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Use of Customer Information

An Ethnography in Service Development

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Use of Customer Information: An Ethnography in Service Development

Key words: Customer Information, Use, Service Development, Ethnography

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1 INTRODUCTION

This chapter gives a background to why use of customer information in service development is important to investigate. It presents the purpose, research questions and intended contribution of the study. The key concepts: customer information, its use and service development are defined. The positioning of the study is presented followed by a discussion on the ontological and epistemological assumptions that underlie the investigation on use of customer information in a service development context. An outline of the thesis ends this introductory chapter.

1.1. Background

The following experience ignited the current study:

On a grey and rainy day I had to go to the bank to transfer some money to Sweden. Since I believe that one's time could be spent in better ways, I suggested that perhaps the "transfer service" could be developed on the bank's website. The frontline person agreed that this, "most likely", would be a good idea (what else could they say!). On the way home from the branch office I reflected on what would happen with the piece of information I provided. Would the information about my view, i.e. customer information, ever end up on the developers' agenda, and if so, would the service then be developed accordingly, that is to say, would the customer information be used in the development?

Much attention has been paid to how firms should "get close to the customer," "listen to the customer," or "bring in the voice of the customer". Marketers have repeatedly preached that customer information should be acquired by the firm in order to develop products and services that fit customer needs. However, although the acquisition of customer information and the impact of such acquisition on the outcome of the service development has been researched, surprisingly little research exists on whether the acquired information was actually used. For example, since the late 1960's, a continuous stream of studies on success and failure factors in new product development (NPD) has concluded that customer information is one of the top most critical success factors for new products. From the mid 1980s onwards, studies within new service development (NSD) and service innovation have repeatedly reached the same conclusion. In fact, it is almost an axiom of the development literature that the acquisition of customer information is a necessary precondition for success. The underlying premise is that if the development is based on this information, that is, if the information is used, the new service or product will be attractive to the market. While the aforementioned research provides insights into the role of customer information acquisition in new product/service development, little is known about how customer information actually is used in development projects (e.g. Citrin, Lee and McCullough, 2007; Frishammar, 2005).

Another large stream of the development literature focuses on incremental versus radical new innovations. In this stream, customer information acquisition and its impact on the "newness" of the new service or product has been studied, resulting in inconclusive findings. Some studies argue that customer information acquisition is important as this has a positive impact on radical innovations (e.g. von Hippel, 1986; Rochford and Rudelius, 1997), while others argue that customer information can be detrimental to the development of this type of innovation (e.g. Christensen and Bower, 1996; Hamel and Prahalad, 1994). A similar incongruence can be noted with regard to the development of incremental innovations, but, the disagreement is most evident with radical ones (Trott, 2001). Despite these inconclusive findings and prescriptions

on whether customer information should be taken into account or not in development practices, little is known about the actual use of such information.

Still another central stream of studies focuses on the methods that developers can employ in order to acquire customer information for the purpose of using it in development (e.g., Fuller and Matzler, 2007; Lagrosen, 2005; Urban and Hauser, 2004). The underlying assumption in this research stream is that the acquired customer information will be used. Still, this stream gives little insight into the actual use of such acquired information (cf. Abbott, 2001; Morgan, Anderson and Mittal, 2005).

To additionally accentuate the importance of studying use of customer information in development practices, it can be argued that if information is not used, the acquisition is an expensive and a useless activity (Frishammar and Hörte, 2005). Hence, similar to studies of value in use (e.g., Grönroos, 2008; Heinonen and Strandvik, 2009), the focus of the current study is *information in use*. Thus, customer information as an entity of exchange or acquisition is only investigated in relation to its use.

From the above discussion the following can be concluded. While there seems to be a general agreement on the importance of customer information in development studies, few studies have empirically studied customer information use during the development process. Studies have either examined the antecedents of customer information use (such as information acquisition methods), or its consequences (such as new service success/failure and the degree of novelty of the innovation). Few studies have directly investigated the actual use of customer information in service development projects. Yet, an appreciation of the actual use of customer information is fundamental to the management of customer oriented service development, meaning that knowledge about its antecedents and consequences is not enough.

So far, the majority of conducted research in service development and product development has been deductive. Studies use surveys with self-administered questionnaires or develop normative procedures based on anecdotal evidence (Biemans, 2003; Craig and Hart, 1992; Workman Jr., 1993). There is a lack of studies that are based on an emergent research approach, or as Biemans (2003) expresses it:

What is especially needed is research that aims at gaining in-depth understanding by building rich, detailed pictures of NPD issues that account for contextual complexity. NPD research would greatly benefit from interpretative research methods that focus on describing and explaining complex phenomena rather than on merely counting variables and calculating statistical correlations...it certainly takes a long time and effort to get commitment from organizations, gain access to respondents, assess their competency, deal with conflicting perspectives and build a coherent picture out of many diverse sources of information. However...there are no shortcuts (p. 523-524).

Although Biemans (2003) refers to new product development, the same can be said to be true for service development. Hence, in order to create an in-depth understanding of customer information use in service development, research is needed that is based on an emergent research strategy, conducted in real time and in the field (cf. Zaltman, LeMasters and Heffring, 1982). As an answer to this need, the present study is based on an ethnographic methodology.

1.2. Purpose of the study

This study argues that the actual use of customer information in service development practices has by large been neglected in prior research. Consequently the purpose of the study is *to identify and describe different types of customer information use in service development*. The investigation is based on an ethnographic methodology of a service development project.

In order to create an in-depth understanding of information use, the current study is delimited to identify and describe different kinds of use. Thus, possible antecedents or consequences of use are outside the scope of this investigation.

During data collection, the emergent empirical findings on customer information use showed that aspects related to customer information were different from those suggested by prior development research. Based on these emergent findings the following research questions were formulated, 1) *From what source(s) is the customer information acquired?* 2) *When is the customer information acquired?* 3) *How is the customer information acquired?*

The study contributes to service development theory by identifying and describing different types of use of customer information in a development context. In addition, from the perspective of 'information in use', a holistic view on customer information is generated. This holistic view expands the traditional view of customer information suggested in extant development and innovation literature.

1.3. Key concepts and limitations

Three key concepts are central to the study; customer information, use and service development. In the following sections these concepts are described and defined.

1.3.1. Customer information

A distinction can be made between market and customer information. The term market information is a wider concept than customer information and includes not only information about the customer, but also about competitors and government regulations (e.g., Atuahene-Gima, 1995; Kohli and Jaworski, 1990; Narver and Slater, 1990; Slater and Narver, 1995, 1998). Market intelligence also represents this broader view on information (e.g., Kohli and Jaworski, 1990; Kohli, Jaworski and Kumar, 1993; Maltz and Kohli, 1996). This study is limited to information about the customer. The term customer can refer to an individual or a company. In the majority of studies in NSD/NPD literature, the customer is a company rather than a private person. In this study, due to the investigated service and its target, the term customer, refers to the individual.

The term customer information is not well established in service and product development literature. Still, some authors use the term customer information, but do not define it (see e.g., Edvardsson et al., 2006; Martin Jr. and Horne, 1993, 1995; Rochford and Rudelius, 1997). Furthermore, there is a lack of congruence in prior service and product development research regarding what customer information represents or what the information "is about" (cf. Losee, 1997). Examples of customer information content that frequently appear in the development literature are customer

needs (de Brentani, 1991, 2001; Zirger and Maidique, 1990), customer behaviour (Leonard and Rayport, 1997), customer requirements (Bailetti and Litva, 1995), customer solutions (von Hippel, 1978, 1986), customer ideas (e.g., von Hippel, 1978, 1986, 1988a, 1988b; Magnusson, Matthing and Kristensson, 2003), customer needs and wants (Edgett, 1994), customer needs and concerns (Ekdahl, Gustafsson and Edvardsson, 1999), customer needs and preferences (Storey and Easingwood, 1993), customer needs, wants and preferences (Cooper and Kleinschmidt, 1987), customer needs, wants and values (Berthon, Hulbert and Pitt, 1999), and customer purchase behaviour, potential customer needs and wants (Edgett and Parkinson, 1994).

Due to the lack of congruence in depicting customer information content, a new definition is required. The current study defines *customer information as information about the customer's service related perception(s) and behaviour(s)*. Perception refers to the customer's thoughts and feelings, and behaviour refers to the customer's actions (Zaltman, 1997). Thus, customer information may provide insights on the aforementioned aspects, such as customer needs, values, wants, preferences, ideas and purchase behaviour.

Customer information can be acquired from different sources, and in marketing literature in general and in NSD/NPD in particular, customer information refers to information acquired from the customer (Frishammar, 2005). In the current study, customer information is understood as information *about* the customer, which means that the definition is not limited to information that is gained through market research. The reason motivating this choice is the suggestion that the front line personnel (or sales force) play a key role in development (e.g., Gordon et al 1997; Johne and Storey, 1998; Sandén, 2007). The front line personnel interact with the customer on a daily basis, and consequently, they are in a prime position to obtain customer information that can be used in development, which is not acquired through market research. The decision to use a broad or a narrow definition of customer information is crucial since it delineates the spectrum of information sources to be investigated. To use this broad definition was found fruitful, because during the field study it became apparent that not only was customer information acquired from the frontline personnel, but that the developers also turned to themselves and through speculation created customer information. Furthermore, customer information already existed, and was also found to be implicit in the sense that the information was taken for granted. Hence, the broad definition facilitated the insight that customer information can come from other sources than that dictated in conventional market research.

In NSD/NPD literature, customer information is typically acquired through formal means and methods (see e.g. Kaulio, 1998; Sandén, 2007). However, from the perspective of information in use, the current study intends to generate a holistic picture of the customer information. Consequently, the study is not limited to the investigation of information that is formally acquired.

1.3.2. Information Use

Use of customer information has been partially investigated in studies on market orientation (e.g., Kohli and Jaworski, 1990, 1993) and market learning (Day, 1994a, 1994b, 2002; Sinkula, 1994; Slater and Narver, 1995). For example, Kohli and Jaworski (1990, p. 6) define market orientation as “the organizationwide generation of market intelligence pertaining to current and future customer needs, dissemination of the intelligence across departments, and organizationwide responsiveness to it”. Market

information acquisition, dissemination and use are viewed as an organisational process that tells us about the firm's market orientation and how well the firm is learning about its market. Hence, the use of customer information (as part of market information) is frequently described as one dimension that follows in a sequential order after the information acquisition and dissemination. Frequently, in studies on market orientation and market learning, the organisation is viewed as an information processing system. The general view is that market orientation and market learning are positively related to the performance of the firm (e.g. Day, 1994a; Narver, Slater and MacLachlan, 2004; Slater and Narver, 1994). Hence, market orientation and market learning are something the firm ought to strive for.

