 3.3). These group discussions gave an excellent insight into the consumers' attitudes and needs. The brainstorming technique resulted in a number of service ideas, as detailed later. The focus groups were videotaped and audio taped so as not to miss any of the information that was discussed. They were later transcribed by an assistant and then checked through by the researcher. The findings from each focus group were very interesting and it was found that the problems and needs differed slightly between groups. Most of the problems and attributes were common to all groups while some others were unique. Hence, it was important to target a particular segment of the population that was highly likely to adopt or increase usage of bicycle services as a regular mode of transport.

* *Service Staff*

Several service staff discussion groups were held throughout the project. At the start the discussions focussed on the project strategy and the match with the Council's vision in order to ensure that the project would receive management support for the development of services in this area and commitment of resources. In this case the service staff group included a multi-disciplinary team of roading engineers, cycle support service staff, traffic police and service managers. The service staff was reconvened to discuss the secondary

data and preliminary consumer information gathered. This was an important exercise especially for those service staff that felt out of touch with consumers and was not aware of the consumer problems related to cycling services.

7.4.3 Consumer Telephone Survey

** Objectives*

Strategically it is sensible to recognise that people lie on a continuum with regard to their disposition to cycling. At one end of the scale were people who needed a vehicle at work for travel, people who simply hate cycles, people who need to carry large amounts or/and infants. At the other end were people who own a cycle, have cycled, still like cycling, are physically able to cycle, some of whom cycle for pleasure or exercise and some who cycle to work. For meaningful results that were actionable in the short term, the research focussed on the possible group of people that was most likely to adopt new cycling services as a regular mode of transport.

** Sample size and selection*

In this step, a random sample of the Palmerston North population was telephoned using a simple question to categorise them on a continuum of the probability that they could be converted to cycling. The contact numbers were randomly selected from the city's telephone book. The statistical random number table was used to choose a list of sixty respondents, who were telephoned to answer a few simple questions in order to establish a target segment.

** Scaling Method*

A five point verbal-numerical scale was used in which 49 consumers chose the category that described their ability and willingness to cycle. The five-point scale for willingness to cycle used 'Very willing' on one end of the scale and 'Not at all willing' on the other end. This helped to identify the people on the continuum and to describe them by age, gender and occupation or work type. This identified the population segment most likely to be converted to cycling, which was found to be mainly students, between the ages of 15 and 25 years, with a slight bias towards males. This confirmed quantitatively the

findings of the focus groups. It also provided quantitative support to concentrate on this consumer segment for the large quantitative survey.

7.4.4 Service Idea Generation and Screening

** Consumer Discussion Groups*

One of the objectives of the qualitative research was to carry out *consumer-driven idea generation and idea screening* to provide a basis for the service concept definition. People falling in the 'high propensity for conversion' end of the scale, namely students (intermediate through to tertiary levels) were selected for further quantitative research. In the group discussions, several topics were covered that included: the background to cycling experiences, if and why they stopped cycling, what barriers were there to cycling, what encourages them to cycle (cyclists), what stops them using the cycle (non-cyclists), what changes would make them cycle, what ideas they had, what would appeal to them. The groups worked towards a consensus on what is needed to convert them, what ideas to screen out, and also examined the applicability of overseas solutions (e.g. cycle ways).

** Service Staff Discussion Groups*

The service staff were also involved in the idea discussions and screening stage. Service staff proposed service ideas that were more related to the bicycle infrastructure such as, the marking of lanes, the cycle routes, improved cycle stands, and better parking facilities and service delivery aspects such as, cycle advisory group and cycle officer. However, when a consensus was achieved on the most important ones based on screening the ideas that served the consumer problems best, the ideas that were selected were almost the same as those screened by consumers, except for the order of importance.

7.4.5 Service Concept Development and Evaluation Techniques

** Concept Development*

The service concepts were developed from the important service attributes identified earlier and the service ideas that solved the consumers' service problems. These were developed in small group discussions with service staff.

The consumer data was collected by means of a combination of open-ended, multiple choice and rating scale questions. Quantitative questions were used for rating and ranking service concepts. The questionnaire was designed to be easy to complete. The initial questions were on service usage behaviour, followed by barrier or problem ratings on a five-point scale ranging from no problem or a minor problem to a major problem. The barriers were determined from the earlier consumer focus groups and verified by experts and service managers. A pre-test of the questionnaire was carried out on a small sample of the target market and the option of specifying any other problem that may have been left out was also provided in the questionnaire. No new major problem was identified in the pilot survey, to include in the final survey.

The final format of the questionnaire was determined after pilot testing and refinement. The content was developed from the information gathered in the qualitative research, expert opinion and service staff input. The questionnaire was divided into six sections:

- The first section categorized respondents by their cycling behaviour.
- Section two gauged their rating of problems on a five-point scale.
- Section three covered consumer perceptions of common modes of transport.
- Section four presented a list of service ideas to which respondents indicated their likelihood of using the service, if certain services were improved or provided.
- In section five, consumers ranked the nine service concepts in order of preference, from most preferred to least preferred.
- Section six included demographic data and a few open-ended questions for consumer comments.

* *Scaling Techniques*

The use of semi-structured linear scales for perceptual mapping has been popular in food product development (Earle, 2000). The semi-structured linear scale was recommended as being easy to use, where the respondent had to place a mark across the line at the point which best reflected the intensity of that particular attribute. The sub-attributes that

were identified in the focus groups were presented in the form of bi-polar phrases, with low to high at the end of each line scale. These line scales were randomized for presentation, so that the order in which they appeared on questionnaires varied. Consumers were requested to place a mark on the line scale to indicate how closely they perceived the attribute matched the mode of transport.

* *Self-administered Survey*

The self-administered survey was used because the respondents were spread out geographically at various locations; the questionnaire was straightforward and simple to answer. It also provided a quick method of reaching the different groups and achieving a good response rate. The objectives of this section of research involved the gathering of quantitative information from the target market. Based around the barriers, service attributes and ideas already determined in the qualitative research, the survey was used to quantify four major research areas: Demographic data of the cyclists and non-cyclists within the target market, significance and importance of the barriers, comparative perceived ratings of different modes of transport and consumer evaluation of the service concepts.

Table 7.2 Characteristics of Sample in Quantitative Survey

	No.	% of sample
Male Cyclists	26	28
Male Non-cyclists	21	22
Female Cyclists	24	27
Female Non-cyclists	21	23
TOTAL	92	100

7.5 Initial Outcomes

7.5.1 Statistics on Cycling in the City

Cycling is popular in the City when compared to other cities in New Zealand. Almost half of intermediate, high school and tertiary education student journeys are by cycle. In the 1960s and 70s, although cycling continued to be popular, it received little recognition. Cycle tracks along main roads had been developed in the city before 1961.

These were however removed at different times up to the 1970s, due to increasing emphasis on the car. The Traffic Management Plan (1984) stated that transport planning was focused on the need “to improve the road network for the exclusive benefits of the motor vehicle”, but noted that this needed to change. Recently a number of factors (e.g. environmental awareness, healthy living, sustainable management, traffic pressures and integrated planning) have combined to produce a need for the increased use of cycles in the city.

The proposed District Plan (1997) also highlighted the need to “enhance the use of public transport and cycling as alternative modes to the motor car.” The City Vision and ‘Eco-City 2010 Scenario’ included the needs of cyclists and envisaged extensive cycling services. This research contributed in part to reaching that vision and this initial secondary research established the first step of service development namely, service strategy. This clearly outlined the management commitment to the improvement of cycling services, the need for service development and consumer research.

The study city had the highest proportion of people using cycles as their mode of transport to work (Census, 1996). Eleven thousand people cycle in the city on a daily basis. The city has a mild climate, is compact and flat and therefore suitable for this mode of transport. To reverse the decline in cycle usage this study was undertaken to find out consumer motivations, barriers to cycling and to identify service areas for improvement from a consumer’s perspective.

shows that bicycle usage has dropped since 1986 (Council transport report, 1998). This and other evidence such as the city's topography, being very flat, compact (only 4 km radius) and having wide roads, showed that the City had potential to increase cycle usage. In addition, lifestyle changes, greater need for exercise and increase in environmental awareness (source: NZ Yearbook, 1997) support the potential to increase cycle usage.

Table 7.3 Travel to Work or Study in Palmerston North in 1986, 1991, 1996

Mode of Transport	1986 No.	%	1991 No.	%	1996 No.	%
Driver of Car/van/truck	14,373	59	16,800	58	19,125	58
Passenger in Car/van/truck	1,473	6	1,638	6	1713	5
Bus	753	3	342	1	228	1
Bicycle	3,267	13	2,919	10	2,869	9
Walking/jogging	2,130	9	2,151	7	2,349	7
Worked at home	711	3	960	3	1668	5
Did not work	-	-	2,856	10	3,438	10
Other	1590	6	1089	4	930	3
Not specified	102	0	348	1	927	3
Totals	24,399		29,103		33,246	

Source: New Zealand Census, 1996

Comparing data of cycling numbers in the study city with two other New Zealand cities (Appendix 7.4) showed that it was necessary to support the existing service users and to improve the bicycle service in order to encourage usage. Overseas information gathered showed that the Netherlands is also flat, has a high car ownership but cycles are mainly used in the inner city areas. Sweden has much harsher winters and Switzerland much steeper hills, yet both have higher rates of cycling. Cities that are about the same size as the study city (Palmerston North) were compared on bicycle usage. Table 7.4 shows that there is scope for increasing usage, since similar sized cities in the U.K. have a much larger percentage of cyclists.

Table 7.4 Comparison of Bicycle Usage in three cities

City/Town	Population	Town radius	Terrain	Journeys by Bicycle (%)
York (UK)	98,745	3.47 km	Fairly flat	20%
Cambridge (UK)	91, 933	3.38 km	Flat	27%
Palmerston North (NZ)	76, 000	4 km	Flat	9%

7.5.2 Current Bicycle Usage in the Study City

The proportion of trips by bicycle is far smaller than in many comparable cities in other countries. As can be seen in Table 7.3, there has been an overall decline in cycle usage from 13% (3,267) in 1986 to 9% (2,869) in 1996 (New Zealand Census, 1996).

Table 7.5 Summary of Secondary Information

Means of Travel	Intermediate & High Schools %	University %
Car	17	59
Bus	13	1
Bicycle	45	39
Other (walk.)	24	1

Source: New Zealand Census 1996

Additional relevant statistics based on desk research were sourced regarding general cycling behaviour, which supported the identification of the target segment.

7.5.3 Outcomes of International Secondary Data Analysis

The outcomes of the secondary data showed that the city had potential to increase cycling but required research to find out the major barriers to cycling and the needs of consumers in the study city. The main points in summary are:

- Environmentally sustainable transport services are needed, such as the bicycle.
- Encouraging cycling does not necessarily involve expensive or complex infrastructure, but significant changes in perceptions and attitudes.
- Attention needs to be directed towards reducing the sources of danger and the motivational barriers to cycling.

- Actions to provide consumer-friendly services have helped encourage cycling overseas (includes reallocation of road space for convenient and safe access by cycles).
- Sustainable management of resources is internationally and nationally recognised as desirable and necessary (cycles do not need fuel and do not pollute the air)

The transport strategies sourced from Singapore, Netherlands and Wellington, New Zealand showed similar emphasis away from the use of the private car towards an integrated system of transport services.

7.5.4 Focus Groups with Cyclists and Non-cyclists

The qualitative research phase consisted of *focus groups* of major segments of the population. Likes and dislikes, needs, motivations, perceptions and barriers to cycling were explored. Service ideas to solve the problems and to enhance the service were gathered and screened.

** Perceived Likes and Dislikes about Cycling*

The groups agreed on the main likes and dislikes about cycling services and they were mentioned in all the group sessions. Independence and freedom were mentioned more in the younger aged groups, while fitness and environmentally friendliness were mentioned by the adult groups. This provided insight into consumer perceptions of cycling, their experiences of the current service and their attitudes towards it.

Table 7.6 Provides a summary listing of the likes and dislikes related to bicycle services that were generated at the consumer groups. The groups agreed on the main likes and dislikes about cycling services and they were mentioned in all the group sessions. Independence and freedom were mentioned more in the younger aged groups, while fitness and environmentally friendliness were mentioned by the adult groups. This provided insight into consumer perceptions of cycling, their experiences of the current service and their attitudes towards it.

Table 7.6 Summary of Likes and Dislikes about Cycling

Consumer	Consumer Likes or Advantages	Consumer Dislikes or Disadvantages
<i>Secondary students - Intermediate level</i>	Ease of use Relatively less age restriction Less expensive Enjoyable Freedom Easy to learn	Danger from traffic Danger at intersections Bad road conditions Not knowing road rules
<i>Secondary students -High School level</i>	Wide age range Less ongoing costs Avoid traffic congestion Independence Free parking Easy to operate	Theft and vandalism Bad weather (uniform and books affected) Time taken to reach destination Difficult to carry stuff or take friends Safety Unsure how to pass an intersection
<i>Adult Groups</i>	Fitness, exercise Environmentally sound Small city – places are not too far PN is flat – cycling not a strain Enjoyable No problems in traffic jams Easy to find a park Fresh air and scenery Avoids congestion Easy to maintain Economical	Motorist behaviour Small and vulnerable Insufficient lighting No cycle lanes Cycle education only at Orientation Inadequate Bicycle Parking Glass on roads – flat tyres Cannot carry much Theft of bicycles Travel time Puncture repairs Inconvenience e.g. wearing a helmet, clothes restrictions

7.6 Qualitative Outcomes - Identification of Service Needs and Barriers -

The following problems were identified from the consumer focus groups as *barriers* to cycling, and suitable for further analysis in the quantitative section.

7.6.1 Barriers to Cycling Services

The barriers or problems perceived by consumers with regard to cycling and its services were: Danger from road traffic, Theft and vandalism of bicycles, Bad weather - rain, wind, cold, Poor road conditions - pot holes, loose gravel, broken glass, Time required to cycle to the destination, Lighting when cycling at night, Danger at intersections, Problems with school children not understanding the road rules - giving way, traffic intersections, right of way, and lack of bicycle facilities.

Of these factors, the emphasis on which was most important varied depending on which market segment the group represented. A simple *ranking* of the problems by focus group members resulted in five lists of problems. However, some problems repeatedly came up as being important in every group.

The top-ranking barrier to cycling was physical danger when cycling (safety and vulnerability issues). Both cyclists and non-cyclists in every group felt unsafe in traffic. Amongst the older consumers, this was felt to be because cars did not tend to regard cyclists as legitimate road traffic, and often did not realise they had to give way to cyclists. Amongst younger age groups, this was also a common feeling, as well as apprehension about *danger at intersections*. However, many younger cyclists felt this was because they had *little understanding of the road rules*. In focus groups of people over the age of 16 – 17 years, this was not a concern, as they had learnt the road rules in the course of obtaining a drivers' licence.

7.6.2 Motivations of Cyclists

People who currently cycle (and also have a drivers' licence) started cycling at intermediate school level. Also, they were often taught the road rules and cycle safety either at school or by their parents. Many of them were currently tertiary students, who

continue cycling for fitness, convenience, and financial reasons. Younger students preferred cycling to being driven by their parents, as it gave them a measure of independence. They also thought it was “fun”. Some of the older respondents chose to travel by car because it was an “easier, convenient, quicker alternative”.

Obtaining a driver’s licence was seen as a ‘rite of passage’ for young adults, and at this point interest in cycling starts to decrease. However, for many who were regular cyclists before they obtained a licence, they still continued to cycle recreationally and were the most likely to increase their cycling.

School students seemed to have a very limited or practically non-existent understanding of the road rules. This led to a high level of apprehension about interacting with road traffic, especially at intersections. There appeared to be a strong need for more cycle education and road use guidance. Although Cycle Maps and related Safety pamphlets were available, many consumers had not seen this and were not aware it was available. However, they were of the opinion that more of such information would be extremely useful in encouraging them to take up cycling. Some students said, *“I think I would be a lot more confident if I knew more about the road rules, and who I have to give way to and stuff.”* *“Mum wants to give me a ride to school in the mornings, but I decided to bicycle anyway, because it’s fun and we (another group member) ride to school together.”*

7.6.3 Contextual Factors that Facilitate or Impede Cycling Services

The contextual factors that facilitate or impede cycling behaviour in the study city were explored. An analysis of the advantages and disadvantages of cycling as perceived by consumers was essential in order to take advantage of the positive aspects of cycling and to offer solutions for the negative aspects of cycling.

The Strengths of cycling were identified as:

Bicycles are more suited for short distances (the city is small and compact - 4 km radius).

Bicycles are seen as 'environmentally friendly'- do not pollute and do not cause noise.

Bicycles take up little room on the road and in parking spaces.

Cycling has got a better image than public transport amongst the surveyed population.

Cycling contributes to a healthy lifestyle.

Cycling is relatively economical

School children mentioned that cycling offered a certain amount of independence

The city is topographically suited, being relatively flat, with broad roads.

The city has a large student population and they have been identified as the segment most likely to increase cycling (as a regular mode of transport)

The Weaknesses of cycling were identified as:

The bicycle is perceived as being vulnerable and physically unsafe.

The weather was mentioned as a major obstacle to cycling, but this appears to be exaggerated by non-cyclists.

The quality of cycle infrastructure was also mentioned – cycle specific traffic lights, insufficient lighting, glass on roads, and shortage of bicycle racks.

Theft of bicycles was another misperception and was not as high as they perceived the problem to be.

Not having a guidebook or road code for cyclists to inform and educate them on bicycling.

The extent of usage, safety and appeal of the bicycle can be greatly improved by highlighting the strengths and reducing the weaknesses (whether it is a real or perceived problem). The preferred Solution Concepts (i.e. Education, Bicycle Lanes and Specific Bicycle Lights relate well to countering the weaknesses of bicycling mentioned by the consumers.

7.6.4 Service Attributes for Cycling

The main *service attributes* for different modes of travel were explored using a simple form that listed the main features of the transportation service. Consumers generated the most important features of the service and the resultant twelve service attributes were identified as: *Physical safety in traffic, Suitable in bad weather, Suitable for local trips, Economical to use, Avoids traffic congestion, Reliable, Security of vehicle, Suitable on various road surfaces, Contributes to physical fitness, Environmental friendliness, Convenience and Appeal.*

7.7 Quantitative Outcomes - Service Needs and Barriers

A quantitative survey of 92 respondents was conducted on a representative cross-section of the student population consisting of students from intermediate, secondary and tertiary levels of education in the city. These segments were found to be segments of the market most likely to adopt or increase cycling as a regular mode of transport. The respondents identified themselves into certain predetermined categories, which allowed for sorting the data and analysis by age, cycle usage and gender. The outcomes of the quantitative survey covered the following areas: research to assess consumer attitudes (the extent of problem and level of importance), consumer perceptions of different modes of transport, idea generation and screening of service concepts and the identification of the preferred service concept.

7.7.1 Major Barriers to Cycling

The objective of this section of the questionnaire was to determine how much of a problem the major barriers to cycling were to the consumers. This provided guidance on and justification for development of services that helped solve the most important service problems. The list of barriers evaluated was identified from the qualitative research. They were: (1) Danger from traffic, (2) Bicycle theft, (3) Bad weather, (4) Poor road conditions, (5) Time required to cycle to destination, (6) Lighting when cycling at night, (7) Danger at intersections, (8) Young cyclists not understanding the road rules and (9) Lack of bicycle facilities. Respondents were asked to rate the problem on a scale of 1 to

5. A value of 1 meant that the problem was very minor and 5 meant that the problem was a very major barrier to cycling.

The data was analysed as a single data set, and as a divided data set between cyclists and non-cyclists. The total data set was analysed for the barriers that received the most responses of major and very major problem. From the combined responses (of major and very major) it was found that the following were major barriers, in order of magnitude and the results are presented in Figure 7.2.

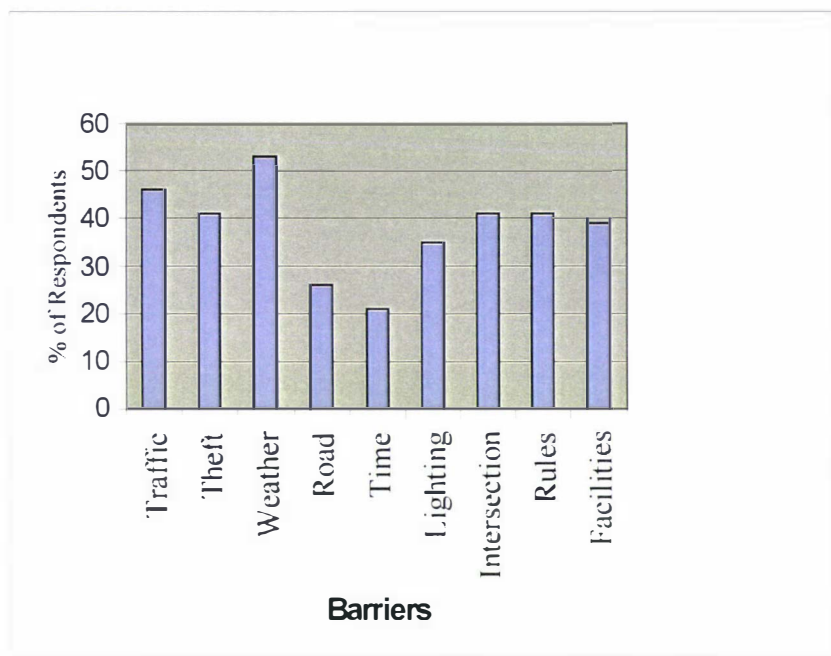


Figure 7.2: Ratings of Major and Very Major Barriers

Barriers: 1=Danger from **traffic**, 2=Bicycle **theft**, 3=Bad **weather**, 4=Poor **road** conditions, 5=**Time** required to cycle to destination, 6=**Lighting** when cycling at night, 7=Danger at **intersections**, 8=Young cyclists not understanding the **rules** and 9=Lack of (bicycle) **facilities**.