The information processing view embedded in many studies on market orientation and market learning has to a limited extent also been applied in studies on new product development. For example, in the concluding lines of a study on new product success, Ottum and Moore (1997) argue:

The processing of market information can be thought of as a NPD triathlon. As in a triathlon, there are three events. Instead of swimming, bicycling, and running, these are gathering, sharing and using market information. Just as in a triathlon, one must successfully complete all three events in order to be successful. Finally, it is often the last event that separates the winner from the rest of the competition (p. 271).

Considering the importance of customer information use, surprisingly few studies have exclusively focused on and empirically investigated use of customer information in a development project. Thus, in order to conduct an in depth investigation, the current study concentrates primarily on *one* dimension, i.e. on *use* of customer information. Still, some studies in service innovation have been conducted that focus primarily on one of the other dimensions, such as the dissemination of information as a central determinant of market learning and new service success (e.g. Blazevic and Lievens, 2004; Lievens, de Ruyter and Lemmink, 1999; Lievens and Moenaert, 2000, 2001). The underlying assumption in these studies is that the disseminated, or communicated, information among project members is used during the development process. The current study makes no such assumption.

Furthermore, an important difference is that studies on market orientation and market learning are frequently interested in the impact these processes have on the performance of the firm. In the current study, it is believed that use of customer information can have a positive impact, negative impact or no impact at all on the performance of the new service (cf. Gronhaug, 2002; Hart and Diamantopoulos, 1992). However, as previously stated, the consequences of use are outside the scope of the current study. In addition, market orientation and market learning studies are frequently interested in identifying the determinants of market orientation and market learning. In the current study, it is believed that multiple mechanisms exist that facilitates or hampers the use of customer information. The current study argues that there is a lack of knowledge on customer information use itself (i.e. the process in between antecedents and consequences) and that more in-depth exclusive research on use of customer information in development practices is needed before valid results and prescriptions can be made concerning antecedents and consequences of information use.

In comparison to market orientation and market learning literature, use of customer information has been *exclusively* studied in the area of market research. Particularly during the 1980's, researchers investigated how marketing managers use market research and factors that influence the use (Deshpandé, 1982; Deshpandé and Zaltman,

1982, 1984, 1987; Lee, Acito and Day, 1987; Menon and Varadarajan, 1992; Moorman, Zaltman and Deshpande 1992; Moorman, 1995; Zaltman and Moorman, 1988). Market research refers to formal market research that is produced by the marketing department within the firm, or by marketing researchers external to the firm. Hence, customer information that may be acquired by the firm in customer interfaces, or in service encounters, is not focused upon in this research stream. Moreover, although providing a rich source of factors that influence use, very few studies have been conducted in a development context (Citrin, Lee and McCullough, 2007, Hart, Tzokas and Saren, 1999). The use of information is addressed from the perspective of the individual manager, without considering other managers' potential influence on the use. Typically, a deductive methodology with experiments and surveys detached from the natural context of use characterises this stream of research.

In the market research stream, a distinction is typically made between *conceptual* and *instrumental* use. Conceptual use of information refers to the enhancement of the user's understanding or general enlightenment (e.g., Moorman, 1995). This type of use involves integrating new information into a firm's existing knowledge base and emphasises the commitment to and understanding of the information before its application to a task (Citrin, Lee and McCullough, 2007). Hence, conceptual use is subtle, indirect and similar to learning. For example, conceptual use of customer information may entail learning about customer preferences, which in turn *may* enable managers to identify opportunities for developing new services in the future. (Morgan, Anderson and Mittal, 2005.) Instrumental use of information, however, refers to the direct application of the information to a specific situation or to solve a particular problem. For example, customer information indicates that customers are dissatisfied with a specific service aspect and the service is, therefore, developed. Hence, the instrumental type of use is direct and action oriented (e.g., Citrin, Lee and McCullough, 2007; Menon and Varadarajan, 1992).

Based on the distinction between the conceptual and instrumental types of use, it can be concluded that if service development is based on customer information, we have an instance of instrumental use of that information. Hence, *use of customer information is in this thesis understood as the action oriented instrumental type of use*. A conceptual use may have preceded the developers' instrumental use of customer information, however the conceptual use, as such, is not investigated in the current study.

1.3.3. Service development

Service development constitutes the context for the current investigation of customer information use.

In research on new services, the terms service development and service innovation have been used interchangeably (e.g., Alam, 2005; Jeppesen, 2005, Johnson et al., 2000). For contextual clarity, this interchangeability deserves some comment. 'Service development' or more precisely, 'new service development' (NSD), emanates from the service marketing and management tradition while the concept of innovation emanates from economics and public policy (Gallouj and Weinstein, 1997; Menor, Tatikonda and Sampson, 2002). Innovation research has mainly focused on innovation at the national and industry levels (Methlie and Pedersen, 2005), while research on service development has focused on the individual project level and the program level, i.e. several development projects in the same firm (e.g. Johnne and Storey, 1998). Moreover,

innovation theories have traditionally been based on studies in manufacturing industries (Sunbo, 1997), while most empirical research in service development has concentrated on the financial service industry (Johne and Storey, 1998).

Recently, the term service innovation has grown in popularity among service researchers. The preference for the term service innovation is particularly notable in the emerging fields of Service Science, Management and Engineering [IfM and IBM, 2007] and in the growing body of literature on new services adopting a service dominant logic (cf., Blazevic and Lievens, 2008; Michel, Brown and Gallan, 2008).

As implied in prior research that uses the terms service development and service innovation interchangeably, the current study understands service development and service innovation as representing the same kind of organisational process. However, since it is believed that the text will be more reader friendly if only one of these terms is used, *service development* is chosen as the term representing this organisational process. The reason for this choice is that the intended area of contribution, service marketing and management, uses this term originally.

Service development can be identified along a continuum from a minor adjustment, or modification of an existing service, to a major change or introduction of a new service. 'Innovativeness' is frequently used as a measure of the degree of change, of novelty or of a new service's newness. Hence, 'highly innovative', 'discontinuous' or 'radical' new services are seen as having a high degree of newness and 'low innovative', 'continuous', 'incremental' new services are positioned at the opposite end of the continuum (e.g. Alam, 2006; Calantone and Garcia, 2002; Johnne and Storey, 1998). While there is a consensus in literature regarding the meaning of these terms denoting the degree of newness, there is less continuity regarding from *whose* perspective the degree of newness is viewed (e.g., Johannessen, Olsen and Lumpkin, 2001). The most frequent perspectives used to determine degree of newness are the firm's and the market's (Avlonitis and Papastathopoulou, 2001; Garcia and Calantone, 2002). In addition, the degree of newness has also been determined from perspectives such as 'new to the world' (Johnson and Storey, 1998; Olson, Walker Jr, and Ruerkert, 1995) and 'new to the industry' (Colarelli O'Connor, 1998).

The empirical context of the current investigation on customer information use is the development of a bank's existent website. The present study on use of customer information is limited to the development of an *incremental* service. Hence, the service is not new to the world, or to the financial service industry, or to the firm, or to the firm's customers.

Although it is generally agreed that service development is highly relevant and even vital for the firm's prosperity and future existence (e.g., Froehle et al., 2000; Johnson et al., 2000; Kelly and Storey, 2000; Stuart, 1999; van Riel, Lemmink and Ouwersloot, 2004), a general definition of service development is lacking.

The development of a service has typically been described as a process of a predetermined number of phases, each composed of a set of development activities (e.g., Bowers, 1989; Edvardsson, 1996; Scheuing and Johnson, 1989). The number of phases varies between researchers. Consequently, processes from six to fifteen phases have been identified (Edvardsson, 1996). The phases of the development process are usually viewed as being executed in a logical and sequential order. The development process is managed by a group of people organised as a development project (Brunsson, 1976).

Just as prior research has made a distinction between innovation process and process innovation (cf. Garcia and Calantone, 2002), it is worthwhile to clarify the distinction between the service development process and the developed service. Service development refers to the process, tasks or practices of developing a new service. A developed service is the outcome of the development, i.e. the new service. To further clarify, *in the present study, service development is understood as an organisational process that aims to create a totally new or a revised service.*

1.4. Positioning the study

This study is positioned within service marketing and management and more particular in the field of service development. The present study also draws on product development literature, because research on service development and service innovation has also been published within that research stream.

To clearly illustrate the positioning of the current investigation on customer information use vis-à-vis prior research in service and product development, the previous research is divided into four categories. The set of categories represents increasing degrees of customer influence on the development practices from no influence to the entire control over the development (cf. Sanden, 2007). These categories are discussed below.

1. Customer has no influence. In this situation the customer is not consulted or is ignored. The development is based on technology push rather than customer demand. For example, it has been suggested that products precede needs and that new products can create customer needs (Berthon, Hulbert and Pitt, 1999).

In the context of the current study, the situation of no customer influence equals a situation when customer information is not used in the development practices. Thus, the current study acknowledges that development may be driven by the firm, encompassing this literature stream. However, the current study also acknowledges that the development of one and the same service may in some parts be driven by the firm and in others by the customer. Hence, as customer information may be used in some parts of the development process but not in others, so may also the influence of the customer vary along the same development process. The assumption that the customer's influence, or use of customer information, can vary along the same development process also motivates the choice to investigate the entire development process. This longitudinal approach further differentiates the current study from prior development studies.

2. Customer as a provider of information. So far, the majority of prior research that partly or exclusively investigates the role of the customer in a development/innovation context tends to view the customer as a provider of information and can, therefore, be classified into this category. It is generally agreed that in order to develop the service according to customer needs, market research must be conducted by the developing firm or by an external market research firm. Three types of research fall into this category. First, the large number of studies on new service success/failure concluding that market research is crucial for new service success, represent this view of the customer (e.g., de Brentani, 1991; de Jong and Vermeulen, 2003; Martin Jr. and Horne, 1993, 1995, see also 2.1 the success/failure stream). A second stream of research that typically views the customer as an information provider is one that focuses on the impact of market research on the newness of a new service (e.g. Callahan and Lasry,

2004, Hamel and Prahalad, 1991, 1994; Ulwick, 2002, see further 2.2 the incremental/radical stream). Finally, a third stream of research that evidently subscribes to this view consists of the large number of studies on market research methods in a development context (e.g. Kaulio, 1998; Nijssen and Lieshout, 1995; Urban and Hauser, 2004, see also 2.3 the means/method stream).