Figure 7.2 shows the number of major and very major problem ratings received for each barrier. Weather and then traffic, rated as the most serious problems. Time to cycle to destination and road conditions were relatively minor service problems and therefore do not require immediate service improvements.

The major barriers determined from the entire data set were: Bad weather conditions - rain, strong winds, Danger at intersections, Young children not understanding the road rules and Danger from road traffic. Individual graphs of the responses to each barrier are included in Appendices 7.5 and 7.6. Of the major barriers determined above, the danger to cyclists at intersections, the problem of young children not understanding the road rules, and danger from road traffic confirmed the findings of the qualitative research.

There was also evidence from the secondary research conducted on the Hamilton City Council's services that showed that 75% of cycle accidents occur at intersections and that 40% of cyclists involved in accidents are in the intermediate and high school age groups. These statistics support the findings from this research and highlight the need for service improvements in these particular areas.

7.7.2 Consumer Attitudes to Cycling

In consumer perception terms, cycling was highly regarded as superior to other forms of transport in terms of contributing to physical fitness, economical to use, environmentally friendly, and avoiding traffic congestion. Cycling was regarded poorly in terms of physical safety, vehicle security, and suitability for use in bad weather. The negative factors of cars were predominantly the factors that were perceived as strongest in bicycles, and vice versa.

7.8 Service Idea Generation and Screening

7.8.1 New Service Ideas and Improvements

A list of service ideas was generated from the brainstorming session with consumers and service staff in the focus groups. The number of ideas from service staff was relatively less than those offered by consumers, who appeared to be constrained by the practical issues of providing the service. However, this was a small qualitative sample. The technique of brainstorming ideas for an "ideal" bicycle service, generated innovative and uninhibited ideas such as, a unique cycle tracking system, a completely new type of cycle that offered the protection that consumers would like, a giant glass dome to keep the rain out etc. A list of 83 service ideas was generated. It appeared that consumers had more

ideas at the micro-level (bicycle or individual levels), while service staff had more suggestions at the macro-level (cycling infrastructure or community level e.g. road usage behaviour).

Table 7.7 Comparison of the Number of Service Ideas Generated by Consumers and Service Staff in the Focus Groups

Category Levels	Consumers	Service Staff
Individual Level, Micro-level	27	17
Community Level, Macro-level	17	22
TOTAL	44	39

Note: qualitative sample

7.8.2 Service Ideas Screened

The service ideas were first screened using a simple pass/fail method (based on the service barriers identified), led by the researcher with consensus from the group members. Then the list of 'passed' ideas was categorised into related services and broadly into macro-level and micro-level groups. The multi-voting technique was used to reduce the number of ideas to those most favoured by the consumer groups. Each idea was considered based on the related problems identified earlier. Consumers also helped to develop the selected ideas into concept descriptions.

* Checklist Screening

After the initial screening, the list was then presented to service staff groups who were reconvened for the purpose of *screening the service ideas*. The service staff considered the ideas from a much broader perspective and their consideration was based on which ones helped to solve the major consumer problems in the short-term (i.e. can be implemented within five years). As mentioned, the preliminary screening was consumer biased, as the focus of this study was on consumer-oriented service development. The service staff was presented with the identified list of major consumer barriers and a checklist. They selected a somewhat similar set of service ideas as the consumers, although their order of preference was slightly different. The screening factors considered by them involved the service barriers and a checklist of screening criteria

(Appendix 3.4). A discussion on their reasons for choice was held following their selection.

A huge amount of useful information was gathered as part of the focus groups held with consumers and service staff. Some of the findings are mentioned below and others are detailed later in the chapter.

Table 7.8 Screened List of Ideas by Consumers and Service Staff

<i>Consumers</i>	<i>Service Staff</i>
Bicycle lanes	Community education programmes
Cycle education service	Cyclist and pedestrian bridge
Bicycle parking service	Parking facilities
Cyclist and pedestrian mall	Upgrade infrastructure –lanes
Bicycle rental service	Intersection lights
Cyclist-specific lights	Broadway mall
Bicycle stands	Road lighting and surface
Free bicycle service	Cycle racks
Cyclist and pedestrian bridge	Set up a Cycle Advisory Group
Recreation routes	Appoint Cycle Champion
Bicycle repair service	Rental programme
Discounts and bicycle tokens	Sheltered paths, separate cycle paths

7.8.3 Major Barriers and Related Service Ideas

The major barriers to cycling and the related service ideas from the research have been identified in Table 7.9.

Table 7.9 Major Barriers and Final Service Ideas

Major Barriers to Cycling	Related Service Ideas
Danger at intersections	Specific Traffic Light system, Cycle lanes, cycle-box area for waiting at lights, signs, education.
Danger from road traffic	Specific cycle paths, separation from other traffic, motorist education.
Bad weather conditions	Sheltered paths
Young cyclists not understanding the road rules	Education, road signs, traffic management.
Theft of bicycles	Cycle racks, bicycle rental service, bicycle parking service

The barrier of bad weather conditions was identified as the major barrier by non-cyclists, but the responses from cyclists indicated that this was a perceptual barrier, held overwhelmingly by non-cyclists. Whilst this was a major problem, it could be a perception problem with some non-cyclists that can be solved by targeting one sector of the market, as it was not a population-wide problem.

7.9 New Service Concepts

7.9.1 Service Attributes and Consumer Perceptions

Consumer perceptions of cycling services relative to the major modes of transport were analysed. The three modes of transport were bicycles, cars and buses. The line scale was used for this purpose as it has been used successfully in sensory evaluation and food product development (Earle, 2000). The data gave good information on the perceived advantages and disadvantages of bicycles, which is critical for cycle service strategies. Consumers were asked for their perceptions of these modes of transport on the following *service attributes* that were identified in the focus groups: Physical safety in traffic, Suitable in bad weather, Suitable for local trips, Economical to use, Avoids traffic congestion, Reliable, Security of vehicle, Suitable on various road surfaces, Contributes to physical fitness, Environmental 'friendliness', Convenience and Appeal/Style.

From the analysis of perceptual distributions, **bicycles were rated very highly** in the following areas: Contributes to physical fitness, Economical to use, Environmentally friendly, Avoids traffic congestion and to a lesser degree, Reliable, Useful for short, local trips. Conversely, **bicycles rated poorly in the areas of**: Physical safety, Vehicle security and Suitability in bad weather. These results were evident in both the distribution analysis, and in the *Perceptual Mapping*. When the data sets were perceptually mapped, it was found that the co-ordinates for 'Bicycle strengths' corresponded closely to the co-ordinates for 'Car weaknesses', and vice versa. There was a very strong correlation in that the attributes most commonly perceived as failings in cars were the attributes that were seen as the most positive in bicycles. (See Appendix 7.6).

The weaknesses in cars were also seen as weaknesses in buses, with public transport rating overall only a very weak positive feature in terms of *physical safety* in traffic, and in *vehicle security*, with all other attributes rating poorly. The highest bicycle rating attributes were *Contribution to physical fitness*, *Environmentally friendly*, *Economical*, *avoids traffic congestion* and least was *physical safety*.

7.9.2 Service Concept Development

This is the last activity in the initial stage of service development, before large investments in time and finance are required to develop and implement the service. In the case of local government, this stage is followed by a Service Development Plan (which includes a feasibility report) for the Council to review and implement. If approved, it is then adopted into the Strategic or Annual Plan and passed to the relevant department for development and implementation. Consumers and service staff were involved in this sub-stage. The concepts were developed from service ideas and attributes that were deemed to be important by consumers, service staff and service experts, as well as an examination of common attributes in the benchmarked studies. Consumers provided information on acceptability and the likelihood of service adoption. Service staff indicated their support for the new service concepts. The service concepts tested were:

Concept One - Bicycle lanes: A network of bicycle lanes could be established in and around the central city and major roads. These lanes should be clearly identified and suitable for cycles. A pamphlet containing a map of cycle stands and cycle lanes in the city, as well as a list of cycling rules, could be made available.

Concept Two - Education: An educational programme to encourage all local primary and secondary schools to institute a bicycle usage and safety program. Motorist awareness of cyclists could also be raised, by the use of 'cyclist awareness' ideas, such as the "Mind that cyclist" signs.

Concept Three - Downtown bicycle park: A bicycle parking area in the bottom floor of the Downtown car park, on Main Street. The area would be well lit, covered, and have high security. A free puncture repair service, or similar scheme, *could* be operated, available to all cyclists.

Concept Four - Broadway Mall: A pedestrian and cyclist based Mall on Broadway with restrictions to traffic put in place, such as restricting traffic flow at certain times of the day. Bicycle stands could also be placed throughout this area.

Concept Five - Bicycle rental: A bicycle rental program can be instituted, run from one or more sites around the city, from where people can get a bicycle and helmet in exchange for a small, refundable deposit, and on the presentation of ID. They can keep the bicycle for a certain length of time, ranging from one hour to a whole week/weekend. Over the summer holidays this scheme could also be operated in the Esplanade.

Concept Six - Cycle lights: All the major traffic light-controlled intersections in and around the Square, including Princess St, could have bicycle lights fitted, similar to those at the bridge at the top of Ruahine St. An additional signal attached to the traffic light would give phases specifically for bicycles to cross the intersections.

Concept Seven - Bicycle racks: A large number of secure and sheltered bicycle racks could also be set up around major commercial centres and high usage areas. A pamphlet containing a map of the location of cycle stands and cycle lanes, as well as a list of cycling rules, could be made available.

Concept Eight - Free bicycle service: A large number of free bicycles could be made available to the public. These bicycles could be left at sites throughout the city, from where they could be borrowed by the public, used in and around the city, and returned to any other site. There would be no charge for this service.

Concept Nine - Cyclist bridge: A new bridge could be built across the river, specifically for use by cyclists and pedestrians. Possible locations for the bridge are Cook St, or Ruha St.

7.9.3 Service Concept Evaluation

The data gained on which concepts were the preferred services was analysed as a total sample, divided by group, analysed on a pure ranking scale and on a rating scale, and the same three concepts consistently rated highest. Whilst the order of first, second, and third changed depending on whether the data was being analysed as a total set, or

between groups, the same 3 concepts were consistently the top 3 results. These were: Concept Two: Education, Concept One: Bicycle lanes and Concept Six: Cycle lights.

It was interesting to note that the only time these were not the top three was in the rating analysis of the 'cycle never' group. The results of the 'non-cyclist' group consistently scored every option lower (i.e. gave less 5's (very likely) when asked to rate the ideas), and were generally not as enthusiastic about the impact of cycle initiatives as the cyclist group.

It was also interesting to note that the 'Cycle Rental' service and the 'Free Bicycle Service', rated better for the 'never cycle' group, who rated them third and fourth, respectively, overall. This can be explained by the fact that those who never cycle, most probably do not own cycles and therefore preferred these options. The option of 'Cycle lights', which every other group rated third overall, came out at fifth place in this group. A possible explanation for this is that non-cyclists really do not want to be held back at intersections, if there were cycle specific lights.

When the *new bridge concept* was tested against the other solution concepts, it rated *overall* at number six, out of the nine concepts. Opinions from the focus groups suggested that some people felt the current bridge, especially with the expansions, was sufficient. Opinion on location was evenly divided between the two possible sites. It must be noted that all of the concepts were favourably *rated* but when forced to make a choice and *rank* them, some concepts were preferred more (and could reflect their individual needs). However, the cyclist group analysed separately, ranked this concept higher, but still not one of the top three concepts as far as likelihood to increasing cycling was concerned.

The concept of comprehensive 'Bicycle lanes' was suggested by many of the respondents at the focus groups. Also, many cyclists complained that people often park or drive in parts of the cycle lanes, and expressed the opinion that cycle lanes would not be effective until cars regarded cycles as a legitimate form of road traffic. At this point, the 'Education' concept became relevant and increasingly important.

The concept of **Educational services** was consistently rated highly in both the qualitative and quantitative research. This concept involved an education program aimed at teaching school children the fundamental road rules and cycle safety. The goal is to raise their confidence, the confidence of their parents, and most importantly to educate them on the correct behaviour at intersections and when interacting with traffic. It also aims to raise motorist awareness of cyclists, especially in high risk accident areas, to caution them to stay alert for bicycles. In order to encourage cycling, the **most preferred concepts** were to establish and improve: cyclist and motorist education services, to improve bicycle lanes and to install specific cycle lights on major intersections.

7.9.4 Service Development Plan

The Bicycle Service Development Plan was incorporated into the Council's five-year plan, along with cycling policies and engineering infrastructure plans. This research focussed on consumer-oriented service development, hence the scope of the study was limited to consumer issues related to service development. The objectives of this research to determine the current level of service usage, the potential to increase usage, identify service problems, explore consumer perceptions and needs, generate and screen ideas and concepts was achieved. The complete stage I of the Service Development process model was applied which included several activities and techniques.

The Service Development Plan provided the foundation research and feasibility analysis for bicycle service design. It provided consumer information and techniques for involving consumers and service staff in the development process. It identified service attributes, service ideas, and concepts for new or improved services.

The research involved people from the Land Transport Safety Authority, New Zealand Police, cycle Advocate groups, Councillors, Transport consultants and the Council's roading engineers and service staff, as well as service managers and strategic planning staff.

A summary of the outcomes and decisions in the Service Development Plan were services that make cycling safer and more appealing to users and non-users. All of these

services when implemented would solve the major barriers identified by consumers. The preferred concepts were:

- Education of children, parents and motorists, cyclists and potential cyclists
- Increase the safety for cyclists by having specific cycle lights at intersections
- Improving the cycle lanes to support cycle usage (specifically those routes mentioned by consumers).

The Bicycle Service development plan for better cycling services should be considered by the Council in conjunction with transport services, environmental strategy and central city re-development. It is suggested that for the implementation and monitoring of the new cycling services a cross-functional team and a team leader should be appointed. Although the city is not yet in the position where the environmental dangers of traffic congestion are high, such as in other parts of the world, improving cycle usage would be a proactive approach and the Service Development Plan provides the framework to base future service development on.

The cycling service experts met with Council engineers regarding cycling infrastructure (which was not the focus of the author's research) and provided guidance on design specifications for cycling infrastructure, for the next stage of development after approval by the Council. The Council was using the AustRoads- part 14 guidelines but after consultation with the experts revised and adopted the best practice for the design on bicycle lanes, intersections and parking facilities. The following standards were recommended by the experts: Guidelines and Practical Details – Sustrans, 1997; Guidelines for Designing Cycle friendly infrastructure – DOT, 1996; Design Manual for cycle friendly infrastructure – CROW, 1996. Funding to implement the plan and other infrastructure requirements will be discussed and provided by the Council's Annual Plan process.

7.10 Analysis of Outcomes

7.10.1 Overall Analyses of Consumer Perceptions

Consumer perceptions of the main travel services in the city were placed on a Perceptual Map. Perceptual map data were produced based on the attribute ratings. A spatial analysis of the main travel modes namely, bicycles, cars and buses as perceived by the respondents is presented on a Perceptual Map Figure 7.3

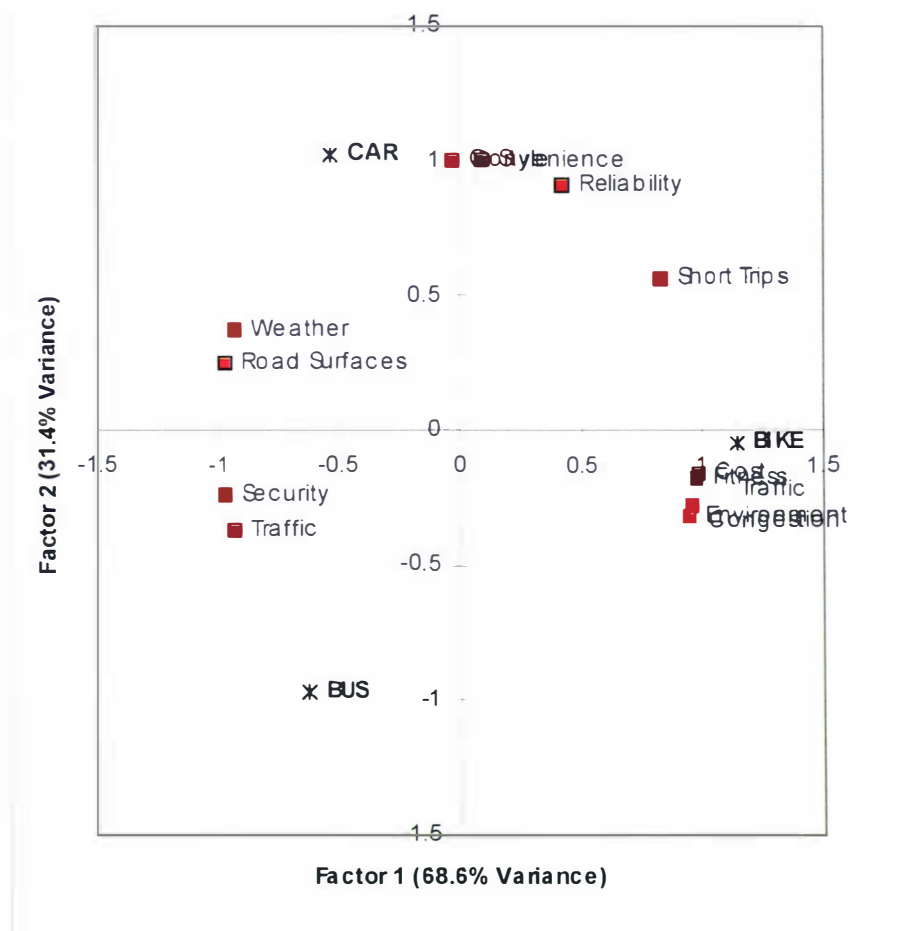


Figure 7.3: Perceptual Map of Travel Modes as Perceived by Consumers

The map clearly shows how the three modes of traffic are separated and the attributes that are closely perceived to be associated with the different vehicles. The bicycle is perceived to be environmentally friendly, contributes to fitness, and is economical,

suitable for short trips and can avoid traffic congestion. This information was extremely useful for service development and planning. Service promotions should build on these consumer perceived strengths, which were measured in comparison with other services.

7.10.2 Likelihood of Increased Cycling on introduction of new services

When asked, “If your preferred service concepts were put in place, how likely are you to increase your current level of cycling?” 81% of the total sample said that they were either likely or very likely to increase their level of cycling. When analysed between groups, 86% of cyclists said they were likely to increase. The response was not as high amongst the non-cyclists, although it was still a positive 75%.

The surveyed population conveyed that they would be likely to increase their current level of cycling if their preferred service concepts were implemented. However, it must be remembered that, due to the increased awareness of the environmental benefits of cycling, and the physical benefits, it may have been perceived as a ‘socially desirable’ activity. This implies that cycling initiatives may increase the current level of cycling, but possibly not by the stated level, even though consumers intended to cycle more. Nevertheless, there was strong evidence to support the potential to increase cycle usage as a regular mode of transport, if the preferred service concepts were developed.

7.10.3 Attributes Analysed by Consumer Segment Groups

The attributes on which cyclists and non-cyclists differed were:

Road surface – non-cyclists gave cars and buses high scores, and bicycles low scores, while cyclists gave cars high scores and buses and bicycles lower ones. This means that overall, bicycles were not perceived to be as suitable on all road surfaces as the other modes of transport tested. Cyclists felt that cars were more suitable than buses and bicycles.

Attributes of Convenience and Style – cyclists rated bicycles as more convenient and appealing than non-cyclists. This shows that cyclists had a better perception of cycles than did non-cyclists. However, both groups perceived cars to be more convenient and stylish.

Reliability – cyclists gave equally high ratings to cars and bicycles on the attribute of *Reliability*, while non-cyclists rated cars higher than bicycles (both were higher ratings than for buses). Once again cyclists perceived bicycles more favourably on this attribute than did non-cyclists.