Comparing the current study with the research in category 2, the following observations can be made. Prior development research has found that market research has an impact on development outcomes such as new service success and on the novelty of the new service. Hence, the underlying assumption is that the customer information generated by market research is used during the development process. In fact, the firm's use of customer information is not questioned and not even discussed in these major streams of development literature (see further 2.1 the success/failure stream and 2.2 the incremental/radical stream). In addition, prior research lists a large number of market research methods in a development context and recommends that certain methods should be employed before others (see further 2.3 the means/method stream). Similar to the success/failure stream and the incremental/radical stream, the underlying assumption in these studies is that the customer information collected according to a certain method will be used. Hence a differentiating aspect that sets the current study apart from prior research in category 2 is that the current study makes no assumption that customer information is used in the development process. In addition, by concentrating on identifying and describing different types of customer information use, the current study "zooms in" on this middle stage between market research methods, i.e. the antecedents to use, and the consequences of use, i.e. service success and degree of novelty of the new service. Hence, while the majority of prior development research investigates antecedents and consequences of the assumed use of customer information, the current study concentrates on identifying and describing different types of customer information use in development practices (see further Figure 1, the "black-boxed" use).

Another aspect that further positions the current thesis is questioning the assumption that only the customer provides customer information. Prior development research elaborates on the customer's role in development practices and tends to view the *customer* as the provider and source of the customer information. Thus, prior research suggests that if the customer is not consulted during the development process, then the customer has no influence on it. In the current study this underlying assumption is questioned. Since the investigation concerns customer information in use, it is not limited to the customer as the sole provider and source of customer information. Hence, in comparison to prior research, the current study on the customer's influence in the development practices is more exploratory and holistic.

3. Customer as a collaborator and co-developer. In this situation the customer takes a more active part and is more involved in the development compared to merely providing information through market research methods. Hence, means and methods that give the customer a more influential role in the development process have been suggested, such as 'user toolkits' for innovation (Jeppesen, 2005; von Hippel, 2001; Thomke and von Hippel, 2002, on Hippel and Katz, 2002), 'virtual customer integration' (Fuller and Matzler, 2007) and 'experiments with innovating end-users' (Magnusson, Matthing and Kristensson, 2003). For a detailed description of these means, see 2.3 the means/method stream and for a description of the 'experiments with innovating end-users', see 2.2.

Viewing the customer as a collaborator and co-developer is in line with the evolving service dominant logic perspective that posits the customer as an active value co-creator (Prahalad and Ramaswamy, 2004; Vargo and Lusch, 2004, 2008). Adopting the S-D logic in a development context, it has been suggested that firms can innovate *with* customers rather than *to* customers and thereby actively involve customers in the innovation process (Blazevic and Lievens, 2008). It has even been suggested that “innovation is the means by which marketers retain customers in a service-dominant logic” (Flint, 2006, p. 350) and that this logic demands that we change our view of innovation as innovation reshapes customer value-in-use (Michel, Brown and Gallan, 2008).

So far, research that gives the customer this more influential role as a collaborator is sparse and has not yet grown as rich as research in category 2. Indeed, most of the very limited research that subscribes to the S-D logic perspective in a development context represents theoretical discussions rather than empirically based studies. Still, a number of studies in innovation and development literature have emerged that can be classified here. In particular research on ‘customer/user involvement’ gives the customer this more influential role as a collaborator in the development process (e.g., Alam, 2002; Kristensson, Matthing and Johansson, 2008; Kristensson, Magnusson and Matthing, 2002; Lundkvist and Yakhlef, 2004; Magnusson, 2003; Magnusson, Matthing and Kristensson, 2003; Matthing, Sandén and Edvardsson, 2004; Neale and Corkindale, 1998). In addition, research that has been conducted on ‘customer interaction’ in b-to-b service development (Alam, 2006a) as well as b-to-b product development (Gruner and Homburg, 2000) can be classified into this category.

In the context of the current study it can be argued that although research in category 3 enriches our understanding of the customer’s role in service development, studies specific to the developers’ use of customer information in development practices seems to be lacking (Citrin, Lee and McCullough, 2007; Zahay, Griffin and Fredericks, 2004). Studies have for instance investigated: the objectives of collaboration (Alam, 2002), the intensity of the customer interaction (Alam, 2002; Gruner and Homburg, 2000; Lagrosen, 2005), the techniques and methods of collaboration (e.g., Alam, 2002; Blazevic and Lievens, 2008; Matthing, Sandén and Edvardsson, 2004; Veryzer Jr., 1998b), the phase(s) of the development process when the collaboration takes place (e.g., Alam, 2002; Alam and Perry, 2002; Callahan and Lasry, 2004; Veryzer Jr., 1998b) and the characteristics of the collaborating customers (Blazevic and Lievens, 2008; Gruner and Homburg, 2000; Kristensson, Magnusson and Matthing, 2002; Magnusson, 2003; Magnusson, Matthing and Kristensson, 2003). Hence, it can be concluded that there is a lack of studies concentrating on the actual use of customer information in a service development project, as this is assumed to take place within the organisation.

Comparing research on customer collaboration with the current study, the following can be noted. First, the current study concentrates on the developers’ use of customer information in the development process. It is assumed that, even if the customer is invited to participate as a member of the development project, the customer’s view might not be incorporated into the new service, i.e. the customer information might not be used. Conversely, it is also assumed that the use of customer information can be a result of close collaboration between customers and developers. These assumptions motivate a different research approach than those which typically have been employed in prior development research (see Table 17, Methodologies used in prior NSD/NPD research). Hence, it is believed in the present study that in order to capture different types of customer information use, it is necessary to make close up observations while

participating in development meetings. Moreover, since saying is one thing and doing another (Boote and Matthews, 1999), it is also believed that to capture valid knowledge on use, the field investigation needs to be longitudinally conducted from the early stages of the development to the launch of the new service.

4. *Customer is the developer.* The most extreme case of customer influence in the development process is when the customer takes on the role as the developer. In this situation the role of the firm or the firm's influence on the development is minor. To my knowledge, very limited research has been conducted in this category. However, some examples can be observed and these typically represent so called 'open source' development projects. A well known example is the operation system Linux, which was initiated by Linus Thorvalds in 1990. Today Linux is used and continuously developed by millions of users all over the world (Sandén, 2007). Other examples are the Open office software (www.openoffice.org), which is similar to Microsoft office, and the Apache software program (Lakhani and von Hippel, 2003). These types of digital innovations are continuously developed by the technically skilled users that can download the source code and make changes and improvements to it. In the case of the development of the Apache software even a field support system for the development has evolved, which is operated by the users themselves (Lakhani and von Hippel, 2003). From these limited observations it can be noted that the customer's role as the developer is most evident within the information and communication technology sector.

Viewing the customer as the developer is in line with the *service logic* perspective, which argues that the customer creates value for themselves when using resources provided by a firm together with other resources (Grönroos, 2008). In comparison, Grönroos (2008) argues that the aforementioned *service dominant logic* posits that "firms still create the value, but customers are allowed to engage themselves with the suppliers' work and enter it as co-creators" (p. 305). The service logic suggests that the supplier can facilitate customer value creation, but the customer is the one that creates the value. Hence, adopting this logic in a development context entails that the firm plays the role as a facilitator and the customer, possibly together with other customers, is the one that develops the service.

Comparing the current study with the limited research in category 4, it can be concluded that both deal with the same activity, i.e. the use of customer information. However, a central aspect that separates that research from the current study is the difference in focus on the actor. While research in category 4 focuses on the customer as the developer, the current investigation focuses on the service development project members as the developers. Consequently, the current investigation does not concern the customer's use of his service perception in the customer's development process; instead the present study concentrates on the developers' use of the customer's perception in their development process. Hence, while research in category 4 takes place in the customer's sphere of practices, the current study is conducted in the firm's sphere of practices.

Methodologically speaking, the present study incorporates a novel approach for marketing studies on service and product development, namely ethnography. Consequently, the study is not retrospectively conducted as the majority of research on service and product development, but it is conducted in the field in real time. The ethnographic methodology is an emergent research strategy. Hence, it is open, flexible¹

¹ Being "open" or "flexible" is an important ingredient of an ethnographic methodology. It means that the researcher acknowledges the discovery of novel or unexpected issues that may come to light as the study

and more inductive than deductive. The emergent or “exploratory” approach is often used in a condescending sense as a label for “pre-research”, pilot studies or research in a new field. However, in line with Mintzberg (1979) it is here argued that: “no matter what the state of the field, whether it is new or mature, all of its interesting research explores” (p. 584).

In previous research on service and product development, much effort has been directed toward developing normative procedures to help managers in development practices (e.g., Edvardsson, 1996; Methlie and Pedersen, 2005; Workman Jr., 1993). However, there has been little descriptive research on actual service development activities and the role of customer information in these activities. In line with traditional ethnography, the current study aims to *identify and describe* different types of customer information use (e.g. Aull-Davies, 2005). In addition, from the perspective of customer information *in* use the present study intends to generate insights on the customer information source, when the information was acquired and how. Whether use of customer information is “good” or “bad”, in terms of its potential impact on the performance of the new service, is outside the scope of this investigation.

In conclusion, it is argued that the area of services marketing and management in general, and service (product) development in particular, can gain advantages from the ethnographic methodology, since this facilitates generation of knowledge on actual development practices and the customer’s role in these practices. In this way, an understanding grounded in contextual empirical data can be generated about customer information activities in service development.

1.5. A realist view on reality and knowledge

This study is based on a realist ontology and epistemology. An ethnographic methodology is employed to develop knowledge on use of customer information in service development. In the following text the realist ontology and epistemology are discussed. The ethnographic methodology is discussed in detail in chapter 3.

The realist standpoint in regards to ontology is that there exists a reality, independently of whether the human mind perceives it or not² (Tsoukas 1989; Hunt 1990, 1992; Tsang and Kwan 1999; Ackroyd and Fletwood 2000; Bhaskar 1979; Mingers 2004). However, perceptions are not given in a straightforward way through the senses. As a consequence, the ethnographer argues: “only one who has actually “been there” in the field talking to and living it up (or down) with the natives could possibly understand what the natives are about and presume to interpret it for those who have not been there” (Van Maanen, 1988, p.47). That the reality is subject to our senses and may be socially constructed is also a key aspect that the realist shares with the constructionist³ (Berger and Luckmann, 1967 in Zinkham, 1992).

The realist believes that reality consists of different layers. We have only direct access to the empirical domain of the reality and not to the real level, which means that our

progresses and is the opposite of “narrow, even constricting...theory-driven inquiries” (Lofland, 1995, p. 46).

² The opposite of realism is idealism. Idealism states that there is no world outside the mind, that is, only minds and their ideas exist, and material objects exist only as objects of perception (Burr, 1995).

³ “The essential difference seems to be the ontological status given to the social processes producing social phenomena. A qualified version of realism, which seems acceptable for most people, is to state that many social phenomena may indeed be socially constructed but exist independently of the specific researcher studying these phenomena” (Durand and Vaara, 2005, p. 11).

knowledge of the world is only partial (Durand and Vaara 2005; Tsoukas, 1989). Reality exists but can never be fully apprehended (Guba, 1990), thus our knowledge is fallible. “As such, all knowledge claims are tentative, subject to revision on the basis of new evidence” (Boal, Hunt and Jaros, 2003, p 87). Hence, the truth is only provisional (Hammersley, 1998). In regard to epistemology, the study is based on the following assumptions about knowledge:

Knowledge is cumulative. Knowledge is a cumulative process in which new insights are added to the existing stock of knowledge and the concept of “certainty” does not belong to science (Hunt, 1993) or as Antonacopoulou and Tsoukas (2002) put it:

The beauty of (social) scientific research...is its inherent incompleteness and revisability – the recognition that what we know, at any point in time, is inherently inadequate and that, as a result, we should always be careful to submit our assumptions and perspectives to scrutiny...so that we can conduct our inquiries from a better position next time – and the time after that, and so on (p. 861).

Thus, knowledge is not static, but “the truth” changes over time (Schumpeter, in Mc Craw, 2007).

Knowledge is subjective. The ethnographer is a realist who has “the supposedly naïve view that there is a (small t) truth to which we can have some reasonable degree of access” (Lofland, 1995, p. 48). Although there is a “reality out there,” knowledge is still subjective. Since human beings cannot transcend their language and culture, they cannot obtain any absolute viewpoint (Zinkham, 1992). Thus, the realist ethnographer does not believe in the “caricature of objectivism that implies that science has access to a ‘god’s eye view’ or a ‘unique privileged position’ to reach an absolute truth” (Boal, Hunt and Jaros, 2003, p. 87). There are no objective facts⁴ that exist per se waiting to be discovered (Case, in Westwood and Clegg, 2003). Thus, there is not an objective reality about which we can say things that are objectively, absolutely and unconditionally true or false. For the ethnographer, the issue is not which assumptions are “true” (Guba, 1981). Like the realist, the ethnographer believes that any observations we make are inevitably filtered through and limited by the characteristics of our senses and the social-cultural context in which our research is conducted (Boal, Hunt and Jaros, 2003). However, despite the subjectivity of knowledge, it can still be shared and hold “true” for a greater general public. What is true can be agreed upon (i.e., the coherence theory of truth⁵). Knowledge claims are an agreed best understanding of what has been produced at a particular point in time (Zinkham, 1992).

The realist ethnographer asserts that the researcher and the phenomenon of study influence each other. Of course, the ethnographer makes every effort to maintain an optimal distance between herself and the phenomenon, but never for a moment does she consider that the “optimal” distance is impervious to inquirer-respondents interchanges (Guba, 1981). One way to keep the distance or to reduce the effects of the researcher on the research results is through reflexivity. Reflexivity is necessary because our accounts are partial, contingent, and somewhat inadequate (Antonacopoulou and Tsoukas, 2002). Reflexivity is particularly salient for

⁴ “A scientific fact is a construction abstracted from a complex and interwoven reality by means of arbitrary definition and classifications” (Case, in Westwood and Clegg, 2003, p. 159).

⁵ The coherence theory suggests that “an assertion is true if it follows from, is consistent with or ‘adheres’ with another statement or system of statements that is believed to be true, i.e., generally held beliefs and values” (Durand and Vaara, 2005; Hunt, 1990).

ethnographic research, in which the involvement of the researcher is particularly close (Aull Davies, 1999).

Knowledge is the taken for granted, the unspoken assumptions, thus tacit in nature (Polanyi, 1958, in Guba, 1981). In addition to the propositional or explicit knowledge, the ethnographer is interested in the knowledge that cannot be stated in the form of language, that is, tacit knowledge. Everyone knows more than what they can express in words (Guba, 1981). We act in the world on the basis of assumptions we never inspect but just act on (Becker, 1996). “Most emotions and cognitive functions, which guide thought and behaviour, occur without awareness, that is, most mental life is tacit” (Zaltman, 1997, p. 426). Since knowledge consists of a tacit dimension it requires the ethnographer to identify and problematise things that the insiders take for granted and thus, tend to overlook (Forsythe, 1999). To capture the tacitness of knowledge, I observed use (and non-use) of customer information in real time or in situ while it emerged. This type of methodology has the capacity to provide new insights and widen the existent knowledge of the topic under study (Dawson, 1997).

Knowledge is relative to both time and place thus context-based (Zinkham, 1992). The realist believes that “knowledge derives from mistakes, disagreements, and ruptures in which the non-rational momentarily takes precedence over the rational” (Case, in Westwood and Clegg, 2003). The ethnographer’s long-term immersion in context increases the likelihood of spontaneous revelatory incidents (Arnould and Wallendorf 1994). Revelatory incidents are naturally occurring in context in real time. Hence, the ethnographic methodology and more specifically the method of observation, is appropriate to develop this kind of context-based knowledge.

1.6. Outline of the thesis

The current study is organised in five chapters.

Chapter 2 encompasses a systematic review of marketing literature on new service and product development/innovation. Both prior findings and research approaches generating these findings are reviewed. The literature is divided into three main streams that have studied customer information in a development context. The purpose with the review is to justify the current investigation on use of customer information in service development practices. Hence, the review clearly identifies and describes the current gaps that this study intends to narrow.

Chapter 3 presents the ethnographic methodology that was used to generate knowledge about the different types of customer information use in service development. The chapter describes the main characteristics of the ethnography. A detailed presentation of the used methods for gathering empirical material together with a discussion on their strengths and weaknesses are put forth. Moreover, the selection of the field setting, case and informants are described. The chapter ends with a thorough discussion on the strategies used in the study to increase the quality of the research.

Chapter 4 starts with a presentation of the emergent analysis process. Thereafter, the context of the findings is described; the investigated development process and the studied users of customer information, that is, the members of the development project. Following that, the main findings of the study are described. First, the identified six different kinds of use are presented. Second, the customer ‘information in use’ is described. The sources the information came from, the temporal aspect of the

information acquisition and finally, the way the information was acquired. The chapter ends with a summary of the identified combinations of the types of use/non-use, and of source, time and means of acquisition.

Chapter 5 concludes the study. It discusses the study's theoretical contributions and implications for research. It provides managerial implications and ends with a presentation of avenues for further research.

2 CUSTOMER INFORMATION IN THREE MAIN STREAMS OF NSD/NPD LITERATURE

This chapter critically reviews main streams in prior marketing research on new service and new product development that study customer information. This study aims to contribute to service development literature. The reason to include product development literature is that several studies on customer information in service development have been published in the product development literature (see e.g., Avlonitis, Papastathopoulou and Gounaris 2001; Pullman, Moore and Wardell 2002). Some authors (e.g. Matthing, Sandén and Edvardsson, 2004) even suggest that out of the limited number of studies that concentrates on customer information in service development, most are published in the product development literature.

Based on the literature review on service and product development, three main research streams that discuss customer information were identified; *the success/failure stream*, *the incremental/radical stream* and *the means/method stream*^{6,7}. Other studies exist that discuss customer information, however this review concentrates primarily on those that represent the traditional view of the customer⁸. This traditional view tends to posit the customer as a passive information provider to whom the developing firm should turn to in order to develop services and products accordingly (see 1.4). Before the review of these streams is presented, a brief introduction is presented.

The first stream that is reviewed is the identified *success/failure stream*. In this stream customer information is discussed in relation to the success/failure of the new outcome. Since the late 1960s, studies have found that customer information acquisition relates positively to the new product/service success. The success/failure stream has been acknowledged as a central stream of development research (e.g. Brown and Eisenhardt, 1995; Craig and Hart, 1992; van Riel, Lemmink and Ouwersloot, 2004).

Another stream of identified development research that discusses customer information is *the incremental/radical stream*. In this stream of studies customer information is investigated in relation to incremental and radical innovations. Studies have investigated how customer information acquisition relates to the success of radical vis-à-vis incremental innovations. In addition, other studies have investigated how customer information acquisition relates to the degree of novelty of the new outcome. This research stream has also been recognised in prior research, (e.g., cf. Alam, 2006a, Callahan and Lasry, 2004; Magnusson, Matthing and Kristensson, 2003).

⁶ Henceforth, these three streams are referred to as “mainstream service and product development literature” or “mainstream research on service and product development”.

⁷ Another stream constituting the core of the NPD/NSD literature are studies on the development process, i.e. what stages this process can be sliced into and whether or not these stages are (or should be) executed in a sequential or parallel order. Menor, Tatikonda and Sampson (2002) state, for example, “there is no topic in new product and service management that has received more attention than establishing the right process for development” (p.139). However, this stream is not directly linked with customer information and its use, and is therefore not included in the review.

⁸ It should be noted that although most of the reviewed studies represent the traditional view of the customer as an information provider, some exceptions were included where the customer is viewed more as an active collaborator. These exceptions were included in the review because they, i) provide additional insights on customer information that further justify the current investigation of customer information use, ii) are frequently cited in development literature and iii) discuss customer information in relation to any of the three main stream themes.

The third identified group of studies that discusses customer information is labelled *the means/method stream*. This consists of studies that focus on how to acquire customer information with the purpose of using it in development. This stream of studies has to some extent been recognised in prior research, which further supports the classification of this type of research into the means/method stream (e.g. Nijssen and Lieshout, 1995).

The review reveals that research has investigated the antecedents of customer information use (such as information acquisition means/methods), and its consequences (such as new service success/failure or incremental/radical new outcome). However, there is a lack of studies with an exclusive focus on the actual use of customer information in a development context. The use of the acquired customer information seems to be taken for granted as a non-problematic “logical” consequence of the acquisition. Indeed, the developers’ use of customer information is not questioned and not even discussed in these streams of research. Hence, the actual use has only been implicitly studied and appears to be treated as a “black box” in mainstream new service and product development literature, see Figure 1.