7.10.4 Analysis of Barriers by Age Group

There were no significant differences between the 10-14 age group and the 15-19 age groups, so the analysis was concentrated on those under 20 years and over 20 years. An analysis of variance indicated that for the cycling under 20s group, the most important barriers were Intersections, Knowing the road rules and Lack of facilities; followed by Traffic, Theft and Need for good road lighting at night.

For the cycling over 20s, the biggest barriers were Weather, Traffic, Road surfaces, Intersections and Road lights at night. Theft, Lack of facilities and knowing the road rules were significantly less important than Weather and Traffic; Time to destination was significantly less important than Weather, Traffic, Road surface, Intersections and Road lights at night.

For the Non-cycling under 20s, the biggest barriers were Intersections, Knowing the Road rules, Weather, Theft, Traffic, Lights at Night and Time to travel. The Road surface was seen as significantly less of a problem than Intersections, Knowing the Road rules, Weather, Theft and Traffic.

For the Non-cycling Over 20s, the main barrier was Weather. This was significantly more important than Theft, Traffic, Knowing the Road rules, Lack of facilities, Intersections, Lights or Time. Road surfaces ranked significantly lower than Theft, Traffic, Knowing the road rules or Lack of facilities.

7.10.5 Analysis of Barriers by Cyclists and Non-cyclists

The major cycling problems identified were: Danger to cyclists at intersections, Danger from road traffic and School Students not understanding the road rules. Bad weather conditions were perceived as a major problem, but mostly by non-cyclists. The ratings for the barrier of Bad weather conditions was analysed between groups of cyclists and

non-cyclists. Figure 7.4 showed clearly how cyclists and non-cyclists differed on this particular motivational barrier. Cyclists did not perceive this to be as major a problem as non-cyclists did.

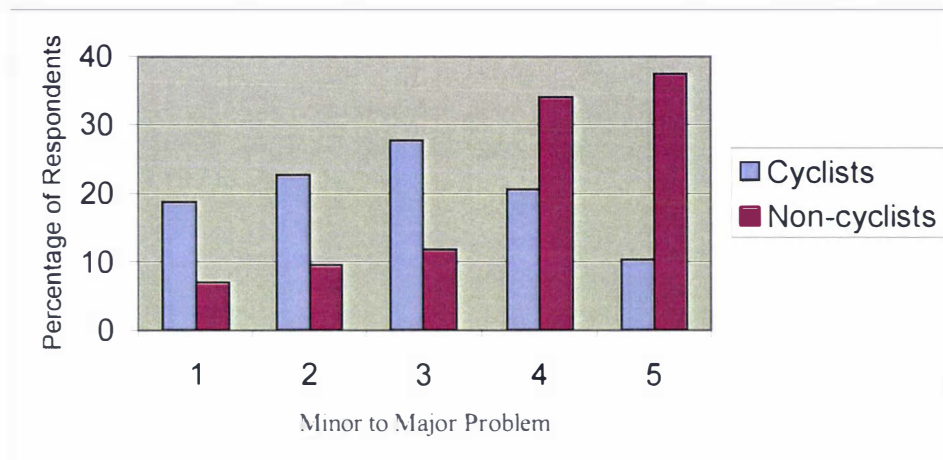


Figure 7.4: 'Bad weather conditions' as a Barrier to cycling

The responses of non-cyclists showed that they perceived bad weather conditions to be an extremely major barrier to cycling. The emphasis placed on 'major' and 'very major' ratings of this barrier reveals the overall rating of this barrier in the entire data set to be very high. However, when this was compared against the results for cyclists, the perception of people who cycled regularly was that bad weather was not a major barrier to cycling. When compared to the results of the entire data set, it would seem that people who cycle regularly, and have experience of cycling in bad weather, do not find it to be a problem. However, those who do not cycle indicate this as their major barrier to cycling, a barrier which is more perceptual in nature than physical. The emphasis non-cyclists placed on this barrier was so heavy, that it skewed the result for the entire data set. Overcoming this perceptual barrier in the minds of non-cyclists would immediately remove the attribute that most distinctly separated the results of non-cyclists from cyclists.

The identification of the barrier of '*bad weather conditions*' was one that was reported most by non-cyclists and not as applicable to the entire population set. The findings

supported the qualitative results and therefore, can be removed as the number one barrier to cycling for the entire surveyed population.

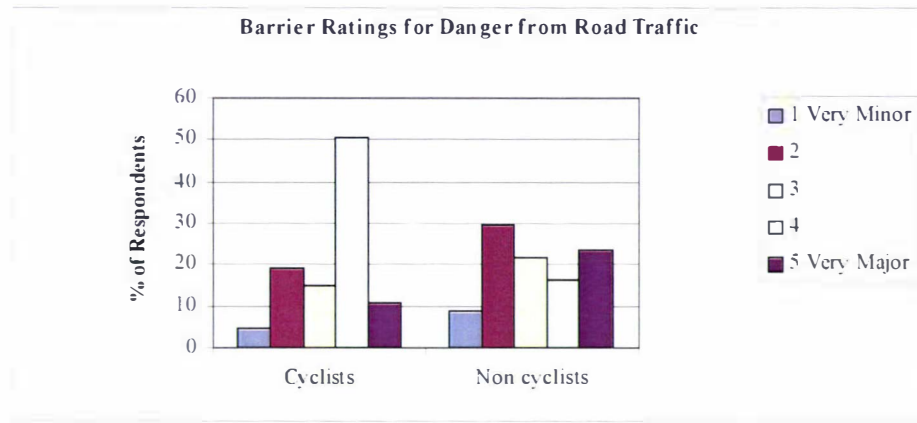


Figure 7.5: Barrier Ratings for ‘Danger from Road Traffic’

Analysed by Consumer Groups

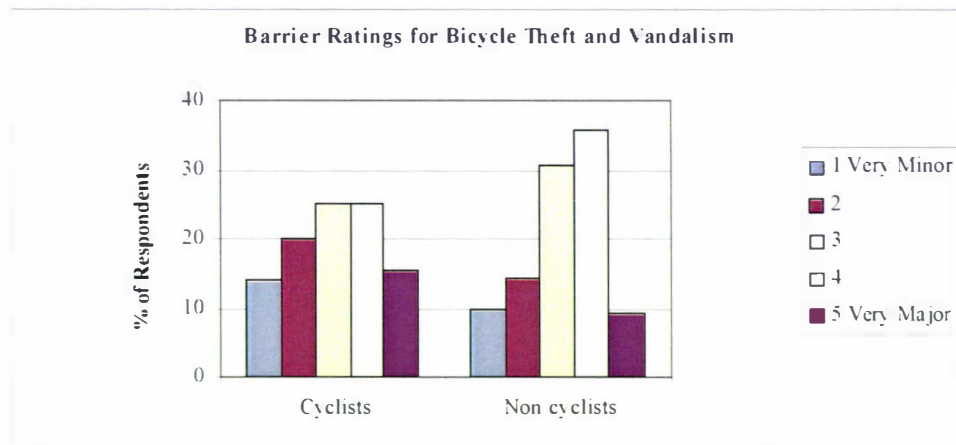


Figure 7.6: Barrier Ratings for ‘Bicycle Theft and Vandalism’

Analysed by Consumer Groups

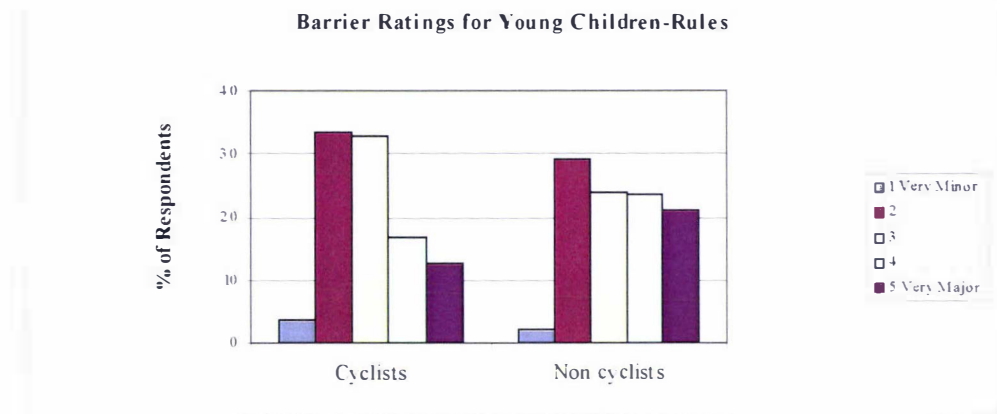


Figure 7.7: Barrier Ratings for ‘Young Children Rules’

Analysed by Consumer Groups

Analysis of Variance (ANOVA) was used to study the differences between consumers on the barrier factors. Consumer groups were split by age group and cycle usage behaviour, as reported by them in the questionnaire. A ‘within-group’ ANOVA (Analysis of Variance to test the significant statistical differences among average responses) revealed that the barriers on which cyclists and non-cyclists differed at a significant level, were *Bad weather conditions*, *Suitability on various road surfaces*, and *Time required to cycle to destination*. In each instance, non-cyclists rated these barriers higher than cyclists. When analysed between age groups, there was some evidence to suggest that the older age groups (24+) tended in general to score all barriers slightly higher than the younger age groups.

There were no significant demographic differences, which applied to *all* the barriers, although a ‘p’ value of 0.11 suggested that the older group tended to score barriers higher. The means, standard deviations and significant interactions for each group, in terms of each barrier are detailed in Table 7.10.

There were significant differences between the following barriers for cyclists and non-cyclists groups: weather, road surface and time. As was found earlier and in the qualitative research, Non-cyclists tended to exaggerate the problems with the weather. With respect to road conditions as a problem factor, non-cyclists did report it to be a major problem, perhaps due to lack of experience. Again with respect to the barrier of *time taken to reach destination* on bicycle, non-cyclists reported this as a major barrier (a problem that service promotion should address).

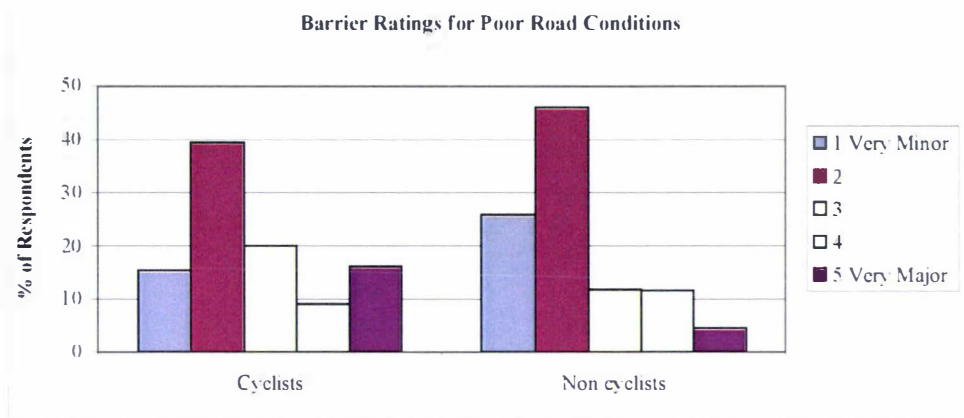


Figure 7.8: Barrier Ratings for 'Poor Road Conditions'

Analysed by Consumer Groups

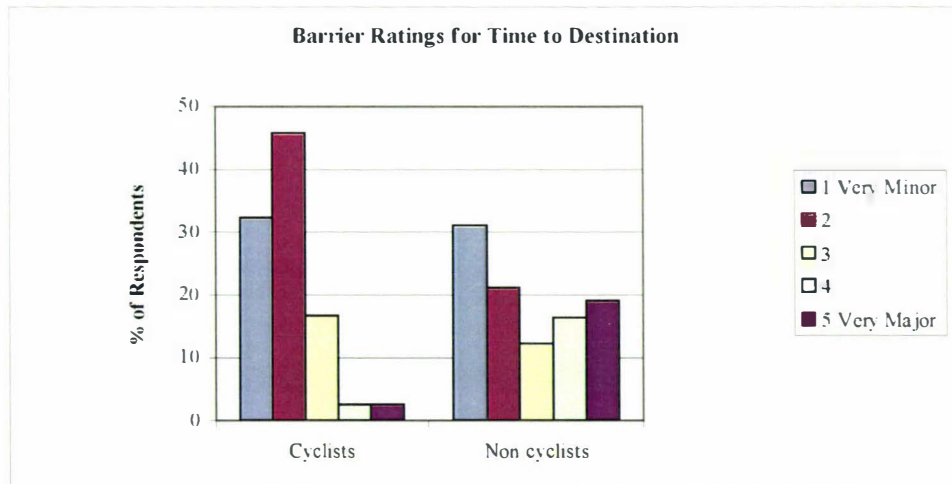


Figure 7.9: Barrier Ratings for 'Time to Destination'

Analysed by Consumer Groups

Table 7.10 Analysis of Barriers between Age groups and Cyclists/Non-cyclists

Barriers		Cyclists		Non-cyclists		Significant Difference Between
		<20 years	>20 years	<20 years	>20 years	
Traffic	Mean	3	3.74	2.95	3.38	*Age groups
	SD	1.15	0.81	1.16	1.5	
Theft	Mean	3	2.79	3.00	3.43	
	SD	1.34	1.44	1.1	1.12	
Weather	Mean	2.61	3.79	3.14	4.57	*Age groups, Cyclists/Non -cyclists
	SD	1.12	1.23	1.35	0.51	
Road surface	Mean	2.68	3.26	2.14	2.33	* Cyclists/ Non-cyclists
	SD	1.35	1.37	1.19	1.06	
Time	Mean	2.06	2.05	2.67	2.76	* Cyclists/ Non-cyclists
	SD	1.15	0.71	1.59	1.51	
Road Lights	Mean	3.00	3.05	2.85	2.90	
	SD	1.41	1.08	1.62	1.41	
Intersections	Mean	3.32	3.16	3.43	3.00	
	SD	1.45	0.83	1.08	1.3	
Road Rules	Mean	3.48	2.53	3.29	3.38	
	SD	1.34	0.77	1.19	1.2	
Facilities	Mean	3.42	2.79	2.67	3.29	
	SD	0.99	1.27	1.2	1.35	

N=92

SD=Standard Deviation

*Significant at 5% level

7.10.6 Comparison of Scaling Techniques

In section four of the quantitative survey, two different scales were used to compare the preference rating of service concepts by consumers. Respondents rated their preference of concepts using a five point rating scale and also ranked the concepts from most preferred to least preferred. The results were the same for the two scales when the entire sample was treated as one data set, but differed slightly when analysed between cyclists and non-cyclists (which has been discussed earlier and is not due to the difference in scales used). This provided support to earlier studies that found both rating scales and ranking scales to be equally effective for testing consumer preferences (Kress, 1998).

7.11 Discussion of Decisions and Outcomes

The major barriers to cycling were reported as Bad weather conditions, Danger at intersections, Young children not understanding the road rules, and Danger from road traffic. Of these, 'bad weather conditions' was believed to be a perceptual barrier for non-cyclists. Hence, the remaining barriers relate to the major qualitative finding, namely physical danger whilst cycling. Since the cycle was perceived as vulnerable and unsafe, any initiative to encourage bicycling should focus on reducing this fear and developing services that address this problem. The suggestions that consumers made for new and improved services also reflected this aspect.

The major positive attributes of cycling were its suitability for short local trips, its contribution to physical fitness, reliability, economy, environmental 'friendliness', and avoiding traffic congestion. The major negative attributes of cycling as a regular mode of transport related to issues of physical safety, the security of the bicycle, and its unsuitability in bad weather. This further reinforced the importance placed on physical safety.

Of the preferred service concepts, traffic lights for cyclists and bicycle lanes reflected the need for an increase in the physical safety of the cyclist. The education concept provides a way of not only educating cyclists to increase their own safety, but also educating motorists to be aware of cyclists, and treat them as legitimate road traffic. People who started cycling at a young age are more likely to continue cycling as they grow older, provided they are confident about the road rules, cycling and about interacting with road traffic. The research provided valuable insight into consumer perceptions about cycling relative to other modes of transport, their needs and how they can be addressed, the major barriers and service ideas related to the barriers in order to encourage cycling.

Based upon the outcomes gained from this major research study, the following recommendations were made:

- Non-cyclists rated the perceived lack of suitability of a bicycle in bad weather as one of the major barriers to cycling. Evidence from regular cyclists, however, suggested that this was not as great a barrier as non-cyclists believe it to be. This

was one of the few barriers that could be overcome by a strategic marketing approach, to change non-cyclist perception. Overcoming this would remove a major barrier for non-cyclists.

- The major barrier/problem with cycling that existed across both cyclists and non-cyclists is physical danger whilst cycling. This was reflected in the high ratings for danger at intersections, and when interacting with road traffic. Evidence from focus groups showed that younger cyclists tend to have a limited or non-existent grasp of the road rules, which increases the danger in traffic and at intersections. Older cyclists attributed the danger from traffic to the attitudes of motorists, who according to them, do not tend to treat cyclists with the same regard as other motor traffic.
- Both cyclists and non-cyclists consistently rated the 'Cyclist and motorist education' concept highly. This concept involved an education program aimed at teaching primary and intermediate school children the fundamental road rules, and cycle safety. The goal was to raise their confidence, the confidence of their parents, and most importantly to educate them on the correct behaviour at intersections and when interacting with traffic. The goal was also to raise motorist awareness of cyclists, especially in high-risk accident areas, to caution them to stay alert for bicycles, and to increase the profile of cyclists as legitimate road users. Of the service concepts, this is one that can be implemented in the short-term, without the need for physical construction and high costs.
- It was strongly recommended to promote a 'Cycle Safety' programme in local primary and intermediate schools, possibly in conjunction with the Police and Land Transport Safety Authority. Also since cycling is perceived as 'environmentally friendly', this identified strength could be promoted to encourage the use of this mode of transport.
- It was also recommended that the Council and other cycle interest groups promote motorist's awareness of cyclists. This includes raising their awareness of the legitimate nature of cyclists in matters of giving way at intersections, and of

the fact that cyclist-specific facilities such as cycle lanes are only for use by cyclists. This could be achieved with an integrated, strategic approach. The campaign can focus on the strengths of the bicycle and its positive attributes (as described by consumers), as well as to try and reduce the misconceptions about the negative aspects of cycling.

In summary, the main recommendations were to improve cyclist and motorist education services, target the perceptions of non-cyclists (who are potential cyclists) to reduce bad weather as a barrier, promote the advantages of cycling and improve bicycle service facilities (e.g. bicycle lanes, lights, parking).