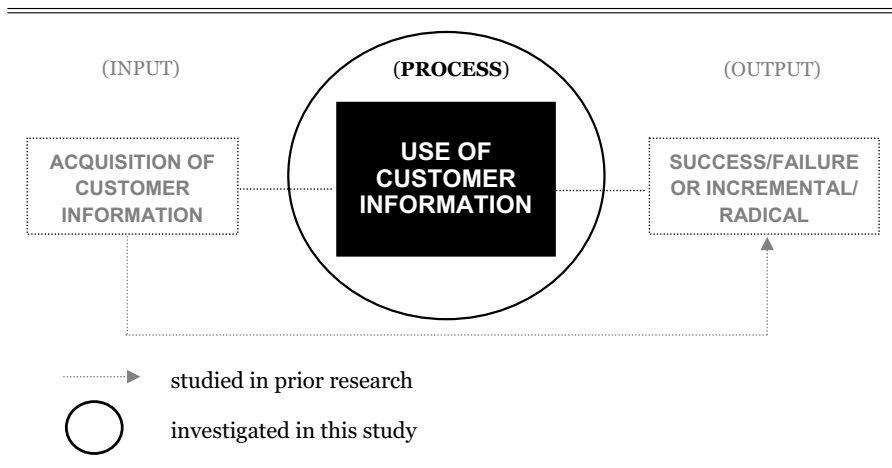


Figure 1 The “black-boxed” use of customer information as the focus of the study

The implicitness of use is particularly evident in the success/failure and incremental/radical streams. In these streams, it is implicit in the sense that the *acquisition* of customer information is claimed to generate a certain outcome of the development process, such as success/failure or degree of novelty (as in the incremental/radical stream) of the new outcome. In the means/method stream, studies focus on how customer information is, or should be, acquired for the purpose of using it in development. Hence, the underlying assumption is that the information will be used after it has been collected, however use is not investigated.

In addition, the review reveals that the majority of research in these streams have a limited view on acquisition of customer information in that i) the customer is the only and direct source of the customer information, ii) the acquisition of customer information, and its implicit use, takes place within the timeframe of the same development process, iii) primarily formal methods are used to collect the customer information.

Finally, in regard to research approaches employed in these streams, the following can be identified. First, the notion of rationality appears as the philosophical stance underlying most studies. It appears to be taken for granted that practitioners who acquire customer information for the purpose of using it in the development process also use it. Second, the most frequent methodologies are i) retrospective, deductive and explanatory, empirically-based with survey as the main data collection method, or ii) normative and prescriptive, conceptually-based with illustrative empirical examples. Third, most studies have been conducted in a business-to-business, rather than in a business-to-consumer context.

The three streams were utilised as a basis to facilitate a structure of the review, thus each stream is reviewed separately. The studies in each stream were classified according to their research approach and/or context. The review is not all-inclusive, but rather presents a selection of representative studies within each stream. The choice of studies is described in the introduction of each reviewed stream. One criterion that had to be met for any study to be included was that it had to be conducted in a *service* or *product development context*. Thus, those studies that elaborate on customer information in the context of, for example, customer satisfaction or service quality without explicitly relating it to service or product development are not included. In addition, the review was limited to service and product development literature within *marketing* since this is the wider area of intended contribution. Next, studies in the success/failure stream are reviewed. Thereafter, the incremental/radical stream is reviewed, followed by the review of studies in the means/method stream.

2.1. Customer information in the success/failure stream

The aim in this stream of studies is to identify and describe those “critical” factors that determine the *performance* of the outcome of the development process: in other words, whether the new product or new service is to be labelled a *success*⁹ or a *failure*. The underlying premise is that retrospective analysis of past successes and failures provides insights that can help firms to avoid pitfalls and manage the development process more efficiently. To identify the “critical” factors, most of the studies focus on a broad range of variables related to the management of the development process and to less manageable variables in the organisation’s environment. Thus, the perspective is often broad in terms of the number of variables investigated, and subsequently low in level of detail. It has also been referred to as a broad-brush approach (Brown and Eisenhardt, 1995). Typically, researchers use surveys with self-administered questionnaires in which the respondent is asked to select two recently developed outcomes, one success and one failure, and thereafter rate (on a 5- or 7-point Likert scale) how much she/he agrees with a predetermined statement representing the variable that caused the success of the developed outcome¹⁰. Studies that exclusively investigate single variables, such as customer information and its possible link to successful outcomes, can also be

⁹ “Success” is defined in numerous ways; from more objective measures (e.g., sales) of the developed outcome to pure perception-based ones (assessment). One excellent review on how success has been defined and operationalised is offered by Hart (1993). Storey and Easingwood (1999) is yet another study dealing with different types of “successful performance.”

¹⁰ Examples of such statements are “the product concept was developed from frequent interactions between the product development and introduction team and customers” (Zirger and Maidique, 1990), “customer opinion of the new product was obtained very early in the development process”, “market research, involving a large enough sample of respondents, a formal design, and a consistent data collection procedure was used” (Edgett and Parkinson, 1994) and “we knew customers’ buying behaviour”, “carried out a detailed formal study of the market on a consistent basis” (Oldenboom and Abratt, 2000).

identified in this stream. However, so far, such studies are much more limited in number.

To be included in the review of the success/failure stream, the study had to focus on success and/or failure of the new product/service. After going through the literature on success/failure factors in product and service development primarily by a “snowball” technique of searching citations found in identified studies, by performing manual searches of leading marketing journals where articles on product and service development are most likely published, by reading literature reviews¹¹ on product development and service development, a few much-cited studies typical for this genre were chosen and reviewed (e.g. Cooper 1979a; de Brentani, 1991; Storey and Easingwood, 1996; von Hippel, 1978; Martin Jr and Horne, 1993, 1995).

The review of the success/failure stream is structured as follows. First, and chronologically, studies with a broad focus on several variables in product (2.1.1) and service development (2.1.2) are explored. Second, studies with an exclusive focus on customer information and its role in successful product (2.1.3) and service development are discussed (2.1.4). Summaries are presented in tables after each section. A presentation of key findings on customer information and use, and how it has been studied in this stream concludes the literature study of the success/failure stream.

2.1.1. Customer information partly studied - product context

The studies reviewed in this section have been referred to as the *classics* among studies on success/failure factors. They all utilise a “broad-brush” approach and are conducted in a product development context.

Mayers’ and Marquis’ study in 1969 (in Brown and Eisenhardt, 1995 and in Zirger and Maidique, 1990) represents a landmark among studies on successful product development and is also one of the very early studies that emphasized the importance of acquiring customer information for achieving success. This study identified variables that were critical to the success of the development of 567 products in over 100 firms and 5 manufacturing industries. The principal result was that identifying and understanding user needs was perceived as substantially more important to the success of the products than exploiting new technology.

In the 1970’s, Rothwell et al (1974) conducted the classic SAPHO-study in the United Kingdom within the chemical and scientific instruments industries. This study was among the first that was based on the idea that only by including and comparing successes with failures in the *same* study is it possible to identify factors that differentiate between successful and less successful outcomes (Brown and Eisenhardt, 1995; Cooper and Kleinschmidt, 1987; Zirger and Maidique, 1990). One of the identified factors that differentiated between successful outcomes and failures was the acquisition of customer information and, implicitly, its use:

User needs must be precisely determined and met... Many successful firms achieve this deep and imaginative understanding of user needs through interaction with a representative sample of potential customers throughout the development. (Rothwell et al., 1974, p. 289 in Gruner and Homburg, 2000, p3).

¹¹ For literature reviews on success/failure in product development, see for example, Brown and Eisenhardt (1995); Henard and Szymanski (2001); Montoya-Weiss and Calantone (1994), and for a review of studies on success/failure in service development, see for example Edvardsson (1996); de Jong and Vermeulen (2003).

In the 1970's, the 'New Prod'-project (Cooper, 1976, 1979a, 1979b, 1980) was conducted. Cooper studied failures and successes separately, but also contrasted them in the same study. His study of 102 successes and 93 failures of industrial products in 102 firms in Canada revealed that the second (out of three) most critical success dimension is "market knowledge and marketing proficiency" (Cooper, 1979a, p. 100)¹². This means that the development team performed acquisition activities such as "market assessment, market studies and test market".

The commercial viability of a new product rests in the hands of its potential customers; and therefore a solid understanding of the marketplace together with an effective market launch effort is vital to new product success (Cooper, 1979a, p. 101).

In a more recent study Cooper and Kleinschmidt (1987) conclude that two of the three strongest success factors are^{13,14}:

Protocol. There was a clear definition, prior to the product development stage, of the target market; customers' needs, wants, and preferences; the product concept; and product specifications and requirements.

Proficiency of predevelopment activities, e.g. initial screening, detailed market study or marketing research. (Cooper and Kleinschmidt, 1987, p. 180).

Table 1 summarises the focus, type of study, sample, context and findings of the above studies.

Table 1 Studies on success/failure - broad focus - product development

Author	Focus	Type of study	Sample	Context	Findings
Mayers and Marquis (1969)	To identify factors critical to new product success	Empirical: survey using questionnaire Retrospective	567 successful new products	B2B, manufacturing industries represented by 121 construction, railroad and computer firms	Acquiring of customer information (CI) more important than to exploit new technology Use of CI only implicitly mentioned
Rothwell et al (1974)	To identify factors generating successful and less successful new products	Empirical: comparative study of successes and failures. Survey using questionnaire. Retrospective.	43 success and failure products pairs.	B2B, manufacturing industries chemical and instruments firms	Acquisition of customer information was related to one factor that influenced success. Use of CI only implicitly mentioned
Cooper (1979a)	To identify factors generating new product success	Empirical: comparative study of successes and failures. Survey using self-administered questionnaires, statistical analysis. Retrospective	102 success and 93 failure products. Informants were "functionally" neutral and had an overall knowledge of the firm's npd activities.	B2B, 103 industrial firms	Acquisition of customer information was related to the second most important variable to success. Use of CI only implicitly mentioned

¹² The first and most important dimension was "product uniqueness and superiority" and the third most important dimension driving successful developed products was "technical and production synergy and proficiency" (Cooper, 1979a, pp.100-101).

¹³ The third being "product advantage" (i.e. product was superior to competing ones in the eyes of the customer).

¹⁴ Measured in terms of numbers of correlations and strength of correlations (Cooper and Kleinschmidt, 1987).

Cooper and Kleinschmidt (1987)	To identify factors generating new product success	Empirical: Developed and tested 10 hypotheses. Personal interviews based on a lengthy questionnaire Retrospective	123 successes and 80 failures. Informants were the manager, or managers, most knowledgeable about each development project (response rate 60%)	B2B, 125 industrial product firms in a variety of industries. For example, automotive components, chemicals, food and packaging equipment, etc	Acquisition of customer information was related to two of the three strongest supported hypothesised success factors. Use of CI only implicitly mentioned
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The studies pinpoint that one important ingredient to develop successful products is the understanding of customer needs, wants and preferences. Furthermore, the authors suggest that market studies and interaction with the customer during the development process are ways to acquire this understanding or, in my terminology, ways to acquire *information* about customer needs, wants, and preferences that, in turn, may generate this understanding. Thus, the studies provide consistent findings that acquisition of customer information is important in development as this influences the performance of the outcome. However, due to the broad-brush approach customer information acquisition is only one dimension among many, only limited insights are generated on customer information. These studies merely state the importance of customer information and only implicitly the importance of using it. As it appears, *use* is not at all explicitly discussed, but can rather be viewed as a missing link between acquisition of customer information and a successful developed outcome.

2.1.2. Customer information partly studied - service context

When moving on to the service development context, we find that studies that focus on success/failure factors start to appear frequently only during the 90's. The majority of success/failure studies in the service development context have been conducted within the financial service industry (de Jong and Vermeulen, 2003; Stevens and Dimitriadis, 2003). Although conducted in a different context, these studies have a similar approach, that is, a broad focus on several variables in order to identify those that are "critical" to success, as those carried out in the product development field during the 1970's and 1980's. The following is a review of a number of service development studies that are typical within this stream.

In a much-cited study, de Brentani (1991) investigated 150 successes and 126 failures in 115 firms within several service sectors (e.g., financial, marketing and advertising and transportation). Industrial services were the focus of the study, but several cases involved both industrial and consumer services (e.g., airlines). de Brentani identified 17 independent factors that describe issues and concerns related to service development¹⁵. The factor that contributed most to success ("high sales performance"¹⁶) was the "product-market fit/attractiveness" of the developed service. This means that the developed service "satisfies clearly identified customer/client needs", "responds to important changes in customer needs/wants", is "consistent with existing customer values/operating systems" and that the developed service "solves important customer problems" (p. 42). In my terminology, the study found that the acquisition of

¹⁵ 75 variables were reduced to 17 independent factors (de Brentani, 1991).

¹⁶ de Brentani (1991) found that service firms use at least *four* measures of success and of these the most important one was *sales performance* (e.g. exceeds sales/customer use level objectives, positive impact on corporate image/reputation, high overall profitability, exceeds market share objectives)

information about customer “needs”, “changes in needs/wants”, “customer values” and “customer problems” or, as I formulate it *customer information*, contribute to a successful developed service.

The second most influential factor on success in de Brentani’s study was that projects had a “detailed/formal new service development process”. According to de Brentani, this means that the following activities are performed in the development process:

a number of up-front activities, including in-depth market studies, customer researched concept descriptions...pre-launch testing to determine customer response... (de Brentani, 1991, p. 44).

Thus, de Brentani found that different customer information acquisition activities are critical to success. However, the meaning of “in-depth market studies”, “customer researched concept descriptions” and “pre-launch testing” are not defined. Similar to several studies conducted on products, de Brentani’s study on services primarily focused on development projects within the business-to-business arena.

Moving on to new services targeted to the *individual consumer*. Storey and Easingwood (1993; Easingwood and Storey, 1993) conducted a study on consumer financial services in the UK. From a literature review of popular business, financial and marketing press the researchers identified 17 variables characterising the development process in the financial service industry. A questionnaire was mailed to marketing managers responsible for newly launched financial services in order to reveal the relative importance of the 17 variables for success¹⁷. Based on the variable means, 14 services were classified as “unsuccessful”, 32 as “successful” and 32 as “very successful services”. The acquisition of customer information was found to be among the variables contributing to “very successful” services or as Storey and Easingwood (1993) express it:

To develop ‘very successful’ services particular attention must be paid to...market research (testing of product ideas, customer needs and test marketing) (Storey and Easingwood, 1993, p. 47).

Edgett (1994) examined and compared the development activities for successful and unsuccessful new financial services in Britain. He found that for both successful and unsuccessful new services, the lowest level of reported development activity occurred in activities related to acquisition of customer information. He states that “for unexplained reasons, many companies execute this part of the development process poorly”, and he continues “very often the lack of resources, either in time or money, is cited as a reason” (p. 46). Although these activities are not conducted to a very high degree in any single case, Edgett found that in the case of successful new services, these activities were performed to a higher degree than in the unsuccessful ones.

Edgett and Parkinson (1994) also conducted a study within the British financial service sector. Market research was identified as one of the three factors that contributed most to success¹⁸. They describe, to some extent, what is meant by the term “market research”:

- There was a clear idea of the type of information that was trying to be obtained through market research

¹⁷ As common within this stream the 17 variables were formulated as statements and the managers had to rate (on a 9-point scale) to what extent each variable helped or hindered the success of the developed service.

¹⁸ In descending order of importance: *market synergy*, *organizational factors* and *market research* were found to contribute the most to the discriminating power (Edgett and Parkinson, 1994).

- Market research, involving a large enough sample of respondents, a formal design, and a consistent data collection procedure was used
- Customer opinion of the new product was obtained very early in the development process (Edgett and Parkinson, 1994, p. 28).

Hence, the acquisition of customer information should be formal and target a large sample. In addition, the acquisition should take place in the very beginning of the development process.

To reveal the success drivers that separate “major winners from modest successes”, a group of prominent researchers (Cooper et al., 1994) conducted a mail survey of 491 firms in the financial service sector in Canada, 104 variables were reduced to 11 factors. “A market-driven new product process” was identified as the key success factor in all three types of successes investigated¹⁹. “A market-driven new product process” is described as:

a well planned and executed new product process, where customer needs, wants, and buying behaviour were understood, where adequate resources were devoted to market research and product development, where market research was used to test customer responses to the product concept and strategy (Cooper et al, 1994, p. 286-287).

Thus, an understanding of the customer’s perception and behaviour, and customer information acquisition are important for successful new financial services. However, the study does not reveal whether the understanding or the information was used in the development generating the different types of success.

In order to identify key factors determining success, Storey and Easingwood (1996) studied 153 new financial services. Interestingly, they found a *negative link* between the amount of activities related to customer information acquisition and the degree of success (sales performance). Storey and Easingwood suggest that a plausible reason for this outcome may be that the successful new services were aimed at highly familiar markets where customers were already understood, and hence little research was undertaken.

Oldenboom and Abratt (2000) also conducted a study on success and failure factors within the financial service sector. However, their study was conducted more recently and in a different setting, in South Africa. They found four factors to be critical for success²⁰. One of these success factors is “consumer insight” as the authors label it. Looking closer at the meaning of “consumer insight”, the following variables are identified:

- Adequate preliminary assessment of market for the idea before development
- Carried out a detailed formal study of the market on a consistent basis. (Oldenboom and Abratt, 2000, p. 242)

In addition to the assessment and formal acquisition of customer information, Oldenboom and Abratt also point out that the front line personnel plays a key role in development because they can be consulted about customer behaviour in order to identify opportunities for development. This means that, in addition to customer

¹⁹ *Financial performance, relationship enhancement and market development* were the three types of successes investigated (Cooper et al., 1994).

²⁰ In addition to “consumer insight”, the three other critical success factors were: “adequate skills and resources”, “product advantage”, “degree of service newness” (Oldenboom and Abratt, 2000, p. 241-242).

information acquired directly from the customer, the authors also suggest that customer information can be obtained indirectly through the front line. However, this role of the front line personnel was not investigated.

Table 2 illustrates the focus, type of study, sample, context and findings of the studies conducted in a service development context.

Table 2 Studies on success/failure - broad focus - service development

Author	Focus	Type of study	Sample	Context	Findings
de Brentani (1991)	To identify which variables are correlated with successful new services.	Empirical: Comparative study of successes and failures. Survey using questionnaire based on interviews, statistical analysis. Retrospective	150 success and 126 failure new services. Managers responsible for NSD (response rate 62.5%)	B2B, 115 industrial service firms. Several firms provided both industrial and consumer services, Canada	Acquisition of customer information was related to several factors that contributed most and second most to the most important type of success (i.e., sales performance). Use of CI only implicitly mentioned
Storey and Easingwood (1993; Easingwood and Storey, 1993)	To identify which variables are correlated with successful new services.	Empirical: Self-administered questionnaire. Retrospective	78 new services. Marketing managers responsible for newly launched services (response rate 62 %)	B2C, 78 firms mainly in three service areas bank, building society and life insurance, UK	Acquisition of customer information was found to be among those variables that contributed to the "very successful" services. Use of CI only implicitly mentioned
Edgett (1994)	To examine the development activities for successful and unsuccessful new services	Empirical: Comparative study of successes and failures. Survey using self-administered questionnaire with followed-up phone calls. Retrospective.	78 success and 70 failure services. Managers, at a senior level, actively involved in NSD (response rate 96.8%)	B2C, 88 banks and building societies, UK	In both successes and failures, the activities related to acquisition of customer information were identified as those the firms did least of all. But, in comparison CI correlated more with the success services. Use of CI only implicitly studied
Edgett and Parkinson (1994)	To identify which variables generates a success or a failure	Empirical: Comparative study of successes and failures. Survey using self-administered questionnaire with followed-up phone calls. (61 reduced to 11 factors). Retrospective	62 success and 56 failure new services. Information on informants not revealed.	B2C, 67 building societies, UK	Acquisition of customer information was related to two of the three factors that contributed most to success. Use of CI only implicitly mentioned
Cooper et al. (1994)	To investigate which variables separate very successful new services from modest successes.	Empirical: Survey using self-administered questionnaire (104 variables reduced to 11 factors). Retrospective	173 new successful financial services ranging from marginal successes to "spectacular winners". Senior managers involved most in the actual development.	B2C and B2B, 491 firms in the financial service industry, Canada.	CI acquisition was identified as a key factor driving all three types of successes investigated. Actual use of CI only implicitly studied.
Storey and Easingwood (1996)	To identify which variables are correlated	Empirical: Self-administered questionnaire (90	153 new services. Marketing managers	B2C, 153 firms primarily in	Acquisition of customer information was negatively linked

	with successful new services.	reduced to 20 split into 4 groups). Retrospective	(response rate 51%).	banking, building society and insurance, UK	with success. Possible reason: the customer is already understood, hence little acquisition undertaken. Use of CI only implicitly mentioned
Oldenboom and Abratt (2000)	To identify which variables are correlated with successful new services.	Empirical: comparative study of successes and failures. Survey using self-administered questionnaires (52 reduced to 8 factors). Retrospective	35% success and 37% failure bank services. 65% success and 63% failure insurance service. NSD-, marketing managers, managing directors (43% usable).	B2B and/or B2C not revealed. 40 banks and 85 insurance companies, South Africa.	Acquisition of customer information was related to one of the four critical factors to success. Use of CI only implicitly mentioned.

As the broad-brush approach in a product development context, the studies on service development seem to reveal similar findings, that is, *activities related to customer information acquisition have been found to be important in development as they influence the success of the outcome*. It can also be concluded that these studies do not elaborate in-depth on the acquisition of customer information but merely state its importance. Discussions on customer information are lacking and so are also discussions on possible difficulties with obtaining this kind of information. The data collection method for studying success/failure with lengthy questionnaires covering a large number of variables (often over 50) is one reason for the lack of depth on customer information, which subsequently, is only *partly* studied as one variable among many. In addition, the extent to which the acquired customer information is actually used in the development has not been explicitly elaborated upon.