7.12 Discussion and Evaluation of Model, Consumers and Service Staff, Consumer Techniques

7.12.1 Modelling of the Service Development Process

The proposed NuServ model of Service Development was used to guide this major study. As part of the initial planning, a matrix was developed to identify the activities, techniques, outcomes and decisions appropriate to this case study. Due to the fact that services are more complex than tangible products and the human elements and interactions are important, it was crucial to include the people involved in the service. The new model allowed for the consumer and service staff contributions. Although the model looks like the sub-stages are linear, in practice it was found that some activities were iterative, as shown by arrows in Figure 7.10

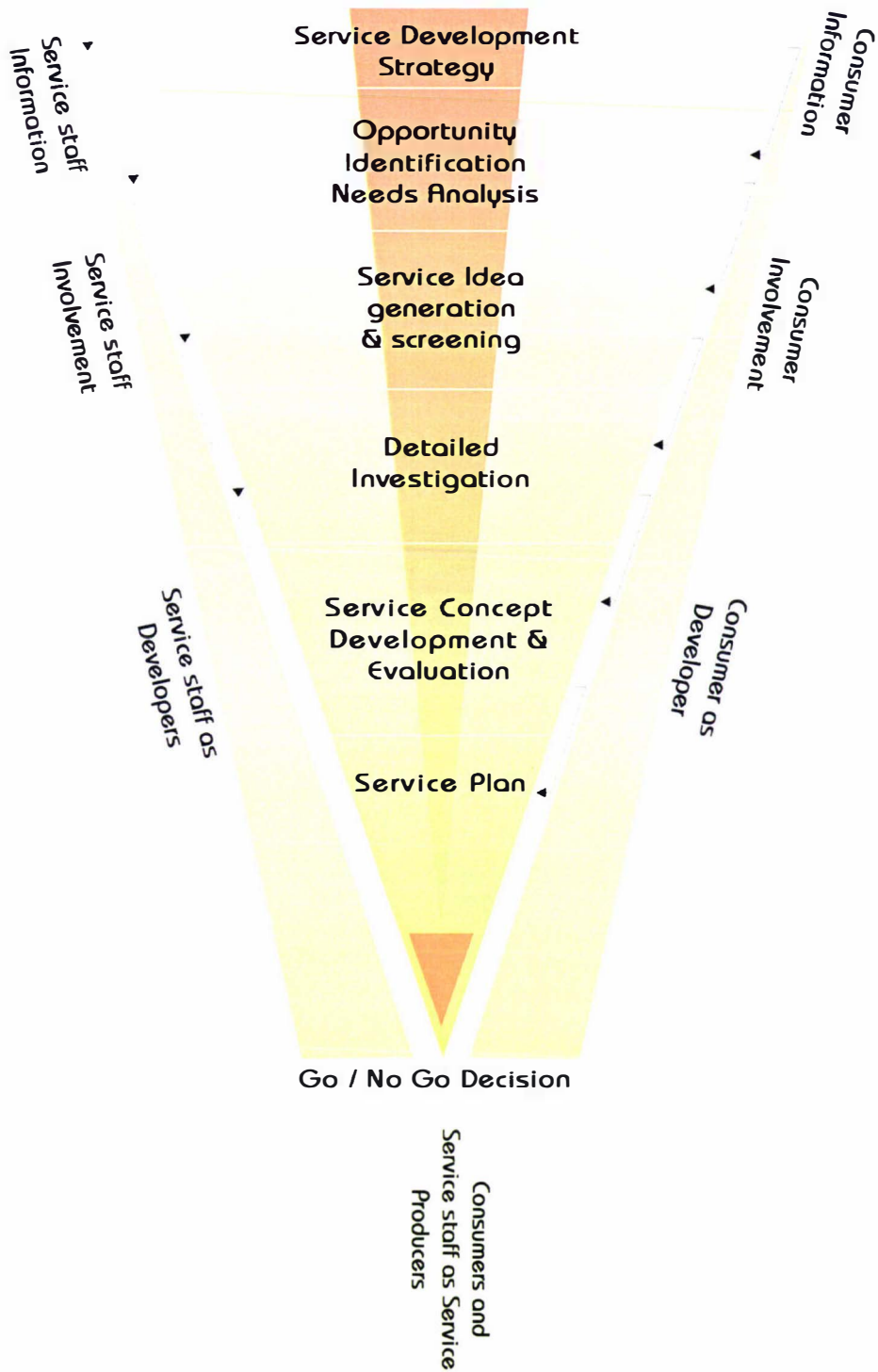


Figure 7.10: Complete Stage 1 of Service Development

In the initial activities it was found to be more appropriate to have separate sessions with service staff and consumers. At the idea generation stage, it was beneficial to have both groups interacting and building on ideas. Service staff were more useful for service idea screening as they based the screening on knowledge of the service organisation's constraints and the fit with the overall organisation's goals and vision. Consumers, on the other hand, screened ideas based on their own preferences and the important consumer attributes. It is important to have both these perspectives, to examine, compare and review the two perspectives. If consumers feel strongly the need for a specific service, which service staff may consider inappropriate to the organisation's infrastructure, then this matter should be re-considered by senior management. This is when the weighting of some of the screening criteria become important and could vary between organisations and managements. Services have been found to be more successful when developed based on unfulfilled consumer needs (Bowers, 1989). Hence, the importance of being consumer oriented is emphasised. At the same time, involving the service staff throughout the development phases, ensured 'buy in' from them, which in the case of services is critical to successful service delivery. Service staff play a key role in service delivery and in some services, come into direct contact with consumers.

A key outcome from this case study was that segmentation is critical, especially where there are significant variations in attitudes among consumers towards the service. Consumers should be segmented according to their attitudes towards services. Those who have a propensity towards the adoption of a new service or are most likely to make increased use of a service should be targeted for identification of their needs. This was achieved by using focus groups to find needs, problems and attitudes, which have most impact on consumer behaviour. It can also be accomplished by asking a simple question on how likely or how interested consumers are to adopt a new service. This case study demonstrated the benefits of consumer and service staff involvement in the development process. Detailed below are the specific contributions by each of these groups of people.

7.12.2 Consumer Participation in Bicycle Service Research

The consumers shared their experiences of the current service and identified barriers to service usage. The major barriers were identified as exposure to bad weather, intersections, children's lack of road rules and lack of facilities. Road conditions, time to travel and lighting did not require service improvements. They also generated solutions to these problems and ideas that could improve the service. Without this insight it would have been extremely difficult to improve the service, as the service staff in this case, were unaware of some of the consumers' problems.

Generally, Councils use public forums and submissions to gather consumer input or service problems, but the use of specific consumer involvement activities such as those used in the case studies, with clearly specified objectives, sampling methods and consumer techniques, allowed for close and purposeful involvement with representative consumers.

The interaction of some consumers (cyclists) with other consumers (non-cyclists) who share a service was noted in this case study. For example, the use of traffic intersections and cycle paths by other transport users was investigated. The importance of consumer *roles* was also stressed by some consumers commenting on 'children not knowing the road rules' or 'motorists not following the rules in relation to cyclists'. These were interesting insights gained in this case study that had important implications for service design. Not only are there different consumers using a service, but their interaction also can have an effect on service perception and attitudes towards using the service. The assessment of the service also depended on the interaction of the consumers with the service tangibles or infrastructure. For example, consumers complained about inadequate bicycle parking, unsafe cycle routes and dangerous traffic intersections.

The use of consumers in service idea-screening and concept preference has obvious advantages. Success of new services will ultimately be decided by consumer acceptability and usage. As this research focused on consumer oriented service development and consumer acceptability, consumer input was the main criteria for screening. This does not suggest that this is the only criteria or most important criteria.

The study found that consumers generated more micro-level or individual level service ideas that were quite specific to their use of the service (section 7.8.1).

7.12.3 Service Staff Involvement in Bicycle Service Research

Service staff involvement in the development process proved to be most useful when it came to assessing which of the new service ideas had a high degree of synergy with the Council's existing range of competencies and overall long-term strategy. Cooper and de Brentani, 1991, from their study of industrial financial services and success factors, found that success was related to a high synergy or fit with the firm's capabilities. At the early stages of service development planning, the service managers were involved to communicate the service strategy and synergy with the Council's vision.

The re-convened service staff group helped to gain 'buy-in' and support from service staff on the service ideas identified for further development. The results of the consumer research clearly showed to the service staff the consumers' attitudes, problems and perceptions. Sources for new ideas in local governments have traditionally come from comparative data such as other councils or overseas government organisations (Comrie, 2000). In the case studies however, ideas were sought from consumers and service staff, and in some cases specific idea generation techniques were employed, which enhanced the quality and quantity of service ideas. The service staff participated in discussing possible solutions to the consumer problems and in idea screening. Service staff appeared to focus more on the macro-level issues of cycling services (infrastructure and road behaviour) whereas consumers were more concerned about personal safety issues. Service staff also helped to develop the concepts and the quantitative consumer survey questionnaire.

7.12.4 Consumer Techniques Used in Bicycle Service Research

The five *focus groups* allowed for exploration of service attributes, problems and needs. Some participants were very articulate and shared their experiences and motivations for the use of cycles. They felt very strongly about the need for service improvements. Non-cyclists were also clear about why they use other forms of transport, but appeared to place an unnecessary emphasis on bad weather conditions as a reason for not taking up

cycling. Having both groups (i.e. cyclists and non-cyclists) at the same focus group discussions was effective, as at times there were interesting debates between respondents on cycling services. These led to the exploration of important attributes of the service. As one would expect, cyclists appeared to come up with more specific service ideas and solutions (e.g. need more lights in the tunnel leading to the University, remove glass pieces on cycle paths, educate motorists to watch for cyclists) having experienced the service themselves, while non-cyclists mentioned new services they have read about or seen overseas (e.g. buses should be able to carry cycles on rainy days, a totally barriered cycle lane – physical partitions between cycle paths and the rest of the traffic).

The use of coloured sticker dots, provided to the younger participants for multi-voting in the **idea screening** stage, proved very popular. It made the exercise interesting and also achieved the results of reducing the ideas to those selected by the consumers. It allowed the students to think through their choice carefully, as they valued each sticker. Having something tangible in their hands made it easier to allot or distribute the importance rather than just dealing with numbers.

The *bipolar line scales* that were used to gauge consumer perceptions produced very useful information on the attitudes towards bicycles. However, the data entry for the line scale measurements was tedious and time consuming.

The survey allowed for a large sample (130 questionnaires distributed, resulting in 92 completed surveys) to be surveyed at various locations in a short period of time. This method was suitable as a mail survey would have taken much longer, mailing addresses were not available and neither were telephone numbers. The telephone method would not have allowed for the line scale to be tested out. There were specific locations where the target consumers were easily accessible, and the simple questions enabled respondents to complete the questionnaire by themselves. The Perceptual Map proved useful to successfully represent consumer perceptions visually. Spatial configurations of the three modes of travel services namely car, bus and bikes were plotted on all of the important attributes. The map showed clearly that Bicycles were perceived as *environmentally friendly, cost effective and suitable for short journeys*.

CHAPTER 8

Discussion of Results

8.1 Introduction

This chapter discusses the results of the entire research in terms of the four main objectives and themes of the thesis namely, the NuServ model for Service Development, use of consumer research techniques and the participation of consumers and service staff in New Service Development (NSD). The importance and benefits gained by involving the consumer and service staff in the initial stages of Service Development are emphasized. The proposed NuServ model for the first stage of Service Development is evaluated. Techniques that enhanced consumer information-gathering and analyses are discussed. Some were modified slightly from the way they are used in tangible product development and some new techniques were trialled. These are discussed later in the chapter. Recommendations to service developers and public service staff for using the model for Service Development is made and directions for future research are outlined.

The application of a systematic development process in the service industries has not received much attention and research (Easingwood 1986). The lag in service sector research is partly attributable to the recent recognition that services have different development needs. Some of the major contributors to this field of study are Johne and Storey, 1997, de Brentani, 1995, Cowell, 1988, Edgett, 1996, Edvardsson 1996, and Scheuing and Johnson, 1989. Empirical research on Service Development has been carried out mainly on financial services and more recently in health service development (Sloper, 2003). This research was an exploratory study of the involvement of consumers and service staff in the Service Development process, by undertaking four Service Development case studies with the Palmerston North Council, New Zealand. The incorporation of consumers and service staff in certain activities of the development was challenging and provided many insights into their relationship. The research was able to demonstrate methods and benefits of having consumers and service staff actively participate in the early stages of development of

government services. Several consumer research techniques were used and evaluated as part of the research.

The main principles of application were to identify services where improvement and information was required (i.e. commitment was indicated by service management staff and the Council's vision), then explore service attributes, select those that were important to consumers and to focus improvement and new Service Development where the improvement is likely to make a difference to consumers. Beyond the identification of and understanding service attributes to be improved, researching the consumers' importance of attributes most beneficial to improve, it was also necessary to understand the current situation of the specific service and how consumers perceived them.

The results of the case study research are discussed in terms of the consumer's involvement, service staff participation, consumer research techniques and the NuServ model. Finally, further work that can be conducted to build on the knowledge generated by this research, in the area of Service Development practice is presented.

8.2 Research Context

Service Development and evaluation take place in a dynamic environment. The Service Development case studies provided the real life environment to study the interaction and involvement of consumers and service staff in the development process. The case studies allowed for research into valuable user information and the testing of consumer techniques within the selected services. The target users for the services were identified, including potential users, their needs and requirements were explored, their current perceptions of the service and new service ideas were sought. The model for Service Development provided a systematic guide to the early development process, allowing for participation by consumers and service staff. The sub-stages of the model, beginning with Service Development strategy, opportunity identification, needs analysis and idea generation, leading on to a detailed investigation and finally to service concept evaluation were tested in the case studies. The specific techniques used within each sub-stage was dependant on the nature of the specific service and the information requirements.

* Local Government Services

The research was conducted on four Service Development case studies with a local government Council in New Zealand. The local government is bound by the guidelines set by the Central government, especially with respect to the overall administration and the type of services offered. The Council and management structure form the decision-making team, although the ultimate responsibility lies with the Council of 15 elected representatives and a mayor. Interviews held with the service managers provided an in-depth understanding of the work culture of the organisation and its influence on Service Development. They provided an understanding of the standard procedures and controls, the close adherence to precedent and formal submission procedures for new service ideas. Internally, this may be appropriate to their , but in the case of Service Development. processes need to be simple, easy to apply, purposeful and flexible.

This background raised the following research objectives:

- To research ways in which consumers can make a valuable contribution to the early stages of Service Development
- To study ways in which service staff can be involved in the Service Development process
- To create a model for the first stage of Service Development that incorporates the contributions of consumers and service staff. To apply and test this model in real-life Service Development case studies.

8.3 Consumer-Service Staff Relationship

The nature of a service product being a result of the interaction between *service staff* and *consumers* required that Service Development involve these two key groups. The importance of the human elements in services have been stressed by Zeithaml and Bitner (2000) and Hartline et. al (2000). An important message that emerged from this research is that Service Development benefits from the *participation of both consumers and service staff*.

The research showed that specific idea generation techniques should be used to increase the quality and quantity of service ideas. These should be done with groups

of consumers and service staff, as they are most familiar with the service. A neutral facilitator (such as the author in this case) to run these sessions helped immensely in encouraging responses and maintaining objectivity.

Service Development literature has highlighted the importance of consumer research information in the development process. In a service setting, consumer research is essential due to the intangibility and inseparability of services (Cowell, 1988, Edgett, 1990, Scheuing and Johnson, 1989). The results of this research showed the benefits of consumer and service staff participation and how they helped identify service improvements.

The research has both theoretical and practical value in services development. Theoretically, it contributed to the understanding of consumer research in Service Development, how both consumers and service staff can participate in the process and the benefits gained by doing so (i.e. provided consumer-oriented direction to Service Development). Practically, it demonstrated the use of several consumer research techniques in service case studies and their outcomes. The new model and the techniques are recommended for use by service managers in early Service Development. The literature review and citations established the theoretical base and recommended strongly that empirical research in this area was necessary, as no one had reported that they had studied the problem in-depth in Service Development within a local government context.

8.4 Organising Consumer Research in Service Development

The process of Service Development within a government context, began with the establishment and understanding of the service strategy, followed by an exploration of service needs among consumer and service staff. It was also important to identify specific consumer groups and target those individuals who are most likely to adopt the service. Service attributes were identified and established which was then tested quantitatively through surveys. A representative sample of the target population was surveyed using the most appropriate consumer research technique and the information was analysed on a number of issues that were important to Service Development - such as, evaluation of current service, important but unsatisfied service areas,

solutions to major problems, perceptions, motivations and attitudes of consumers, roles and expectations of service staff.

The consumer research techniques began with qualitative, exploratory research and moved to quantitative phases. This included a series of focus groups of consumers and service staff who were involved throughout the early development phase and should continue to participate in the implementation stages of Service Development. The research showed that there were various forms of consumer and service staff input. At one end of the scale is the *collection of information* from the consumer and at the other end is '*active participation*' by the consume/service staff, as shown in Figure 8.1.



Figure 8.1: Continuum of Consumer and Service Staff Input

In the four case studies undertaken as part of this research into early Service Development, consumer participation mostly followed this simple representation of input. In the first study, consumers responded to a mail survey and provided information, while in the fourth case study, they actively participated in service idea-generation and concept evaluation. In the initial sub-stages of Service Development the consumer numbers were relatively small, about eight per discussion group and later on the size of the sample increased (For example 92 consumers took part in the Bicycle concept evaluation and preference survey.)

8.5 Service Development Model Involving Consumers and Service Staff in the First Stage of the Process

While some progress has been made in recent years in investigating Service Development in financial services via surveys of past projects, the Service Development literature revealed that more research needs to be done on testing models empirically, such as this study has done, to build an integrated body of knowledge based on practice. Abbie Griffin, one of the leading researchers in measuring and improving the process of product development, carried out a

comprehensive survey in 1997, on the lines of earlier tracking monitors conducted by the PDMA (Product Development and Management Association, USA). The key findings that are significant to this research are:

- The dominant differentiating factor for achieving service success was having a market-driven process. Using a formal process and not skipping steps in the process has long been a differentiating factor.
- The majority of service firms have no process or use an informal process, due to lack of service research to cater to their specific needs
- More research on the process needs of service firms should be done and practices specific to those needs should be developed
- NPD processes continue to evolve
- Best practice firms use more complex and complete processes.
- The relative focus and differences in the Service Development processes are in the front end-steps rather than the later stages.

On the basis of a detailed literature review, a conceptual framework was designed for the case studies. This empirical research has tested the new model that links the two major groups of people and their involvement in Service Development, by application in local government services. Research on NSD has shown that a formal planned approach to new services is associated with improved performance (de Brentani, 1993). The NuServ model (Figure 8.2) was created to extend existing knowledge in the area and for use by service managers for new Service Development. The model's sub-stages will suit most services and the model should be considered before adaptation of particular techniques.

8.5.1 Activities in the Development Process

The details of activities, outcomes and decisions are in Table 8.1a and 8.1 b. They show the Go-no-go decisions to be made at crucial points during the process, when the management team should decide whether to proceed or not with the development of the service. It should also be noted that the sub-stages are not linear, but that some activities may be performed at the same time and some may be iterative. For example, in the Opportunity Identification sub-stage and Needs analysis there could

be an overlap of activities or the need to reconvene a group of service staff or consumers and hence the technique of sequential discussion groups was used in the Bicycle case study.

As stated earlier, the research environment and the nature of the service influence the development of services. In the case of the local government, the number of stakeholders and consumers are many, and therefore it is important at the start of any Service Development project to clearly identify these key groups. They should be brought into the development process at appropriate times and the process adapted to suit the specific requirements of the project. Multi-disciplinary teams of staff across departments needed to be brought together, along with consumers at appropriate times during the development process. For example, in the Bicycle case study, a cross-functional team consisting of roading engineers, Councillors, service managers, frontline service staff, transport service staff and experts was organised by the researcher. This team was brought together at regular intervals, but particularly at the initial sub-stages (Development Strategy, Opportunity Identification and Idea Generation) and again at the Concept development sub-stage.

The NuServ Model of Service Development (Figure 8.2) was found to be suitable and effective for services offered by local government in New Zealand. It was found to fit in well with the research context and local government procedures. As highlighted earlier, the involvement of consumers and service staff varies according to the stage of development. It starts with information gathering and moves quickly to service assessment and then active involvement as service developers (Figure 8.2). Consumers become part-producers of the service eventually at the service delivery stage.

Table 8.1a Planning Matrix for First Stage of Service Development

Sub-stages	Activities	Outcomes	Decisions
Service Development Strategy	Rationale for project Description of service function Situation analysis Evaluation of service Evaluation of service relationships	Service objectives and scope of study Boundaries of service provision	Service definition Strategic fit Decide on achievable goals Synergy with capabilities and image Go/No Go decision Commitment to improve or introduce new service
Opportunity Identification	Identification of problems Service attribute exploration Target market identification Areas of opportunity	current usage statistics, comparative data and strategies Service assessment Service trends Growth opportunities	Assess the potential to increase usage Research goals and resources Go/No Go decision
Needs Analysis	Identification of service needs Attribute identification Service strengths and weaknesses Service barriers Attitudes and motivations Service interaction analysis	Service attributes List of barriers/enhancers Service problems Areas for improvement of services Consumer needs	Major service problems Areas for service improvements Staff-consumer interaction and roles Service attributes

Table 8.1b Planning Matrix for first stage of Service Development

Sub-stages	Activities	Outcomes	Decisions
Service Idea Generation	Consumer/service staff idea-generation and categorisation Attribute development and definition	Service ideas categorised into major areas 'ideal' service attributes matched with ideas	Service problems and ideas Main ideas to take to next stage
Service Idea-Screening	Selection of important ideas	Analysis of ideas against criteria Service idea hedonic ranking Most preferred importance	Acceptance of service ideas and attributes to develop into service concepts
Detailed Investigation	Questionnaire design Sampling of target market Service problem validation	Service usage and consumer behaviour Consumer profile Detailed analysis	Service feasibility Social feasibility Go/No Go decision
Concept Development	Service concept definition and development Concepts matched with consumer needs/problems	Translation of idea into concept Concepts that can be tested by consumers and service providers	Service concepts for testing
Concept Evaluation	Service concept selection Consumer preference testing Ranking and rating of concepts	Most preferred concepts Likelihood of service concept usage	Important concepts Go-no go decision
Service Development Plan	Documentation of service research and analysis	Detailed Plan and feasibility for Service Development	Council to review Go/No go decision implement service

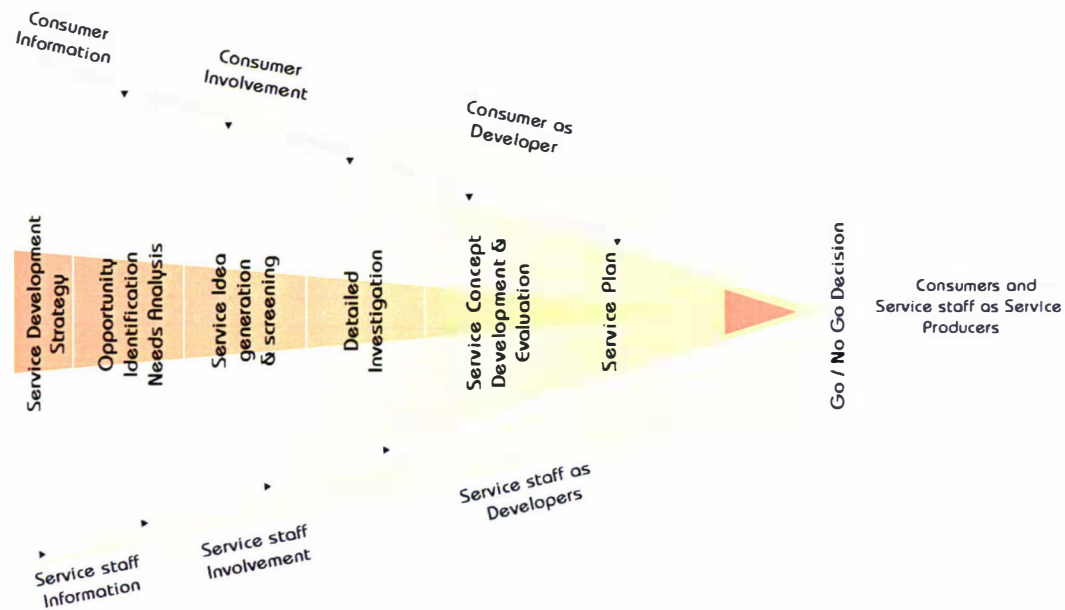


Figure 8.2: NuServ Model – First Stage of Service Development

8.5.2 Benefits of the Process Model

The NuServ model (Figure 8.2) was used to guide the involvement of consumers and service staff in Service Development. The nature of that involvement was tested in the four case studies to validate the conceptual model first proposed (Figure 3.1). As can be seen from the two models, the empirical study has enabled a refinement of the conceptual model. The NuServ model shows the nature and intensity of involvement of consumers and service staff at various sub-stages of the development process, and also the iterative nature of development, which is shown by the arrows. The model (Figure 8.2) also proved useful to inform consumers and service staff about their contributions and role in the process of Service Development.