2.1.3. Customer information exclusively studied - product context

While most studies in product development in the 1970's and 1980's had a broad focus and investigated many possible variables in order to identify those that contributed to success, von Hippel focused exclusively on customer information, and implicitly, its use in product development (1978, 1986, 1988a, 1988b; Urban and von Hippel, 1988). During the 1970's, he introduced the customer-active paradigm (CAP) as a reaction to the traditional manufacturer active paradigm (MAP) existent in the industrial product development arena, and suggested that basing the development on a customer-active paradigm would generate more successful products than basing it on the manufacturer-active paradigm.

According to CAP, the customer develops the idea for a new product as a solution to a problem she/he faces, as opposed to MAP, in which the manufacturer develops ideas and solutions to problems.

A reader accustomed to thinking of customers as supplying product "need" information only, while product manufacturers devise "solutions"- products responsive to the need - might find the concept of product solution data being conveyed along with need data a strange one. In some industries, however, I have found that customers typically do provide a great deal of solution data to manufacturers- field-proven new product designs - as well as need data. (von Hippel, 1978, p. 41, original citations and italics).

Hence, von Hippel underlines the importance of collecting customer information since the content of this information may provide valuable insights not only about customer

needs, but also about *solutions* to these needs. In this regard, von Hippel extends the prior notion of the importance of customer information by putting the focus on the actual content of this information and what it informs the manufacturer about. Later, during the 1980's, von Hippel extended CAP by introducing the lead user concept. According to this concept, information from a specific group of customers, so-called "lead users", is essential for the development of "a novel or enhanced product, process or service" (von Hippel, 1986, p 796):

Lead users are users whose present strong needs will become general in a marketplace months or years in the future. Since lead users are familiar with conditions, which lie in the future for most others, they can serve as a need-forecasting laboratory for marketing research. Moreover, since lead users often attempt to fill the need they experience, they can provide new product concept and design data as well (von Hippel, 1986, p. 791).

By introducing the lead user concept, von Hippel puts the focus on the source of the information by suggesting that developers should consider whom they obtain information from in order to be successful in the development.

A more recent study that also focuses more closely on customer information and its link to successful product development is one by Gruner and Homburg (2000), conducted in the German machinery industry. They found that the intensity of customer interaction during the development process is positively related to success²¹. Moreover, they found that the impact that customer interaction has on the success of the developed product varies between stages in the development:

More specifically, customer interaction during early and late stages of the process can increase the success, whereas interaction during the medium stages yields no performance impact. (Gruner and Homburg, 2000, p. 11)

In addition, Gruner and Homburg (2000) investigated whether the characteristics of the customers have an impact on the success of the developed product. Their findings lend support to von Hippel's suggestion because the information that yielded a positive discriminate effect came from customers featuring lead user characteristics. Other customer characteristics that had a positive influence on the success were "financially attractive customers" and "close customers". While earlier research (von Hippel being one exception) provides only general statements that customer information and (implicitly) its use influence the performance of the developed product, Gruner and Homburg investigate more in-depth the role of customer information in development. Their main contributions lie in:

- An emphasis of the time perspective of customer information during the development process, that is, information from the customer may be used at different points in time during the development and this may have different effects on the success of the developed product.
- A distinction is made between customer groups, that is, some types of customers seem to be more suitable as information sources than others for the development of a successful product.

²¹ *Intensity* was measured by the following items: "We interacted with customers beyond the standards of market research", "The duration of joint work was long", "Frequency of meetings with customers was high", "A high number of persons were involved from customer companies", "The (perceived) intensity of customer interaction was high" and "The number of involved companies was high" (Gruner and Homburg, 2000, p. 8).

In Table 3 the focus, type of study, sample, context and findings of above studies is summarised.

Table 3 Studies on success/failure with an exclusive focus on c.i in product development

Author	Focus	Type of study	Sample	Context	Findings
von Hippel, (1978)	To demonstrate that development based on customer ideas/solutions (CAP) generates more successful products than those based on manufacturers ideas (MAP).	Conceptual/theoretical. Proposes that CAP is more successful than MAP and reviews nine studies to find support.	Review of nine published studies	B2B, Industrial products	Product development is often initiated based on acquired customer information, new products based on customer information is <i>probably</i> more likely to succeed.
Gruner and Homburg (2000)	Does customer interaction enhance new product success? Interaction: A) intensity, B) customer characteristics	Empirical. Personal interviews, survey and statistical analysis. Retrospective	314 vice presidents of R&D (response rate 25.4%)	B2B, machinery industry	Customer interaction, and hence acquired CI, during certain stages has a positive impact on success. Information acquired from financially attractive or lead users contribute positively to success

In comparison to the aforementioned broad-brush studies, the above studies focus exclusively on customer information and how it relates to success/failure. Hence, due to their relatively narrow focus, the studies generate insights on customer information, and implicitly, its use. First, they pinpoint that the ‘type’ of customer the information comes from makes a difference on the performance. Second they suggest that the point in time the information is acquired (and implicitly, used) during the development process can make an impact on success.

2.1.4. Customer information exclusively studied - service context

The studies by Martin Jr and Horne (1993, 1995) employ a narrow focus on customer information and use, and its link to success/failure in a service development context. In contrast to other studies conducted in the success/failure stream, Martin Jr. and Horne (1993, 1995) explicitly use the phrase “use of customer information” (1995, p. 41). This study differs, then, from the previously reviewed ones in which the authors frequently focus on acquiring customer information through “market research”, “market studies”, “test market”, “prototype testing”, “customer interaction” and so on, without revealing anything about the actual use (or non-use) of the acquired information.

In a study of 176 service development processes in 88 firms, Martin Jr. and Horne (1995) contrasted pairs of successful and unsuccessful service developments within the same firm²². The study had two objectives. The first objective was to examine how external inputs (such as customer information) and internal inputs (from managers and front line personnel) differ between levels of success in the same firm. The results show that the degree of external inputs from customers through direct participation in the development process was low, independent of the level of success. However, there was a significant difference between successes and failures, with a greater amount of customer participation in the more successful developments. The second objective was to identify how the use of customer information differed between the most and least successful new services in the same firm. The use of customer information was

²² This study was an extension of their prior study in 1993 where they investigated success and failure factors in service development in *different* firms

examined at three points in the development process; “the idea generation stage”, “the business evaluation stage” and “the marketing plan preparation stage”. The results reveal that in the most successful developments, the use of customer information in all three stages was consistently more prevalent than in the least successful developments. The concluding suggestions made by Martin Jr. and Horne (1995) are that an increase of direct customer participation in the process in general, and the use of customer information at specific phases, will increase the potential of a successful outcome.

Although Martin Jr. and Horne (1995) exclusively focus on customer information and its relationship to success/failure and explicitly state the term use they do not describe and define “customer information” or “use”. Exactly how the information about the customer was acquired, that is, the meaning of customer participation, and to what extent the information was used by the developers in the different development stages is not revealed.

The study by Athanassopoulou and Johnne (2004) investigates successful and less successful corporate banking services to determine differences in developers’ “communication skills” with their customers. They found that in highly successful development, selected customers (lead users) are communicated to throughout the new service development process. They also found that for highly successful development, communication is not enough by itself, but “there is a need for a structured way of exploiting customer-derived information” (p. 113). Thus, Athanassopoulou and Johnne make a clear distinction between acquisition of customer information and its use. In addition, they underline that a sole focus on acquisition is not sufficient for success.

In Table 4, the studies by Martin Jr and Horne (1994, 1995) and Athanassopoulou and Johnne (2004) are summarised.

Table 4 Studies on success/failure with an exclusive focus on c.i in service development

Author	Focus	Type of study	Sample	Context	Findings
Martin Jr & Horne (1994, 1995)	A) To examine how external (such as CI) and internal inputs in the process differ between levels of new service success, B) To identify how the use of CI differs between the most and least successful new services	Empirical. Comparative study between the most and least successful new service in the same firm. Self-reported mail questionnaire. Statistical analysis. Retrospective.	176 new services (pairs of 1 most successful and 1 least successful in each firm).	88 service firms from different industries (not revealed) USA	A) The customer directly participates [or CI information is obtained] to a significantly greater extent in the more successful new services B) The aggregated level of use of CI was significantly higher for level of success. The phrase use of customer information is explicitly mentioned, but its meaning was not described.
Athanassopoulou and Johnne (2004)	To investigate how developers communicate with their customers in order to identify communication skills associated with success of new services.	Empirical. Multiple case studies. Personal interviews and self-administered survey. Retrospective	5 highly successful and 4 less successful leasing developer companies (response rate 75%)	B2B, corporate banking market, UK	Activities related to customer information acquisition during the development process were identified in the highly successful developer companies. The study elaborates to a certain extent on use.

The studies by Martin Jr and Horne (1994, 1995) and Athanassopoulou and Johnne (2004) both investigated customer information in the light of success/failure in a service development context. Although slightly different in focus and context, they

reinforce earlier findings; activities related to customer information have been found to be important in development as they influence the performance of the outcome. Martin Jr. and Horne are to my knowledge the only authors that explicitly use the terms *customer information* and *use* in a service development context. However, they do not describe or define the meaning of these terms. The study by Athanassopoulou and Johne, on the other hand, elaborates to some extent on acquisition and use by not only discussing customer information acquisition during the development process, but also explicitly underline the importance of using the information gained. Thus, that study makes a clear distinction between acquisition and use.

2.1.5. Summary of customer information in the success/failure stream

In the following text, key findings on customer information and how this has been studied in the success/failure stream are summarised.

Customer information acquisition during the development process has been found to be important as it influences the performance of the developed outcome. The extent to which the acquired customer information is *actually used* has not been elaborated upon. It seems to be taken for granted that developers use the customer information that has been acquired. The means or method employed for the acquisition was usually not described. However, the studies indicated that these are formal and that the customer is the target. In addition, it was argued that the type of customers the information comes from, in other words, lead users (von Hippel, 1986) and “financially attractive, close customers” (Gruner and Homburg, 2000), and the point in time in the development process the acquisition takes place, influence the performance. Several authors argue that the customer information should be acquired at the early stages of the development process (e.g. Edgett and Parkinson, 1994, von Hippel, 1978; Oldenboom and Abratt, 2000).

A summary of the research approaches of the reviewed studies is presented in Table 5. The table is adapted from the general outlines by Hunt (1976) and from Olsen and Ellram (1997). Before classifying the reviewed studies, the categories will be described.