Compared to earlier models, this model appears to have more sub-stages in the first stage of development, but the empirical case studies have shown the importance of these steps, which could be attributed to the intangible nature of services.

The model proposed by Terrill and Middlebrookes (Figure 1.3) starts with Problem Description. The NuServ model proposed by the researcher begins with Service Development Strategy and then goes into service problem identification. The initial sub-stage of Strategy development was found to be critical to direct the research, give

it focus and ensure that it met the overall vision of the organisation, as demonstrated in all of the case studies (For example see Section 7.3 and Table 7.1).

Another area of difference in the proposed model and other models is in the presence of the sub-stage of Needs Analysis. This emphasises the strong consumer-oriented approach to Service Development. The sub-stage included consumer activities such as consumer service usage and attitude study, service problems identification and service attribute development. None of the previous models on Service Development showed the involvement of service staff, nor did they detail the activities. The NuServ Model also shows the nature of the involvement of consumers and service staff. It starts with providing information and proceeds quickly to service usage assessment, needs analysis, service idea generation and so on. Generally speaking, it begins with relatively small numbers of respondents (qualitative samples) and proceeds to involving larger samples of respondents (quantitative samples). For example, in the Bicycle study, the focus groups consisted of about eight participants, while the concept preference survey consisted of nearly one hundred respondents.

Some of the previous models were based on theory and survey data gathered from service managers about their practices (Johns and Storey, 1997), while the NuServ model developed by the researcher is first-hand and empirical-based.

The experts consulted in the bicycle case study (See Appendix 7.2) were very positive about the practical use of the model and so were the service managers at the Council (Manson, 2000).

8.6 Techniques

The service staff were found to be valuable in the initial sub-stage of Strategy Development and again in the idea screening stage. Preliminary screening procedures were followed starting with a simple pass/fail system based on the Council's vision and responsibilities, followed by a checklist screening based on consumer service attributes. In future research, economic and technical criteria should be used in the next phases of Service Development such as in concept screening by service staff.

A few researchers have reported that new Service Development has been relatively quicker than New Product Development. This may be attributed to the following reasons – skipping of steps in the process and introducing a new service even before

it has been developed properly because it is easier to implement when compared to New Product Development, as stated by Abbie Griffin (1998).

A systematic approach to developing better new services or to improve existing ones is to follow a process of new Service Development that is sensitive to external change and incorporates consumer reactions, with assistance from service staff, where applicable (Figure 8.3). The following paragraphs explain further the involvement of consumers and service staff in Service Development.

8.6.1 Involvement of Consumers in Service Development

The public forums held by the Council, as part of their consultation process may be useful for Council staff and councillors to meet with local citizens, but specific consumer techniques would be more useful for Service Development, as has been demonstrated in the case studies. This is because often those members of the public who come to these forums may feel strongly about certain issues, and are not representative of the user population. The information gathered via forums may be useful for other purposes, but often not in a form suitable for systematic analysis and input into the next phase of Service Development.

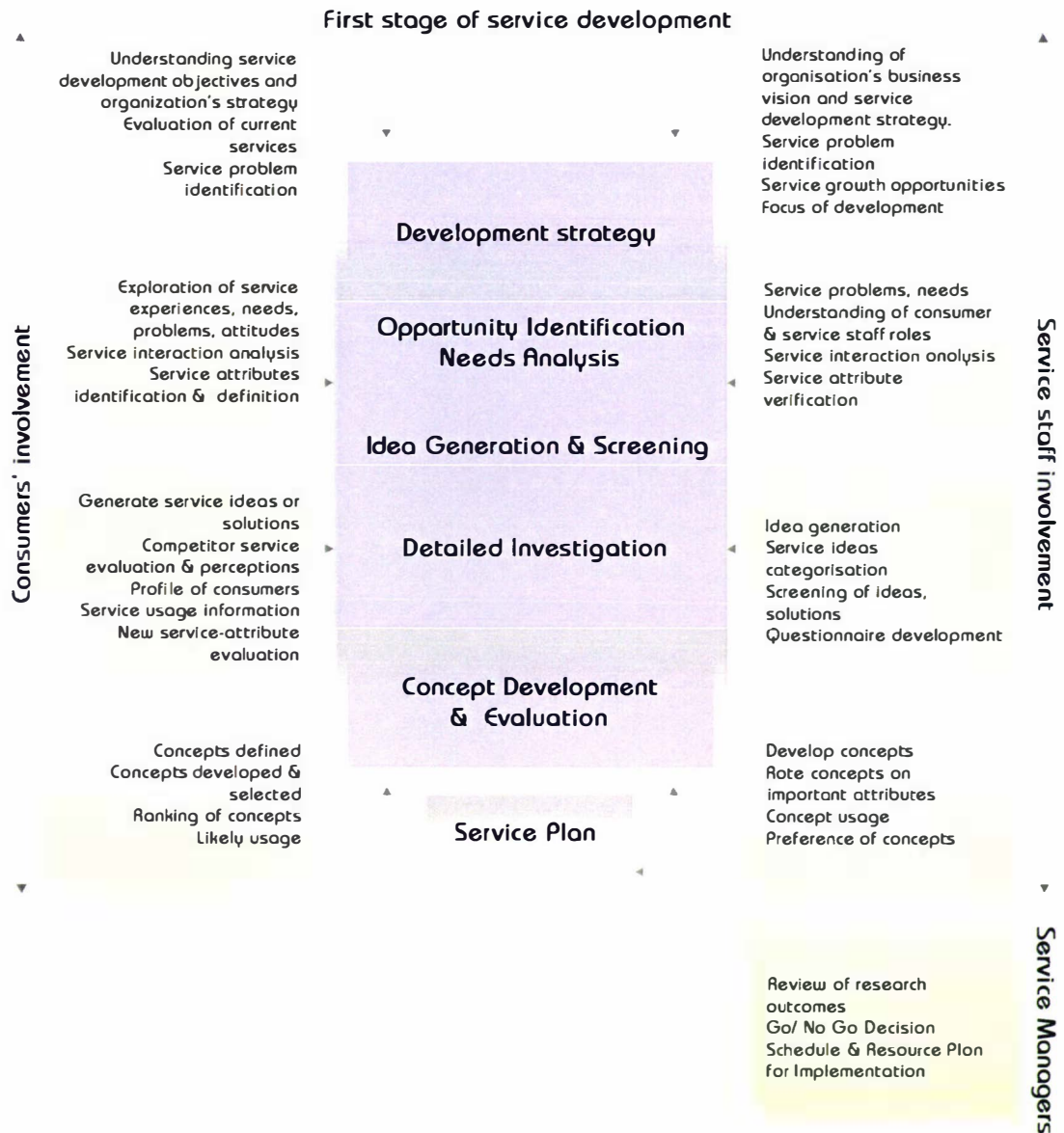


Figure 8.3: Involvement of Consumers and Service Staff in Service Development

There are activities throughout the Service Development process where the consumers and service staff are involved (See Figure 8.3). For example, in the Customer Service case study, both groups of people took part in the joint focus group to discuss service needs and ideas. The consumer in any satisfactory development process must take a major role if the service is to succeed and meet consumer requirements. New services can fail for many reasons, but even if it does

meet all the other criteria, it can still fail simply because it does not meet the specific needs of the consumer.

It is important to remember that it is difficult to develop a new service that will serve the needs of all consumers, particularly a large heterogeneous population such as for local government services. Consumers vary in their needs and attitudes to a service. Markets are usually segmented on various demographic variables such as age, marital status, gender, income and occupation. This research found (as in case study IV, Chapter 7) that it is useful to segment the consumer market in terms of both demographics and psychographics such as consumer attitudes, usage behaviour and perceptions towards the specific services.

This research on government services also revealed that some services were so large and complex that they required to be broken down not only into attributes but also into sub-attributes (e.g. Visitor services research).

Several techniques were examined and administered in the case studies to allow for consumer and service staff input, and their outcomes were analysed. Some innovative techniques were used that allowed consumers and service staff to participate in attribute identification, service evaluation, idea generation and screening. New methods (**sequential discussion groups**) involving the service staff and consumers were also tested. Some of the new techniques used in Service Development were the **joint focus group** and **role-playing techniques** with both consumers and service staff at the same time and location. These were particularly challenging, and resulted in activities to help overcome the initial problems of a tense situation between the two main interacting groups of people. These are discussed further (Table 8.2). The techniques used, the modifications made to some of them (Table 8.3), and how useful they were and areas for future research are discussed in this chapter. The results and information gained helps build new knowledge in the area of consumer research in Service Development. The model proposes to encourage those responsible for introducing new services to look at systematic ways of incorporating consumers and service staff in the service creation process. A more flexible, participative style of designing services is recommended.

8.6.2 Involvement of Service Staff in Service Development

In the case studies, establishing the service strategy and objectives with service staff at the very beginning, helped gain the 'buy in' that is crucial for effective service delivery. Companies with a strong strategic focus for development have been found to be successful in tangible product development (Cooper et. al, 1994) and financial services (Easingwood, 1986). The experience in this research was that better cooperation was obtained from service staff when they were involved at the early stages of development. For example in the Customer Service case study, service staff were enthusiastic about service improvements even if it meant re-training, when they fully understood the consumer's perspective of the service problem.

This was a challenging exercise as some new techniques such as, *Joint Focus Groups*, were trialled. The joint focus group and role-playing with both service staff and consumers at the same location and time, proved very useful but was difficult at the start. Some suggestions are made to overcome these initial difficulties. A preliminary briefing session explaining the objectives and the outcomes desired, helped ease the situation. When the two groups of people, namely, frontline service staff and consumers were informed that the focus groups were to explore service interaction issues in partnership, they were more receptive to the idea of getting together.

Each consumer research technique that was applied, provided different perspectives to the service interaction and added to the total understanding of service needs. The selection of a technique should take into account the nature of services and the service context.

The service staff involvement early in the process made them realise how their work was inter-dependent on other internal staff or other services within the Council, and that they have to be collectively responsible for the service, as far as the consumer is concerned (e.g. Customer Service research). Greater commitment and team-working have been found to contribute to Service Development (Drew, 1995). Edgett, 1993, pointed out the tendency for teams to be run on a committee basis, rather than cross-functional teams (e.g. multi-functional teams used in Bicycle case study).

Service staff participation in idea generation was beneficial because they brought a different perspective to service problems from the consumers(as shown in Table 7.7).

However, it appeared that service staff were more constrained in suggesting completely new ideas, perhaps because of their internal knowledge of resource and technical constraints. This can perhaps be overcome in future research by training a group of service staff in a variety of idea-generation techniques.

8.7 Case studies - Evaluation & Reflection

The case studies were successful in meeting their specific service objectives and the research objectives. The results of the case studies in terms of the research themes are discussed in this chapter, followed by recommendations and future research suggestions. Avlonitis et. al. (2000, as quoted by Hartline et. al., 2000) concluded that NSD involves three dimensions – the ‘what’ being activities, the ‘who’ referring to the people involved and the ‘how’ that is, the process. This research confirmed their findings that successful Service Development consists of all three elements – activities, consumers and service staff (including a cross-functional team) and a process of development (in this case the NuServ model).

8.7.1 Strategic Service Research

This case study research showed that more than three-quarters of the recent consumers rated the overall service provided as Extremely Good or Very Good. There was no significant difference between the overall satisfaction ratings given by internal and external consumers.

Overall, the service performed well according to its consumers and maintained the service improvement gained in 1998 (Figure 5.1). A considerable number had received services beyond their expectations.

Consumers participated in the evaluation of the service and in generating service improvements. One of these service ideas has subsequently been implemented namely ‘prompt service’. A new telephone system and training allowed service staff to respond to customer enquiries promptly within three rings.

Due to the variability of services, in all of the case studies, specific service activities were identified and consumers who had *experienced the service recently* were requested to participate in the process.

The study identified service improvements and needs. New service attributes and sub-attributes that could be examined in future studies were also determined. This first study allowed for an understanding of the Council's Strategic Services and to involve the Council's key consumers. This case study highlighted the importance of evaluating service attributes from a consumer perspective and measuring strategic service perceptions annually in order to identify areas for service improvement and innovation.

8.7.2 Customer Service Research

The Customer service case study involved consumers who had recently dealt with the Council's telephone customer service. Service staff participated in the opportunity identification and needs analysis sub-stages of Service Development.

The most *recent service experience* was used for consumer selection. Consumers were selected randomly from the list of those consumers who had experienced the specific service in the previous three months. A new technique of *joint focus groups* was trialled where the two groups, namely service staff and consumers discussed the service together. Care must be taken to build a friendly atmosphere when service staff and consumers are face-to-face in a *joint focus group*. A briefing session to both groups prior to the integrated session explaining the purpose of the research is recommended.

The *role-playing technique* was very successful in simulating a typical service interaction between consumers and service staff. It highlighted the importance of clarity in roles. It identified the fact that some of the perceived service problems were due to confusion in the expectations of roles and responsibilities of service staff and vice versa.

The involvement of service staff in the research boosted their interest in the new service and they were motivated to contribute to the process. In fact, they found the whole experience very interesting and appreciated that their input was being systematically gathered for Service Development. The early 'buy in' from service deliverers can be extremely valuable when a new service is launched (Hartline, 2000).

Consumers who dealt with the customer services were generally satisfied with the service attributes. Overall rating of telephone service staff - 37.2 % 'excellent' score

and 51.2% 'good' rating. 86.1% of the consumers interviewed rated their overall experience of the service as being the same or better than expected.

The *service attributes*, which rated above average, were: '*keenness to help*', the '*understanding of consumers needs*' and staff being '*attentive and ready to listen*'. The service attributes of biggest concern and requiring improvement appeared to be '*promptness of the service*' and '*simple clear explanations*'.

Quantitative data gathered indicated that 45% of enquiries were answered at the first point of contact. One of the Council's goals is to increase this to 80%. Analysis of the results regarding the nature of inquiry showed that 64% of calls were made in relation to water/sewerage, building services and planning. This was useful for future planning of new services, such as a new database of frequently asked questions for telephonists that concentrated on these areas.

An up-date of the service implementation later, revealed the following improvements made by the Council, as a result of the recommendations made from this research:

- A Centralized Database of information called the "knowledge base – K-Base" for prompt response by service staff (this was as a result of the opportunity and need identified)
- Separate call-centre located above the general reception area, to handle only telephone calls. This included training for staff on providing simple explanations to frequently asked queries.
- Private areas for discussions with consumers who telephone and then visit the Council for confidential matters.
- A telephone system that allows consumers to select the department they require.

8.7.3 Visitor Service Research

This case study concentrated on the Detailed Investigation sub-stage of development, where in-depth consumer information was gathered. Consumer behaviour relevant to the visitor service, such as, length of stay, number of visitors, their interests, age,

gender and origin of travel were collected through face-to-face interviews with recent visitors to the city.

The research showed clearly that most visitors only stayed for about three days in the city and were domestic travellers who did not come from very far off places. They mostly came to shop and therefore, improving shopping services and experiences should be the focus of visitor Service Development. They were mostly young adults who are very likely to re-visit (63%) the city, hence variety of visitor services are required. Some of the main new visitor service ideas generated by consumers were innovative adventure services (e.g. rafting, mountain biking, bouldering etc.) casino and leisure parks (e.g. skateboard-park, ice-skating and water park). None of these exist in the city at present.

An integrated and coordinated effort by retailers and restaurants/cafés/pubs to support visitors by offering variety and 'value for money' in shopping and entertainment experiences may help to attract visitors to the region. Information about specific visitor services was definitely sought by visitors. Visitors mentioned that they would use the Information Service Centre as their source of information, but they also depended on 'word of mouth' or the Internet. Some consumers mentioned that visitor information should be more easily accessible to them (such as via telephone or signposts, videotapes, visuals, notice boards). A suggestion was to make visitor information services more freely available such as via the Internet, and to increase awareness of the location of the Information Centre. Also, to make the Information Centre a more interesting place with more dynamic promotions. A number of visitors suggested a short video clip placed at key locations (such as the Plaza shopping Centre, Information Centre, Council reception etc. for information on places to visit and to attract visitors would be useful. This was actually developed following the quantitative research and based on the information that was gathered from visitors in this research.

The Detailed Investigation sub-stage was essential to gather in-depth consumer data necessary for Service Development, as shown in this case study. In order for the service ideas to be developed into concepts in the next sub-stage, detailed consumer information would be required. The personal interviews with consumers helped identify important service attributes.

Major events in the region need to be promoted and updated constantly as respondents are local and are not too far to come for a few days for the events, as is seen in both surveys. Since the target market appeared to be young adults, promotions suitable to their interests and activities need to be focussed on.

One of the services implemented immediately following this research was the promotional video on visitor attractions of the city aimed at the target segment. The effectiveness of the development process in the introduction of these services was adopted by the Council as a useful follow on from the research undertaken in this project.

8.7.4 Bicycle Service Research

This case study covered the entire first stage of Service Development. Several consumer research techniques were used and evaluated. Service staff and consumers contributed to new service ideas, screening, concept development and evaluation.

The major barriers to cycling were reported as *Danger at intersections*, *Young children not understanding the road rules* and *Danger from road traffic*. The suggestions for new and improved services also reflected these concerns for physical safety.

The analysis of consumer perceptions revealed that cycling was perceived as weakest when compared to the other major modes of transport, in the attributes of *physical safety*, *vehicle security*, and *suitability in bad weather conditions*. This further reinforced the importance placed on physical safety. It also highlighted the perception that bad weather constituted a major barrier, although the mapping revealed that this is a misperception predominantly held by non-cyclists.

Of the preferred concepts, the 'cycle lights' and 'Bicycle lanes' concepts relate closely to the need for physical safety of the cyclist. The education concept provides a way of not only educating cyclists to increase their own safety, but also educating motorists to be aware of cyclists, and treat them as legitimate road traffic. The research showed that people who start cycling at a young age are more likely to

continue cycling as they grow older, provided they were confident about the road rules, cycling and about interacting with road traffic.

The research has provided valuable insight into consumer perceptions about cycling relative to other major modes of transport (Figure 7.3), the major barriers and suggestions of how the barriers could be reduced in order to encourage cycling. Based on the results gained from this major research study, the following recommendations were made:

The perception of bad weather conditions as a major barrier to cycling, held particularly by non-cyclists could be overcome by targeted service promotions. Overcoming this would remove a major barrier for non-cyclists and encourage them to take up cycling and use the many new and improved services suggested by this research.

The major problem identified by both cyclists and non-cyclists is 'physical danger' whilst cycling. This was reflected in the high ratings for 'danger at intersections', and when 'interacting with road traffic'. Evidence from focus groups showed that younger cyclists tended to have a limited or non-existent grasp of the road rules, which increases the danger in traffic and at intersections. Older cyclists attribute the danger from traffic to the attitudes of motorists, who do not tend to treat cyclists with the same regard as other motor traffic.

Both cyclists and non-cyclists consistently rated the 'Cyclist and motorist education' concept highly. This concept involves an education program aimed at teaching primary and intermediate school children the fundamental road rules and cycle safety. The goal was to raise their confidence, the confidence of their parents, and most importantly to educate them on the correct behaviour at intersections and when interacting with traffic. The goal was also to raise motorist awareness of cyclists, especially in high-risk accident areas, to caution them to stay alert for bicycles, and to increase the profile of cyclists as legitimate road users. Of the service concepts, this was one that can be implemented without the need for physical construction and high costs. It was recommended that the Council conduct a 'Cycle safety' programme in local primary and intermediate schools, possibly in conjunction with the Police and Land Transport Safety Authority.

It was also recommended that the Council and other cycle interest groups try to promote *motorist* awareness of cyclists, in matters of giving way at intersections, and of the fact that cyclist-specific facilities such as cycle lanes are only for use by cyclists. This could be achieved with an integrated, strategic approach by the Council and Land Transport Authority. The promotional campaign can focus on the strengths of the bicycle (identified in this research by consumers) and its suitability in Palmerston North as well as try and reduce the misperceptions of the negative aspects of cycling.

The focus of the research was on consumer participation, and the study provided interesting insights into the consumers' attitudes, perceptions and motivations. It has provided guidance and preferred service concepts that are likely to be more favourable and acceptable. The services implemented recently, following this research are:

- Appointment of a Cycle Planning Officer to assist the with the implementation of the bicycle services
- Delivering cycle education programmes to schools and community groups
- The creation of cycle paths that are clearly distinguishable from regular roads by a different colour bitumen surface, especially developed to suit cycles.

Conference papers from this research have been published. a paper on the model is in progress and additional ones are planned.

The extent of involvement of service staff in service production and delivery varies and hence a range of services within the same contextual environment were selected. The case studies revealed that important service attributes depended on the extent of service staff involvement in the service. For example, where the service staff contact was high, as in the case of Strategic services and Customer services, the service attributes identified were mostly qualities of the service staff. On the other hand in the Bike Services where the service staff contact is low, the attributes have less to do with staff attributes and more on other aspects of the service.

In summary, the aims of the research were achieved and the outcomes are of major significance to the field. A number of useful practical insights have also been gained. The use of the model lead to more user-friendly and more acceptable ideas and

solutions. These were done before major financial commitments were made, in terms of new infrastructure or training. The systematic process helped to make decisions based on information gained. This helped reduce the risk of failure later on. It also reduced the uncertainties of the fuzzy front-end of development by providing issues to consider or information to gather from consumers and service staff. This is particularly important in the case of services, since they are generally so easily produced and introduced into the market.

8.8 Evaluation of Consumer Research Techniques

The case studies showed both the value of using different consumer techniques for Service Development and also the changes that may occur in consumer attitudes over time (Tracking Surveys), which indicated additional areas for Service Development or directed the focus of service improvements. They showed how important it is to first identify important consumer service attributes and then measure their attitudes towards the service based on these attributes. These measures provided objective consumer-oriented measurements for service attribute improvements.

The use of a particular consumer technique depended on the objective, the nature of service, the stage of development, research context, time frame and the type of diagnostic information needed (See Table 8.2). Service managers should select a method taking into account these considerations. Service managers can reduce the new service uncertainties, by using a combination of methods, as different methods tend to provide additional perspectives and add valuable information to decision-making (e.g. consumer behaviour, service attributes, consumer attitudes, service evaluation, concept preference etc.). Evidence has shown that these methods used at the 'fuzzy-front-end' also can improve the success of a new service. In addition to improving service success, activities in the first stage of development can prevent organisations from over-committing themselves to a new service idea early in the process. Past research also indicates that managers' increased commitment to a new product or service makes it difficult to drop it once it passes the concept stage (Griffin and Page, 1996).

Some recommendations for the *joint focus group* include a time at the start to “vent” feelings, allow for issues that may not be strictly relevant and to build a good rapport with group participants. It was important to establish the objectives clearly that it was not a confrontational fault-finding exercise, but a simulation of a typical service encounter. A *service analysis* is done systematically starting from the initial point of contact with service staff to the final service completion. Once the initial briefing is done, it is important to keep it fairly well structured, with a clear checklist of topics to go through. The use of specific, real world examples for expression of needs and problems is advised. The planning of breaks during a long session is recommended, which could also be useful for informal discussions among participants. The use of a variety of techniques within a focus group setting for idea generation and idea screening, as was demonstrated in the case studies. The use of tangible stimuli related to the specific service helps respondents to start thinking about the service and assists with recall of their service experience. At the end of the session it is important to summarise and gain a consensus with the group’s main responses.

A new service idea can be dropped from further consideration if consumers have no interest in it, if it does not solve any major consumer problem or will not be accepted and adopted by consumers, in place of what is already available or it cannot be improved.

Table 8.2 Summary Evaluation of Consumer Methods

Method	Primary Objective	Required Data	Time	Diagnostic Information	Limitation
Focus Groups	Understand Service Usage and idea-generation	Consumer and service staff opinions	Quick to conduct	Service attributes information Service ideas	Cannot project to population
Quadrant Analysis	Areas to focus improvement	Importance and satisfaction	Can take time	Insights on Service Development areas	Need current data on important attributes
Perceptual Analysis	Comparative information	Gap of unfulfilled needs or service opportunities	Long-term perspective Relatively more time	Insights on service strengths and weaknesses	Can be cumbersome if there are too many service products to compare
Role Playing	Understand interactions between consumers and service staff	Sequence of a typical service encounter, roles and expectations	Fairly quick	Insights for new Service Development	Needs to be supported by other methods, useful for high contact service types
Problem Analysis	Understand service problems	Consumer survey data, opinion of target users	Long term focus, relatively longer time	Insights for new Service Development and positioning	Can use this to segment the market and develop specific services

8.8.1 Focus Groups

The *Focus Groups* were successful with all age groups and a vast amount of relevant information was gathered quickly. In the bicycle research, the groups held in high schools were modified only slightly to accommodate the younger age group of consumers. The discussions were of shorter duration and the post-box technique was used to prompt them to contribute freely. Focus group discussions helped generate service ideas. For idea screening the younger participants in the Bicycle study were given ten green sticker dots to place beside the service ideas they liked the most. This made it a lot more fun for the younger participants, than just allotting points or ranking. Focus groups have been found to be successful by both product and service developers (Edgett, 1994).

The *joint focus group* technique is recommended for those services where the service staff contact with consumers is high and direct in nature. However, it calls for skilful moderation and a neutral moderator to be able to objectively lead the discussion and keep it focussed on the objectives. The depth and breadth of information gained via this technique was extremely valuable, as it brought both perspectives into the discussion at the same time and place.

8.8.2 Quadrant Analysis

The results showed that it was possible to clearly identify service areas to focus improvement on by using the quadrant analysis technique. It was simple to administer and easy for the consumer to respond to. This technique is effective in narrowing down the service areas to concentrate idea generation on, and to give more importance to service concepts that may solve problems in these less satisfied attributes. It helped identify not only the important variables but also those that are currently not satisfactory. From the analyses of the case studies, it appeared that in the case of services, the psychological and service relationship dimensions and people attributes were more important than tangible physical attributes. In general, early investigations should concentrate on psychological characteristics to uncover important consumer dimensions of perceptions and later as the product/ service develops, attention shifts to physical features. Finally, just before roll out, attention returns to psychological characteristics for appropriate positioning and launch (Moore and Pessemier, 1993).

8.8.3 Idea Generation

When the two techniques were used namely, brainstorming and Post-box techniques, both yielded a good number of ideas. However, it was found that the Post-box technique produced slightly less number of ideas. Of the brainstorming sessions, the ones that were very successful were those where the group dynamics worked well and the members were articulate and less constrained. There appeared to be more service improvement ideas than totally new service ideas.

8.8.4 Role Playing

A typical service interaction between the service staff and the consumer was role-played. It was a useful technique to use in Service Development due to the human

interaction involved. It could be used with younger consumers as well (Gordon and Langmaid, 1988). Role-playing as a technique was chosen due to the human elements in a service and the influence of roles on the actual service. This was found to be extremely useful for a participatory style of development, where consumers and service staff interacted in real time and discussed not only requirements but also possible solutions.

8.8.5 Scaling Techniques

Although government services are for the general community, they could benefit from segmenting their community based on sound consumer research. This research used the *Propensity scaling technique* to identify likely adopters and current high users of the service. Once that was established, further focussed research was carried out with this specific group of consumers. The *Line scale* technique proved successful in capturing the consumer's perceptions and attitudes. It was easy to administer and easy to use by consumers of different ages, but the analyses was time-consuming. Scales with several response options have proved more reliable than the more restrictive 'yes/no' scales (Greenbaum, 1998).

Most of the techniques used were successful in the Service Development case studies. However, some were quite cumbersome for analysis such as the longer duration focus group discussions and the line scale data. The use of *rating and ranking scales* were easy to administer and effective techniques. The initial focus groups were particularly useful in gaining an insight into consumer needs and in the identification of service attributes.

8.8.6 Perceptual Mapping Technique

The *Perceptual Mapping technique* (section 4.3 and Figure 7.3) was a useful visual representation of consumer's attitudes on various service attributes. The identification of consumer attitudes and perceptions towards a specific service is strongly recommended for developing successful services. Perceptual Maps have been used widely in the consumer goods market to compare competitive products. This technique was applied very successfully to compare travel services in the Bicycle case study. It provided valuable input and served as a useful focal point in strategic planning and NSD decisions. It provided vital direction to development efforts to

satisfy consumer needs better. Used in the Opportunity Identification sub-stage, it illuminated decisions on the target market, service design and service communications strategies.

* Other Techniques

The *consumer multi-voting* technique worked well. The use of coloured sticker dots as part of voting for their favourite ideas was very popular with school students.

In many cases the consumer required assistance in making their needs explicit, especially with services, as they are intangible. The presentation of *tangible stimuli* helps with this process (Edvardsson, 1996). The researcher used short *video clips* and *visual collages* (as shown in Figure 7.1) as stimuli to trigger idea generation among consumers.

Cross-functional teams of people experienced in the field were brought together for review sessions. For instance, in the Bicycle research, a service project team was set up that consisted of roading engineers, traffic experts, councillors, cycling enthusiasts, a cycle lobby group representative and a consumer researcher (author). The new service ideas were systematically and critically evaluated based mainly on consumer information. The service team evaluated them based on internal resource information.

8.8.7 Surveys

The response rates were acceptable in all of the Surveys. This could be due to any of the following reasons: the surveys were addressed to specific persons, it was accompanied by a cover letter, the introduction stressed the importance of the individual's opinion, reminder calls were made and the questionnaire was deliberately kept simple, short and easy to answer.

The data quality was high (high completion rates for each question in the survey), the pre-test results (with slight wording modifications incorporated into the major surveys) and the questionnaire design based on initial qualitative pre-research with target respondents ensured ease of comprehension by respondents. The use of closed questions mostly, with a few open-ended questions was used as suggested by survey researchers (Gendall, 1996). The importance of simple language and the use of respondents' own idiom is acknowledged. The position of items (e.g. service

attributes) in a long list needed to be rotated or altered to avoid respondents paying more attention to top of the list items or becoming 'fatigued' towards the end of the list. This was necessary only for the questions with long lists, such as in the bicycle survey. These items were then 're-adjusted' for data entry.

8.9 Modifications of Consumer Research Techniques

Various consumer research techniques were used with the consumers to move through the Service Development Process from the Development Strategy sub stage to Service Idea Generation through to Service Concept Selection. Some of these were modified from the way they are used in the (physical) product development process.

Table 8.3 Modifications to Consumer Research Techniques

	Technique	Modifications
1	Problem Analysis	Tangible stimuli used (e.g. Visual collage, video clip)
2	Focus Groups	Jointly held with service staff and consumers Pre-briefing session Shorter duration for younger groups Provided tangible stimuli Sequential small discussion groups
3	Idea Generation	Post-Box technique with questions Brainstorming & negative brainstorming Tangible stimuli were provided (e.g. Visual collage)
4	Role-Playing	Typical service scenario presented Provided physical stimuli Inter change of roles
5	Scaling Techniques	Propensity Scale applied to services Line scale applied to service comparisons
6	Perceptual Map	No special adaptation for services
7	Idea Screening	Consumer multi-voting with coloured sticker dots Service staff pass/fail method and checklist screening using consumer service attributes

In general, the modification to the consumer techniques used in Service Development should focus on providing tangible stimuli where appropriate (especially at the idea generation stage) and enhance the participation of consumers and service staff.

8.9.1 Limitations of the Research

The limitations of the research are acknowledged to allow the reader to assess the generalisability of the research outcomes. Although the applied research was carried out on four services, it was limited in research context to a local government body in New Zealand. This was intentionally done to study the process in-depth using the case study approach. However, the consumer techniques used and the model for increased participation by consumers and service staff should be applicable to a variety of services and contexts, with adaptation of some techniques to suit the context.

The sample size for the initial tracking survey monitor of the first case study was relatively small, hence limiting the representativeness of comparisons between subgroups. This was however, remedied in subsequent research.

The customary caution associated with survey research is the non-response error. Non-response error was kept to a minimum in the case studies by using techniques such as (the use of a covering letter, telephone call-backs or reminders, small incentives as appreciation for participation etc.) to increase the response rate in all surveys. The response rates achieved were acceptable and the results yielded estimates that ought not to be seriously affected by non-response error, especially when the objectives of the research programme are taken into consideration.

8.10 Conclusions and Recommendations

8.10.1 Service Development Model

Much of the research on Service Development has only been on how a stage has been carried out or whether a formal process was used. Most financial services were found to skip many stages (Edgett, 1996). While New Service Development follows a similar generic process as New Product Development, the importance of each stage is affected by the unique characteristics of services. Edgett, 1996, reported that there is a lack of use of consumer research in NSD, in part due to the lack of a marketing culture. The need to invest in empirical research on the first stage of NSD was stressed by Johne and Storey (1998) and Goldstein, Johnston, Duffy, et al., (2002) especially since they found that service management's perception of consumer preferences and attitudes were frequently wrong.

Significant contributions to the field have been made by fulfilling the research aims. The research explored how and when to bring in consumers and service staff into the development process, the techniques to do this and constructed a process model for the first stage of service development.

The *NuServ* model has been proposed as a process guide to Service Development for service managers. It shows the use of both service staff and consumers in the development process. Any service development research should consider the activities in each sub-stages. Although the sub-stages appears to be linear, sometimes they may be iterative. However, the overall progress is from one sub-stage to the next. The author strongly recommends the involvement by service staff and consumers as a means of improving the development process, early in the development process, as shown in the NuServ Model, and demonstrated in the case studies.

In terms of the real-life outcomes of the case studies, the Council has taken some of the service ideas further into development. Some concepts have already been implemented and monitored. For example, in the Customer Service study, the customer database service was developed and launched, following this research. In the Bicycle study, the free Bicycle service, a school educational programme and specific cycle paths are now in place. A new promotional video was developed following the information gained in the Visitor study.

8.10.2 Consumer Research in Service Development

This research studied the application of consumer research techniques to Service Development via four case studies with a New Zealand local government Council. A number of consumer techniques and analytical methods were used in the case studies and the information obtained from the various approaches were evaluated and summarised (in section 8.8). Recommendations for conducting consumer studies in the first stage of Service Development are provided.

It is recommended that qualitative and quantitative consumer research techniques be used and not to rely entirely on one technique alone. Initially, exploratory research in the form of focus group was useful to obtain important service attributes, problems or needs. This should be supported by service literature, external sources and

discussions with service staff. The qualitative information helped design the survey where quantitative data on consumer usage and attitudes were gathered about the specific service, along with the evaluation of important service attributes and concepts. It is also suggested that a regular monitor to capture consumer trends, needs, perceptions and usage for key services be set up. The tracking research in the Strategic services case study provided dynamic information on a vital service.

It was extremely important and useful to involve the service staff and get them on side, as the research outcomes revealed that the interaction with service staff influenced consumer evaluation of services. Some of the service attributes generated by consumers included variables that described the service staff interaction.

The research provided a systematic methodology of collecting and analysing information gathered from consumers and service staff of local government services, and including their input (information as well as active participation) in the Service Development process.

The importance of involving consumers and service staff in the development of services and their contributions were examined in the case studies (Figure 8.3) and evaluated in section 8.8. The Customer service case study showed that service staff (especially front-line personnel), in the case of services where the contact with consumers is high, can contribute significantly to the development. The *Joint Focus Group* and *Role Playing* were just two of the innovative techniques that enabled this participation successfully. Care must be taken however, to ease the initial uncomfortable situation faced when for the first time the service staff and consumers met. The pre-briefing session helped to ease the situation. It was explained that the discussion would not be a confrontation but a cooperative discussion of experiences and problems from both perspectives, with the main purpose of exploring attributes for service improvement. A neutral environment was chosen for the purpose and a neutral moderator (the researcher) facilitated the focus groups.

The use of semi-structured *Line scales* was effective in measuring consumer attitudes towards different modes of traffic. This was one of the traditional methods of scaling (used mainly in food product development) but was applied for the first time on services in the Bicycle case study. This produced clear differences in the perceptions

of the various modes of transport on the important service attributes, as can be seen in the Perceptual Map in Chapter 7.

The key to new service success is to develop a service that is carefully targeted at a specific consumer segment. This was achieved by studying consumer attitudes and needs, and focusing improvement on those service attributes that were perceived by them to be most important and least satisfied.

It is recommended that consumer research is not limited to the early stages of Service Development, but that it is used throughout the process of development.

It is important to target consumers rather than perceive all ratepayers as a homogenous group of service users. For services it is useful to segment the consumers based on *attitudes* towards the service, more than based entirely on demographic segmentation. These attitudes can be explored and identified using Focus Groups and then quantifying the important ones through surveys, using Quadrant Analysis techniques, as demonstrated in the case studies.

In the Bicycle case study, consumers were segmented based on their need and usage of the service, in addition to demographics. Even though all of the case studies were carried out on the same total population, that is the ratepayers and citizens of the city of Palmerston North, governed by the local council that offers these services, each of the case studies concentrated on specific consumer segments. This is important to note as it makes Service Development more targeted and more useful.

The requirement of a project champion is stressed, in order to lead the project through its many sub stages. In this research, the author was the project champion who planned the sub-stages, activities and outcomes desired (See Planning Matrix Table 8.1 a and b).

A simple form for submission of ideas was provided to service staff by the researcher, to provide input into the Service Development process on a continuous basis. These should be used not only during new service development, but at all times to capture suggestions on service ideas and improvements.

8.10.3 Benefits of Consumer & Service Staff in Service Development

Johne and Storey, 1997, stressed the need for qualitative techniques in Service Development due to the intangible nature of services. They commented that consumer behaviour and needs were not adequately covered in financial Service Development due to privacy reasons and “sugging” (selling techniques dressed up as consumer research).

The consumer information gathered in the first stage of Service Development in this research proved to be extremely useful for long-term service planning strategies. It helped reduce the uncertainties and risk involved with introducing new services that may not be acceptable to consumers or service staff. It allowed for early identification of important service attributes. It enabled the segmentation of consumer groups based on their attitudes (not just demographic segmentation) towards the particular service, and to develop service concepts that better suited the target segment’s needs. The research also showed the benefits of involving non-users of a service (e.g. non cyclists in the Bicycle case study) to identify opportunities and to test service concepts.

It is suggested that Service Development is carried out in cross-functional teams of people with the required skills (as in the Bicycle case study) rather than on a department basis. Greater commitment and teamwork have been found to contribute to better Service Development (Drew, 1995). Edgett, 1993, pointed out the tendency for teams to be run on a committee basis, rather than cross-functional teams. The case studies involved appropriate service staff and consumers throughout the research. For example, in the fourth case study, which examined a number of the sub-stages of development, cross-functional teams included roading engineers, service planning officers, councillors, cycle advocates and traffic managers.

Atuahene-Gima, 1996, stressed the importance of communication and teamwork throughout the process, as several people are involved and because they have been found to be important success factors for new Service Development. The outcomes of this research suggest that physical product development should incorporate suppliers, retailers and distributors into the development and evaluation process as they play a role in offering value to consumers.

In this research, consumers and service staff defined and developed service concepts from the service ideas and attributes identified as important. They then participated in concept evaluation, by selecting concepts that they preferred and were likely to use.

As a result of this research, the new concept of *social feasibility* testing just as physical feasibility in product development, was proposed. This involved testing for social acceptance (not just functional acceptance) of a new service idea and concept before developing the service. This was done in all of the case studies, where consumers and service staff were exposed to early ideas, needs, solutions and their social acceptance gained (Figure 8.3).

The case studies ensured that all the up-front activities were carried out systematically, namely, strategy development, opportunity identification, needs analysis, idea generation and concept development. The consumer research undertaken in the first stage of development provided an understanding of the service interaction, the consumer and service staff roles and expectations, service attributes, needs, perceptions and ideas.

Recent research and literature reviews (Smit and du Ples, 2000; Kelly & Storey, 2000) have also suggested research should explore how and when to identify consumer needs in service development and the need for a development process for services.

In summary, the case studies demonstrated the use of several simple consumer research techniques to gather critical information necessary for service improvement and development. The techniques used involved service staff and consumers and provided direction for service enhancements. Critical reflection of the use of techniques has been covered in sections 8.8 and 8.9, particularly the use of the new techniques that were trialled. Some of the difficulties encountered and suggestions to overcome these are also elaborated earlier.

The NuServ process model is an integrated New Service Development framework, which incorporates consumer and service staff participation and has been empirically tested in this research.

Most previous research on the development process was on products rather than services, the growth in the service industry, the low success rate of services 58%,

Griffin (1997), and the fact that most new services were due to technology-push rather than consumer pull, prompted the researcher to select this area of research.

The importance of consumer-orientation, fit with market and the human elements in services were emphasized by Atuahene-Gima (1996).

The literature on NSD at the time of starting this research was mainly on financial services and mostly based on surveys of past experiences, rather than on empirical research by academics. Previous studies showed that the consumer and the marketing approach was often missing, hence empirical research was required to examine the involvement of consumers, as mentioned by several significant researchers in their areas for future research.

Local government services was chosen as a context for this research because it was less researched on NSD, has a large influence on the community, employs about 737,000 people and has approximately \$35 billion assets.

The case study methodology was used for various reasons (as elaborated in chapter 3), including being realistic, and not simulated, relevant to managers and academics exciting to carry out new research personally and the ability to focus on specific areas identified by significant researchers (Edgett, Edvardsson, de Brentani, John & Storey, Terril and Cooper).

The literature search lead to the following questions, how and when to research consumers in NSD, how to involve service staff in NSD, the research techniques to use, what are the details of the activities in the first stage of NSD and can it be modelled to include the consumer and service staff.

To follow, are brief conclusions in relation to the research questions above:

CONSUMER

- Consumers can and should be involved in the first stage of Service Development – aids with service development decision-making, helps identify service areas for innovation or to focus improvement on, identifies problems or needs, which can generate new service ideas and help as criteria for selection of concepts.
- The importance of regularly measuring consumer evaluations of services in order to detect changes and new requirements is stressed.

- Identification of service attributes, measurement of consumer perceptions and attitudes, service idea generation and concept development.
- Exploration of needs, importance of consumer behaviour information to make decisions for NSD.

SERVICE STAFF

- Service staff are sometimes seen as part of the service product, and their close interaction with consumers adds to the importance of including service staff early in the development process.
- Service attributes that were important to consumers included features of the service interaction and of service staff behaviour (which highlight the above point).
- The importance of roles and expectations was highlighted (case study II), leading to the need for segmentation of consumers, rather than treating all consumers as one homogenous group.
- Use of cross-functional discussion groups, review meetings and having a project champion are recommended (case study IV). Service staff and consumers appreciated the model and the structure it provided, and found it useful to understand how they were contributing to the process.
- Service staff treat consumers better when their roles are made clear (case study II)

RESEARCH TECHNIQUES

- Modifications of techniques should focus on methods that acknowledge the consumer-service staff interaction and provide tangible reference points, and go through the entire sequence of service contact with the consumer (particularly for high contact services).
- Techniques that helped to define the target market, that positioned their perceptions of services on a map, that identified strengths and weaknesses of a service were found to be extremely useful and contributed to NSD decision-making.
- Techniques vary depending on a number of factors including the stage of development. Generally, a combination of qualitative and quantitative

techniques should be used. Rather than only one major study or contact point with the consumer or service staff, a number of such points should be used, as shown in the model and demonstrated in the case studies.

NuServ MODEL

- Constructed a new process model for the first stage of Service Development
- When compared to other models, it gives details of sub-stages, captures the critical role of the consumer and service staff and the nature of their input. Also shows the iterative nature of development.
- Provides guidelines for better managing the process. It is important not to introduce services without the upfront activities (especially since most services are easy to produce).
- The model helps maintain a systematic approach, thus reducing the risk of failure and providing early information on consumer acceptance. Reduces the uncertainties of the fuzzy front-end. Prevents wasteful spending or effort on improving areas that are not important to consumers.

Two research papers were published from this study, and presented at international conferences (Shekar and Earle, 1997 and 1998). Positive feedback was received from Chris Voss (academic researcher in Service Development (UK), V. Vaidyanath and Mike Manson (service managers), regarding the outcomes of the research.

In summary, the aims of the research have been achieved and the outcomes are of major significance to the field. The use of the NuServ Model should lead to better services in the future, that are consumer and service staff -friendly, and more successful, as consumer acceptance has been gauged early in the development process, before major financial investments are made.

8.11 Future Research

This research has been a preliminary empirical study of the early stages of Service Development and the use of consumer research in case studies with a local government Council in New Zealand. The objectives of this research to develop and

test a model for the first stage of service development, based on the evidence in the case studies and to involve consumers and service staff in the process were achieved. The outcomes of this research has contributed significantly to existing knowledge, as no previous model showed the sub-stages of development, nor the important contributions that consumers and service staff make to the process. The model also clearly highlighted the nature of this contribution as the development progresses.

Significant researchers in the field such as Johne and Storey, Edgett, Cooper, De Brentani and Bowers have stated the importance of involving consumers and the role that service staff play in services, and the need for empirical research in services other than finance. The case studies demonstrated this involvement and the activities, techniques and outcomes in the first stage of government service development. An in-depth analysis and discussion of the results, provided an evaluation of the consumer research techniques used (see section 8.8).

There is still knowledge and experience to be gained in the Service Development field. The vast amount of literature on product development served as a base to work from. The case studies and the model on which they were based recognize explicitly for the first time different types of involvement by consumers and service staff in the first of Service Development.

This research was done via four case studies with the Palmerston North Council in New Zealand. For the results to be validated in other contexts, further research needs to be carried out in other service industries and other countries. This study focussed on the early stages of the development process and further work should be carried out in a similar manner on the other parts of the process within a service context.

Several consumer research techniques were selected and tested in this research. There are other techniques that could be applied and evaluated in the future. Innovative techniques for idea generation and screening in different service contexts could be explored. From this research it is clear that the sub stages of Service Development are important. Future research could look at different techniques that allow for observations of the consumer-service staff interactions such as video or audio recordings and virtual simulations.

It is clear from the empirical research that much of the early part of the product development process can be applied to Service Development, with appropriate selection of techniques to suit the nature of services. As well as improving techniques that were used in these studies, some product development techniques such as Computer aided design (CAD) and Quality function deployment (QFD) could be trialled in the development and production phases of New Service Development. Engineering tools such as CAD, DFA (Design for assembly) and the like can be adapted to provide benefit to Service Development.

This research focussed on the consumer input into the initial stages, while future research could study the next phases and the participation of both service staff and consumers in those phases. Another area for consideration is the incorporation of the application of cross functional teams involving consumers in the early stages of physical Product Development. For example, as a result of the outcomes of this research, it is felt that in Product Development, opinions of suppliers and distributors could be incorporated into the development and evaluation process, as they play a role in creating value for buyers in the long run.

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Some government publications and views of authors (personal communication), though not specifically mentioned above, have been extensively studied and where relevant used and acknowledged in the text.

For additional references see Appendix 7.1 and 7.2 for benchmarking material and experts consulted in the Bicycle case study.

Appendices

Appendix 3.1 Secondary Data Collection

The activities in Secondary Data Collection included:

- Identifying data sources
- Information gathering (nationally and internationally)
- Meetings with relevant experts in the field
- Review of information regarding:
 - its original purpose and use
 - sample size and characteristics
 - research methodology
 - appropriateness to present study
 - accuracy
- Identified gaps in information required
- Determined additional information sources
- Verified data if necessary
- Analysed material and planned primary data collection

Appendix 3.2 Interviewer's Guide for Visitor Survey

- Approach the respondent in a friendly manner, introduce yourself and the research, then go through the screening procedures as instructed. Be professional and well-presented. Rehearse the questionnaire with me and a friend.
- Read through the Code of Ethics for market research carefully and follow the guidelines.
- Ask the questions in the order given. It is very important to follow the instructions to questions carefully.
- Use the exact wording of the questions as they are written. Please do not change the wording as it is important that every visitor is asked the same questions.
- Do not lead the respondent to give answers that may be desirable or that you expect.
- Be objective always and record exactly what the respondent says. Even if you disagree, do not show that you do.
- Keep the interview moving forward and avoid getting into discussions or arguments with respondents.
- Make sure that visitors respond to all the questions. However, remember that they are not obliged to give answers to all questions. If they wish to skip questions, they may do so.
- Use the showcards that have been provided, at the appropriate times and record responses accurately.
- Check to see that you have completed the questionnaire and thank the visitor for their time.

Appendix 3.3 Example Guide for Focus Group Discussions

Moderator's outline

Introduction on group-discussion ground rules - no right or wrong answers, rationale of the focus group, free to talk to each other, not a question and answer session, explore opinions. Probe respondents and encourage interaction and discussion on relevant topics.

Warm Up:

What are the different types of transport available in Palmerston North?

What are the advantages/disadvantages of each?

Which do you prefer and why?

Trends:

What changes are occurring in their lifestyle that are relevant to the service?

Usage:

What mode of transport do you use on a regular basis, that is at least 4 times a week?

When did you start cycling?

How long have you been cycling?

Motivation:

Why do you cycle?

Why did you not take up cycling?

Why did you give up cycling?

Current attitudes, Likes/Dislikes:

Is there anything that you particularly like about cycling?

What do you particularly like about cycling?

Is there anything that you particularly dislike about cycling?

What do you particularly dislike about cycling?

Range of Service Attributes:

When you decide what mode of transport to use, what is important to you?

When you think about cycling what features of the service come to mind?

What do you mean by an ideal service?

What would be the features of a satisfactory service?

What are their dissatisfactions, problems and unfulfilled needs?

Service Ideas:

What would encourage you to cycle more?

What suggestions do you have to improve cycling services or introduce new ones?

Have you got any solutions to some of the problems you have mentioned?

Conclusion:

Summarise the group's response to determine the extent of agreement on important issues.

Appendix 3.4 Checklist for Ideas Screening

<i>Checklist for Service Idea Screening</i>	<i>Score</i>	<i>Weighting</i>	<i>Comments</i>
Serves a sizable volume of consumers (at least 5% of population)			
Does it use existing service systems (technically feasible)			
Can it be produced and delivered by PNCC			
Reasonable financial investment			
Strategic match with PNCC's vision			
Synergy with existing services at PNCC			
Innovative			
Is perceived as important by consumers (addresses problem or need)			
Efficient (use of resources)			
Sustainable			
Service can be developed within 5 years			
Service benefits (short-term/long term)			

Appendix 3.5 Research in Practice

CODE OF PROFESSIONAL BEHAVIOUR

Key Principles

Market Research is dependent upon the willing cooperation of the public and the business community. This cooperation is based on the public and business confidence that market research is carried out honestly, objectively, without unwelcome intrusion, or disadvantage to respondents. The purpose of market research is to collect and analyse information and not to directly for selling, promotional purposes, influencing the opinions of respondents or other non-research activities. It is in this spirit that the Code of Professional Behaviour has been devised.

The general public, business community and other interested parties shall be entitled to compete assurance that every market research project is carried out strictly in accordance with this code and that their rights of privacy are respected.

The key principles of professional market research have been taken from the full text of the Code of Professional Behaviour of the Market Research Society and is binding on its membership. These summarised key principles cannot be taken as a substitute for the full Code of Professional Behaviour.

Responsibilities to Respondents

- Respondent's identity must not be revealed without their consent to anyone directly involved in the market research project, or used for any non-research purpose.
- Nobody shall be adversely affected or harmed as a direct result of participating in a market research study.
- Respondents must be enabled to check without difficulty the identity and bona fides of the Researcher.
- Respondents' cooperation in a market research project is entirely voluntary at all stages. They must not be misled when being asked for their cooperation.

- No child under 14 shall be interviewed without parent's/guardian/responsible adult's consent, nor any young person aged 14-17, if the subject of the interview is sensitive.

The Professional Responsibilities of Researchers

- Researchers must not, whether knowingly or negligently, act in any way which could bring discredit on the market research profession or lead to loss of public confidence.
- Researchers must always strive to design research which is cost-effective and of adequate quality, and then to carry this out.
- When acting in their capacity as Researchers, the latter must not undertake any non-research activities (eg. telemarketing and push polling).

The Mutual Rights and Responsibilities of Researchers and Clients

- Market research must always be conducted according to the principles of fair competition, as generally understood and accepted.
- Researchers must ensure that clients are aware of the existence of the Code and of the need to comply with its requirements.
- Clients' identity, information about their business, and their commissioned market research data and findings shall remain confidential to the clients unless both Client and Researcher agree details of any publications.
- The Researcher must provide the Client with all appropriate technical details of any research project carried out for that Client.
- The research findings themselves must always be reported accurately and never used to mislead anyone in any way.

Client

The client organisation should not misrepresent to or exploit the public under the guise of research. Activity undertaken under the guise of marketing research but with doubtful underlying purposes is unethical. The client should maintain an open and honest relationship with the research supplier. The supplier should be given full and accurate information regarding the true purpose of the research, the nature of the

problem being addressed, and time, cost, and resource constraints. The client should not knowingly disseminate project results that are inconsistent with or not warranted by the data. For example, a pharmaceutical manufacturer comparing the efficacy of its expensive drug to that of a less expensive drug should not make a big issue of marginally better results that cannot be statistically supported by the research data. Also questionable is the ethics of soliciting research proposals from suppliers for the purpose of obtaining free consultation. In other words, clients should not request specialised research designs or techniques from one supplier and deliver them to another for execution without the approval of the original firm.

Supplier

The supplier is obligated to adhere to the basic and commonly accepted standards of scientific investigation as they apply to marketing research. Research should be conducted in an objective manner, free of personal biases and motives. The supplier should describe the accuracy and validity of the procedures or findings accurately, and details about the procedures and techniques used should be made available to the client upon request. Attempts should not be made to hide facts, such as low response rate, which would reflect adversely on the quality of the research. Consider a supplier who conducted a mail survey for a health care marketing firm in four different regions. In two of the regions, the response rate was low. Instead of reporting the response rate for individual regions and identifying the ones which were unsatisfactory, the supplier merely reported the overall response rate and characterised it as satisfactory. This practice is clearly unethical. Research information should be held in confidence by the supplier and not used for personal gain. Finally, suppliers should not undertake projects for clients who are in competition when these studies would jeopardise the confidential nature of client-supplier relationships.

Respondent

When a respondent willing agrees to participate in a research project, he or she is obligated to be honest, cooperative, and truthful. The respondent has a right to be informed about the nature of the research; therefore, information that cannot be provided before the interview should be disclosed immediately afterwards. This

practice, called *debriefing*, can build goodwill and can go a long way in securing cooperation in the future. Consider, for example, an appliance manufacturer collecting demographic information (eg. income) from purchasers under the guise of product registration for warranty purposes. It is well known that purchasers do supply such information, but this information is not required for fulfilling warranty obligations. This practice is ethically questionable, because the respondents are not fully informed about the true purpose for which the data are being collected. Respondents should be assured of anonymity, which includes refraining from selling mailing lists of research respondents to outside parties. Ethical issues are also involved in the invasion of respondents' privacy by personal and telephone interviewing calls made at odd hours. Particularly offensive in this respect are computerised interviews, also referred to as junk phone calls.

Appendix 3.6 Consumer Research Ethics

Rules for New Zealand Market Research:

The right to withdraw or refuse cooperation at any time.

The right to have the material collected, destroyed if requested.

The right to be told of recording devices, unless in a public place.

The right to anonymity, unless consent is given.

The right to know the name of the research organisation and contact details.

The statements to secure cooperation be factually correct.

Massey University Human Ethics Committee Principles:

Informed consent must be obtained from the participants

Confidentiality of the data, and the individuals providing it.

Minimising harm to all respondents.

Truthfulness in information given to participants.

Social sensitivity to age, culture, religion and social class.

Appendix 3.7 Letter to High School Principals

6th February 1998

Aruna Shekar
Institute of Technology and Engineering
Massey University
Palmerston North

Dear Principal

Re: Research with High School Students

I am a Massey University researcher working on several projects with the Palmerston North City Council, as part of my doctoral research. I am writing to ask you for your assistance in research that I am conducting into bicycle usage in Palmerston North. The current study is to improve bicycle services and forms a part of the city council's plan for better bicycle services. As high school pupils are part of the target market, I intend to meet with them to discuss their needs and suggestions regarding bicycle services.

At this early stage, we require current information about cycle usage among school students in your school. To this end, could you please complete the enclosed form and fax to 350 5604.

I also require your permission to allow me to conduct Focus group discussions in your school with high school students. These discussions are to find out what students' attitudes and needs are with regard to cycling. Ideas for improving the bicycle services and ideas for new services will be sought. A school staff member is

most welcome to attend these sessions and students are under no obligation to participate.

Those who do will be rewarded for their time and contributions. The sessions will not last longer than 25 minutes. The Focus groups may be videotaped only for the researcher's purpose of recalling what was said. These tapes will be kept confidential and destroyed at the end of the study. The information will be summarised and individual responses will not be identified.

I plan to conduct the focus groups over the next five weeks. Kindly suggest a suitable time when I could conduct these discussions.

Thank you for your cooperation. If you require any further information, do not hesitate to call me.

Yours Faithfully

Aruna Shekar
Researcher/Lecturer
Massey University

Appendix 3.8 Consent Form

Bicycle Study

I give/do not give permission for

to participate in the Bicycle group discussion.

Signature of Parent/Caregiver.....

Date:

Relationship to student:

Contact phone number: Work:

Home:

**Appendix 4.1 Consumer Evaluation of Overall Service –
1997, 1998, 1999**

Consumers	1997		1998		1999	
	Ex Good	V Good	Ex Good	V Good	Ex Good	V Good
Internal	6 (29%)	11 (52%)	7 (26%)	15 (56%)	7 (29%)	13 (54%)
External	3 (15%)	6 (30%)	5 (25%)	9 (45%)	8 (24%)	18 (53%)
All	9 (22%)	17 (41%)	12 (26%)	24 (51%)	15 (26%)	31 (53%)
	N= 41		N= 47		N=58	

Appendix 4.2 Significance Test Formulae

\hat{p} = proportion from sample 1

n_1 = number in sample 1

$z = 1.96$ for 95% confidence interval

95% Confidence Interval for $(p_1 - p_2) = (\hat{p}_1 - \hat{p}_2) \pm z \times \text{Std Deviation} (\hat{p}_1 - \hat{p}_2)$

where Std Deviation $(\hat{p}_1 - \hat{p}_2) = \sqrt{\frac{\hat{p}_1(1-\hat{p}_1)}{n_1} + \frac{\hat{p}_2(1-\hat{p}_2)}{n_2}}$

Appendix 6.1 Letter for Personal Interviewing

Dear Respondent

The bearer of this letter is a student at the Institute of Technology and Engineering, Massey University, and is engaged in a research project under my supervision.

I would be very grateful for your cooperation in the study, which is being carried out as part of the student's education and a major post-graduate research for the local City Council. Your opinions are valued and will help the researcher and the City Council with information about visitor needs and attitudes. This will be used to improve or introduce new visitor services in the future.

This project is subject to the Code of Practice of the Market Research Society of New Zealand, to which the researcher belongs. This requires that any answers you give be treated in absolute confidence and will be reported in a collated summary form, without any individual names.

If you have any questions about the research, please do not hesitate to write to or call me at the University on 350 4786.

Aruna Shekar

Lecturer/Researcher

Institute of Technology and Engineering

Massey University

Appendix 7.1 Benchmarking Material

Cities Make Room for Cyclists, Netherlands Ministry of Transport, Public Works and Water Management, Delft, 1995 (*Video & Book*).

Bicycle parking in the Netherlands 1997, CROW, The Netherlands. ISBN 90 6628 2517.

Facts about cycling in the Netherlands. Netherlands Ministry of Transport, Public Works and Water Management, Delft, 1997

Still more bicycles behind the dikes. 1992, CROW, Ede. The Netherlands, ISBN 90-6628-103-0.

Bicycles First. Netherlands Ministry of Transport, Public Works and Water Management. Delft, 1997.

More and safer Cycling. Netherlands Ministry of Transport, Public Works and Water Management, Delft, 1997.

The Urban Bicycle Axis. Netherlands Ministry of Transport, Public Works and Water Management, Delft, 1997.

Bicycle Parking in the Netherlands. Netherlands Ministry of Transport, Public Works and Water Management, Delft, 1997.

New Zealand Census, 1996 and 2000, Supermap Census 1997.

Land Transport Safety Authority, New Zealand.

New Zealand Yearbook 2000

Proposed Traffic Management Plan for Palmerston North City Council 1984, New Zealand.

Cycling in Hamilton 1995, Hamilton City Council, New Zealand.

Cycle Strategy for Christchurch City, Christchurch City Council, 1996.

Upgrade of Cycle Facilities, New Plymouth District Council, 1993.

Tauranga District Council, 1996, Cycle Plan.

Canterbury Council, 1983, Cycle Transport in Canterbury.

Appendix 7.2 Experts used in the Bicycle Research:

Mr Ton Welleman, Project Manager Bicycle plan, Ministry of Transport, Public Works and Water Management, The Netherlands.

Prof Rob Donovan, Graduate School of Management, University of Western Australia.

Mr Roger Boulter, Planner, Hamilton City Council (former Birmingham City Council Cycling Officer).

Mr Alix Newman, Transport Projects Officer, Christchurch City Council, New Zealand.

Mr Kerry Wood, Transport Consultant, Wellington, New Zealand.

Appendix 7.3 Comparative Travel Data in Palmerston North and Two New Zealand Cities 1996

Mode of Transport	Palmerston North		Hamilton		Wellington	
	Number	%	Number	%	Number	%
Driver of Car/van/truck	19,125	58	30,177	61	40,404	47
Passenger in Car/van/truck	1713	5	2,685	5	5628	7
Bus	228	1	765	2	10383	12
Bicycle	2869	9	2841	6	1632	2
Walking/jogging	2349	7	2934	6	9768	11
Worked at home	1668	5	2346	5	3690	4
Did not work	3438	10	5481	11	7689	9
Other	930	3	1125	3	4254	5
Not specified	927	3	1,479	3	2211	3
Totals	33,246		49,833		85,659	

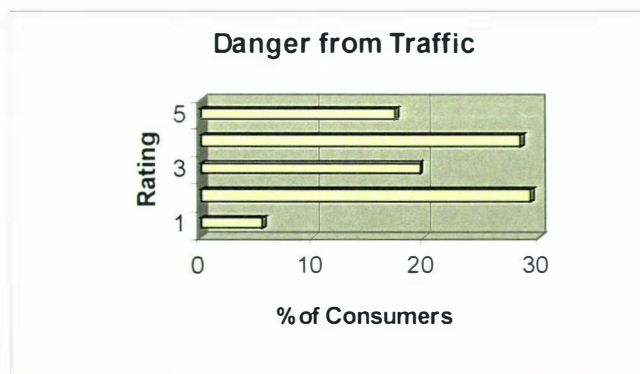
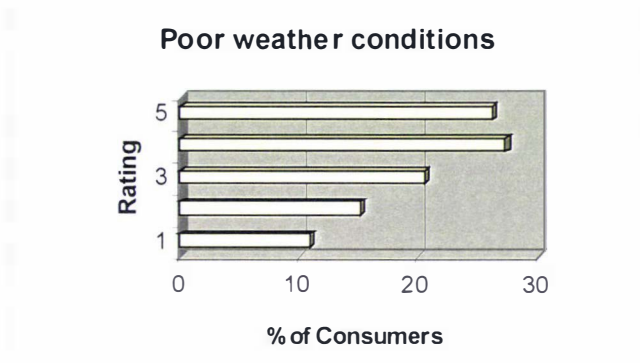
(Source: New Zealand Census)

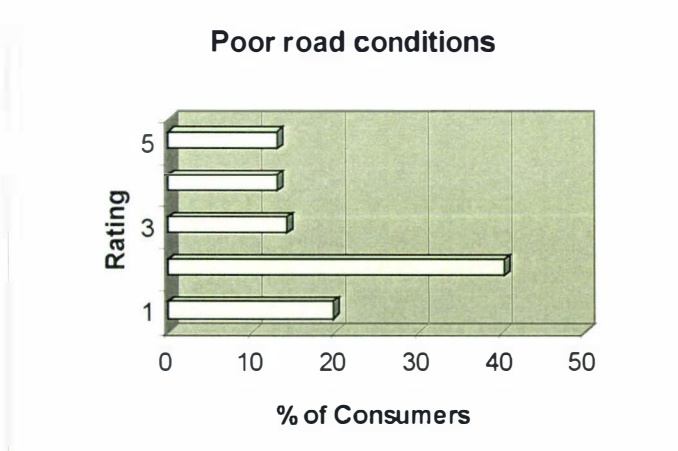
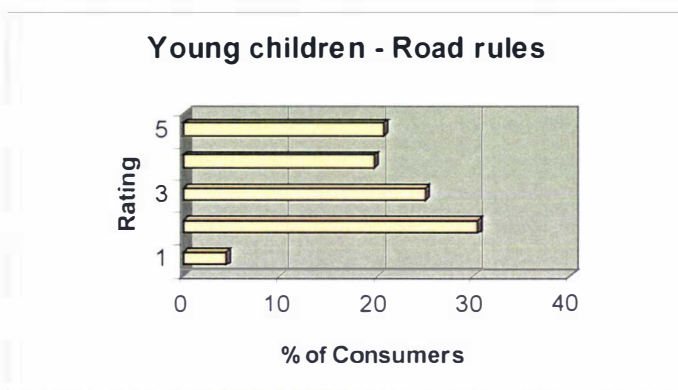
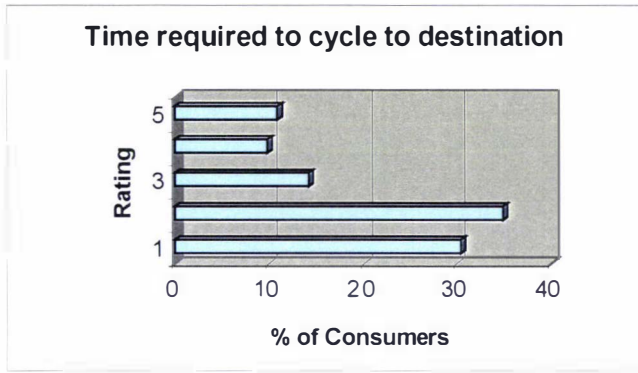
Appendix 7.4 Barrier Ratings

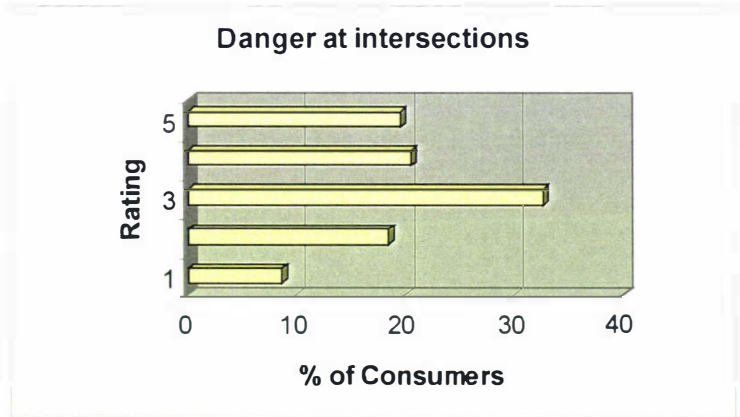
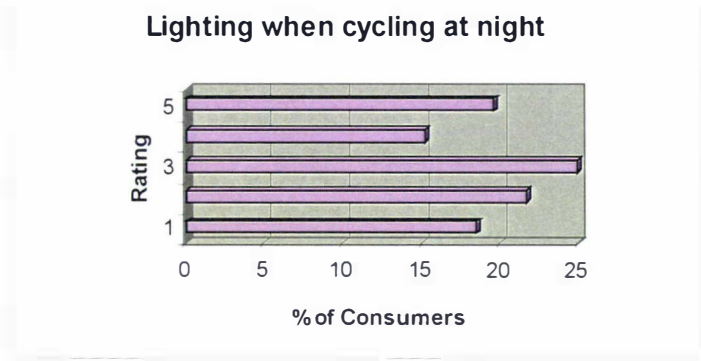
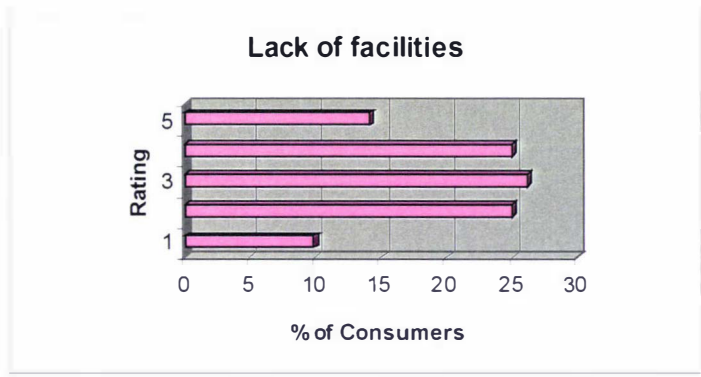
Rating	Traffic No. (%)	Theft No. (%)	Weather No. (%)	Road No. (%)	Time No. (%)	Lighting No. (%)	Intersection No. (%)	Rules No. (%)	Facilities No. (%)
1	5 (5)	15 (16)	10 (11)	18 (20)	28 (30)	17 (19)	8 (9)	4 (4)	9 (10)
2	27 (29)	14 (15)	14 (15)	37 (40)	32 (35)	20 (21)	17 (19)	28 (30)	23 (25)
3	18 (20)	25 (27)	19 (21)	13 (14)	13 (14)	23 (25)	30 (33)	23 (25)	24 (26)
4	26 (28)	27 (29)	25 (27)	12 (13)	9 (10)	14 (15)	19 (21)	18 (20)	23 (25)
5	16 (18)	11 (12)	24 (26)	12 (13)	10 (11)	18 (20)	18 (20)	19 (21)	13 (14)

(1=Very Minor and 5=Very Major)

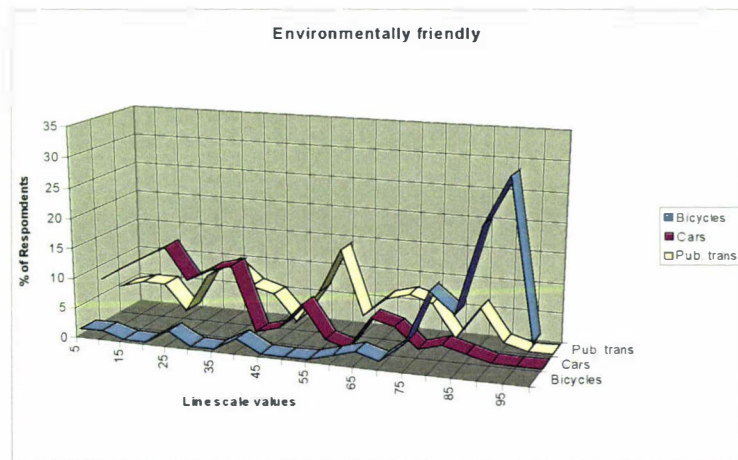
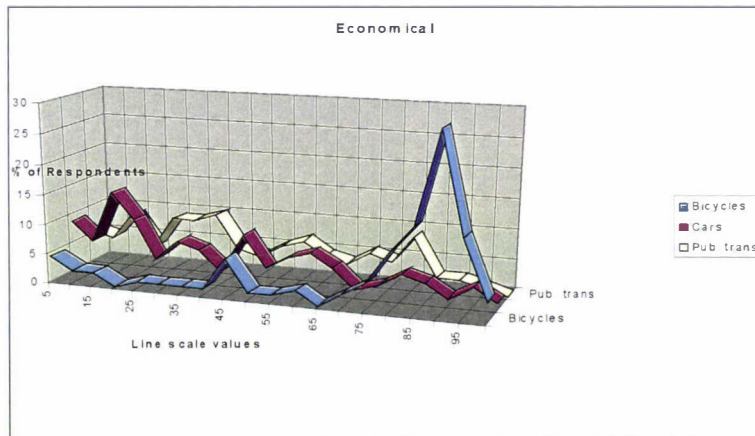
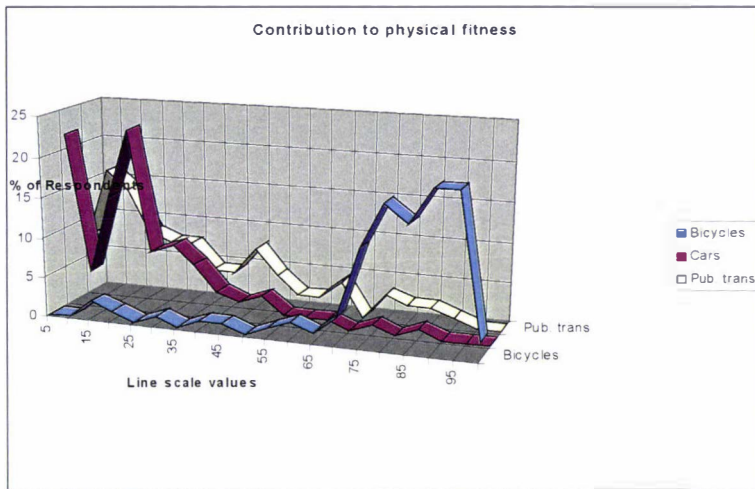
Appendix 7.5 Individual Barrier Rating Graphs



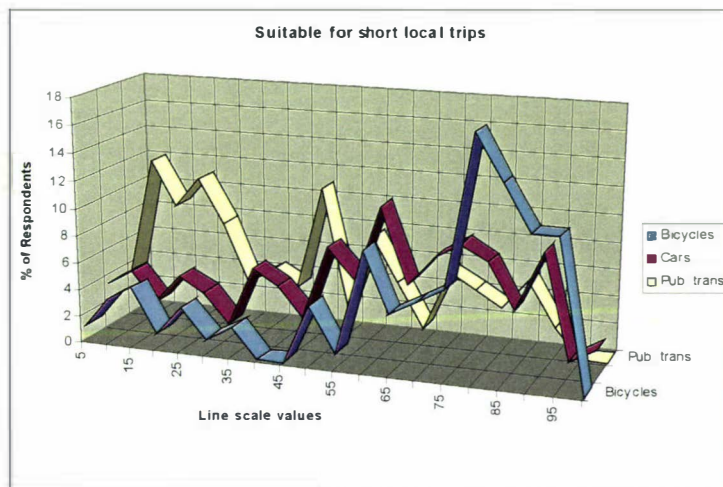
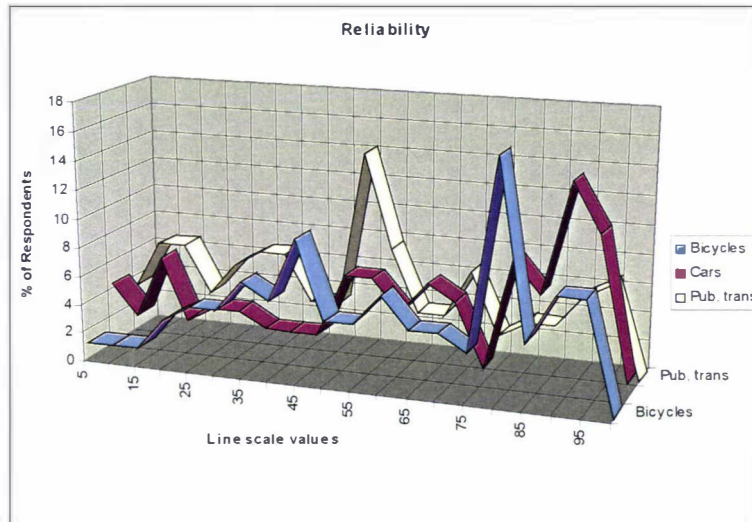
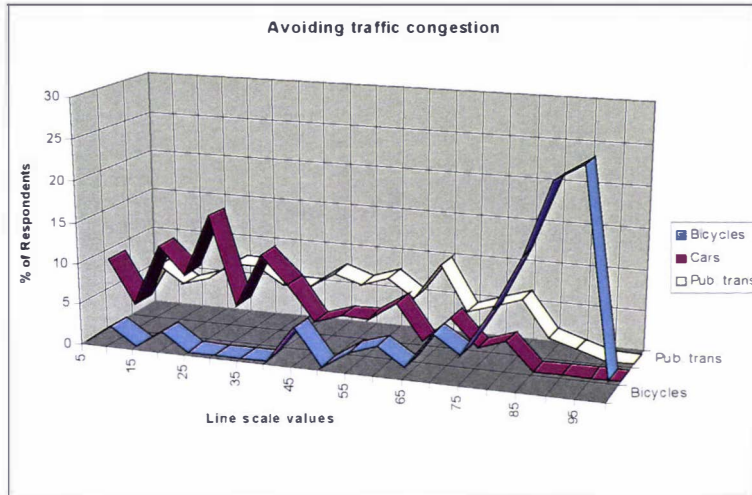


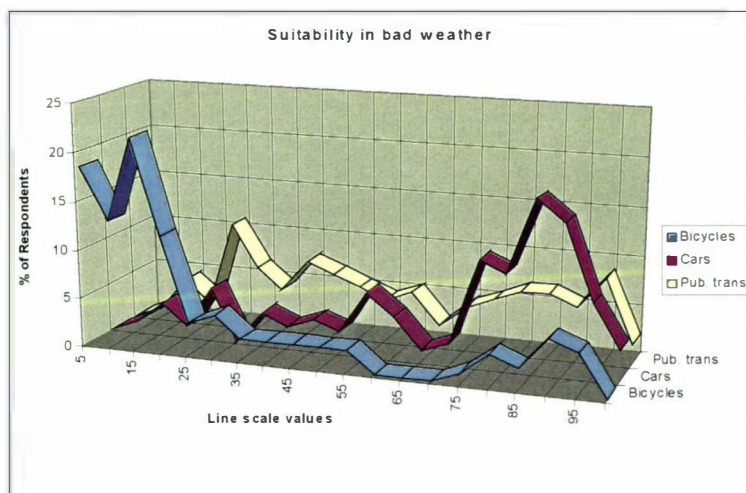
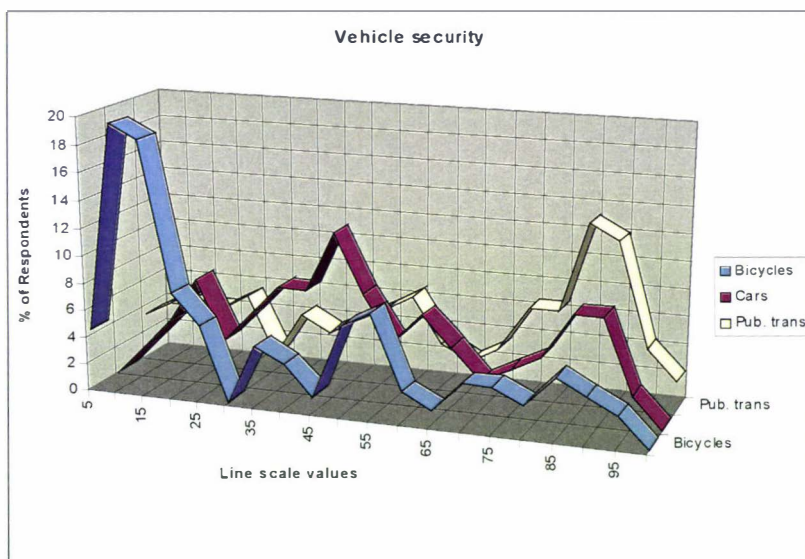
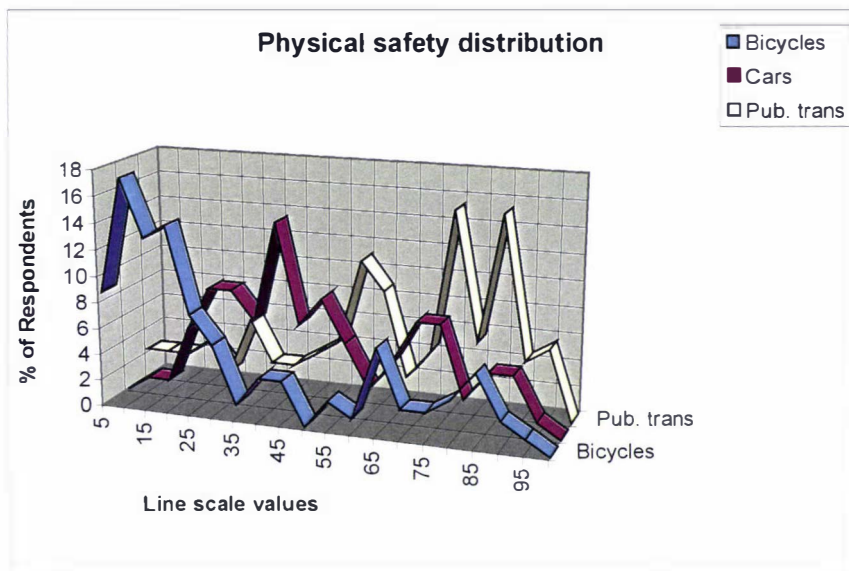


Appendix 7.6 Perceptual Distribution of Attributes



APPENDIX 7 CASE STUDY IV – COMPLETE STAGE I





APPENDIX 7 CASE STUDY IV – COMPLETE STAGE I