An *empirical* study is empirically-based, that is, methods such as survey, case study, interview, experiment or observation are employed to collect empirical data as part of the study. Studies that empirically test hypotheses or put forth ideas and illustrate these through examples from practice are based on a *conceptual and empirical* methodology. Here, the conceptual discussion provides the base, which then is “topped” with empirical data. Finally, a study in the *conceptual and theoretical* group primarily focuses on developing a theoretical framework or model and concept without applying these to the empirical ‘world’. In addition, a study that develops propositions that are *not* empirically tested or that provides a literature review also belongs to the conceptual and theoretical group.

A study can be classified as *inductive and descriptive*, *deductive and explanatory*, or *prescriptive and normative*. The inductive and descriptive dimension attempts to primarily describe the research phenomenon and thus explores questions such as *what is?* and *how is?* The deductive and explanatory methodology attempts to primarily explain and predict causal relationships and thus examines *why?* questions.

The prescriptive and normative attempts to prescribe what should be done thus examine questions of the type *what ought to be?* and *what ought to do?* These

dimensions can be viewed as being on a continuum in which some studies are, for example, primarily descriptive, but still give some explanations and managerial implications. Thus, the studies were divided based on their main methodology.

Table 5 Methodologies and methods used by prior studies - success/failure stream

	Inductive, descriptive	Deductive, explanatory	Normative, Prescriptive
Empirical: - survey (S) - case study (CS) - interview (I) - experiment (E) - observation (O)		Mayer & Marquis (1969) S Cooper (1976, 1979a, 1979b, 1980) S Rothwell, et al (1974) S de Brentani (1991) S Storey & Easingwood (1993, 1996) S Easingwood & Storey (1993) S Edgett & Parkinson (1994) S Edgett (1994) S Oldenboom & Abratt (2000) S Gruner & Homburg (2000) I, S Athanasopoulou & John (2004) I, S Martin Jr & Horne (1993, 1995) S	
Conceptual, empirical: - hypothesis (H) - illustrative examples (IE)		Cooper & Kleinschmidt (1987) H	
Conceptual, theoretical: - literature review (LR) - frameworks, models (M) - propositions (P)			von Hippel (1978, 1986) P

As shown in Table 5, the majority of the described studies on success/failure in service and product development are based on a methodology that is *empirical, deductive and explanatory*. *Survey with self-administered questionnaire* is the most common type of method used for data collection²³. Typically, researchers derive the variables from previous studies in service and product development literature. One danger with this approach is that similar variables are repeatedly investigated and the chances of discovering other success or failure factors that differ from the ones dictated by previous research are rather remote (Craig and Hart, 1992).

Although identified as a success factor from the late 1960's until today, customer information and its correlation with success/failure is rarely exclusively studied as a specific focus of interest in its own right. Apparently, the most common approach is the broad-brush approach, which generates an overview of critical variables rather than an in-depth understanding of one or a few, or as Brown and Eisenhardt (1995) state:

The findings of many studies read like a “fishing expedition” - too many variables and too much factor analysis (p. 353).

Furthermore, the majority of prior research is retrospective in nature, that is, the aim is to reveal, after the launch, why the new service or product became a success or a failure. This approach has been critiqued by several authors; van de Ven and Poole (1990), for example, argue:

...it is widely recognized that prior knowledge of the success or failure of an innovation invariably biases a study's findings. While historical analysis is necessary for examining many questions and concerted efforts can be undertaken to minimize bias, it is generally better to initiate

²³ That survey is the most common method employed in studies on success/failure factors in *product* development has been identified by others as well, see e.g. Hart (1993).

historical study before the outcomes of an innovation become known. It is even better to observe the innovation process throughout its unfolding. This approach maximizes the probability of discovering short-lived factors and changes that exert important influence (p. 316).

In a similar vein, Brown and Eisenhardt (1995) claim:

The research stream relies heavily on retrospective sense making of complex and past processes, usually by single informants...Individuals often are asked to quantify subjective judgements surrounding long lists of success and failure factors...Thus, the research results are likely to suffer from a host of attributional and other biases, memory lapses, and myopia, which are associated with subjective, retrospective sense-making tasks (p. 353).

2.2. Customer information in the incremental/radical stream

Another major stream of studies in the service and product development literature focuses on the development of *incremental* and *radical* innovations. The terms 'incremental' and 'radical' refer to the degree of novelty or newness of the new outcome²⁴. A developed product/service can be viewed as existing on a continuum ranging from totally new, discontinuous, or radical to one that is just moderately developed, incremental or continuous in nature. Hence, radical and incremental services represent the opposite ends of the newness spectrum. The degree of newness can be determined from the perspective of the developing firm or from the perspective of the marketplace (e.g., Olson, Walker Jr., and Ruekert, 1995)²⁵. Changes in technology (e.g., information technology) and in product/service categories (e.g., the introduction of a category previously non-existent at the firm or a line extension) are frequently focused upon when the degree of newness of an innovation is determined from the firm's perspective. The change in thinking and behaviour that is required of the customer in order to consume the developed service is usually in focus when the marketplace determines the degree of newness (e.g., Avlonitis and Papastathopoulou, 2001; de Brentani, 2001; Olson, Walker Jr and Ruekert, 1995).

Within the incremental/radical stream, two sub-streams were identified with a slightly different focus and research approach. In one of the streams, studies aim at identifying whether success/failure factors differ between new incremental and radical outcomes. Thus, related to customer information and its use, the question of interest is: *How does customer information and its use relate to the success/failure of incremental versus radical new services/products?*

In the other sub-stream, studies aim at identifying whether customer information has an impact on the *degree of newness* of the new product/service. Thus, the focus is narrow on the sole aspect of customer information (and its use). The question of interest is here: *How do customer information and its use in the development process influence the degree of newness of the developed outcome?*

The review of the incremental/radical stream is structured as follows. First, studies with a broad focus conducted in service and product development contexts are explored. Second, studies with an exclusive focus on the role of customer information (and its implicit use) in the development of incremental versus radical innovations are discussed. Summaries are presented after each section. A presentation of key findings

²⁴ Another term frequently used for the *degree of novelty* is "innovativeness". The more innovative the service or product, the more novel or new it is.

²⁵ For a thorough review of different ways, the terms 'innovation' and 'innovativeness' have been described and operationalised in the new product development literature, see Garcia and Calantone (2002).

on customer information and use, and how it has been studied in this stream concludes the literature study of the incremental/radical stream.

2.2.1. Customer information partly studied – product/service context

This sub-stream of studies has evolved during more recent years, and apparently, as a reaction towards the neglect to acknowledge that the development process may differ depending on the *degree of newness* of the product/service being developed. In consequence, it is argued, so may also the factors that contribute to the success/failure of the new outcome. The perspective in these studies is broad and the acquisition of customer information, and implicitly, its use constitutes only one among several other variables that are investigated. How customer information use relates to new incremental/radical innovations and their performance has to my knowledge not been investigated empirically as a sole topic in its own right. The ones that will be described are, if not the only ones, some of the very few that have the aforementioned focus, are empirically based, and conducted in a product or service development context. Avlonitis and Papastathopoulou (2001) argue that prior to their study only one study with a similar focus in a service development context has been conducted.

With the aim to identify if and how those success/failure factors that have been identified in prior research differ depending on the degree of newness of the service innovation, de Brentani (2001) investigated 150 successes and 126 new service failures in a business-to-business context. She found that some factors are “global”, which means that they have a similar impact on performance regardless of the innovativeness, whereas other factors differ in impact depending on the novelty of the service being developed.

One factor in the study that relates to customer information, is “formal evaluation and design”, which includes the variables “in-depth market study”, “used detailed ‘drawing board’ approach”, “concept descriptions were customer researched before design”, etc. (de Brentani, 2001, p. 187). According to de Brentani (2001), “formal evaluation and design” was found to be significant in distinguishing between success and failure for incremental business services, but was found non significant in the case of radical ones. This suggests that formal customer information acquisition (and implicitly its use) has an impact on the performance of new incremental services, but not on new radical ones. The insignificance in the case of radical services could be explained by the notion that the market requirements (or customer information) are “fuzzy” and difficult to evaluate for the firm and the eventual radical service is difficult to define. Thus, it may be counterproductive to impose a formal and well-planned NSD process, including the formal evaluation and design.

In a similar vein, Avlonitis and Papastathopoulou (2001) focused on the impact that success and failure factors have on radical versus incremental services²⁶. However, their study was conducted in a business-to-consumer setting (rather than in business-to-business) of financial services. The factor “market testing” is closely related to customer

²⁶ 54 successes and 46 failures were investigated, of which 42 were classified as *innovative* and 58 as *non-innovative*. The innovative retail services were characterised as “new to the market”, “new to the company”, “new delivery processes” while the non-innovative services were characterised as “product modifications”, “product line extensions” and “product repositioning” (Avlonitis and Papastathopoulou, 2001, p. 721). Note that although the authors are investigating retail financial services, they use the term *product*.

information acquisition and its use since two out of three²⁷ variables describing this factor were:

- product testing in potential customers
- evaluating results of product testing and adjusting product, procedures and systems (Avlonitis and Papastathopoulou, 2001, p. 737)

Interestingly, the results suggest that customer information (and its use) were not significantly linked to the performance (success or failure) of the new incremental services or of the new radical ones. According to the authors, this finding is no surprise since “market testing”, or as I would put it the acquisition of customer information, is an activity that was conducted to a very limited extent in the development processes of each case²⁸. Elaborating on this finding, Avlonitis and Papastathopoulou (2001) state that in the case of radical services, and given the competitive situation in the retail financial service industry, the reluctance to test the service with customers (and thereby acquire customer information) *before* launch can be explained by the perceived risk of information about the service reaching competitors:

Thus, in order to keep the new project confidential and subsequently minimize the risk of imitation, financial service providers try to avoid any pre-launching market exposure (Avlonitis and Papastathopoulou, 2001, p. 728).

In addition, the authors claim that during the qualitative phase of their study, when they interviewed a number of service development managers, it was revealed that frequently, instead of conducting formal service tests:

The launching stage is used as a quasi test phase, where certain adjustments are made in line with customer reactions...receiving feedback from customers regarding the products and taking corrective actions to product launching are executed to a higher extent when innovative products are developed compared to non-innovative products (Avlonitis and Papastathopoulou, 2001, p. 728).

Hence, the study suggests that the launch stage is used as a means of acquiring customer information. Furthermore, the study reveals that to acquire customer information in this way was more frequently undertaken in the case of *radical* services than for that of incremental ones. Considering the development of incremental services, the authors speculate that the ‘time issue’ can be a reason for not acquiring and using customer information, as this would delay the launch of the developed service allowing competitors’ faster entry to the market.

The studies by de Brentani (2001) and Avlonitis and Papastathopoulou (2001) are, if not the only ones, some of the very few empirically-based studies on incremental versus radical new services *and* success/failure factors. As mentioned earlier, both studies have a broad perspective and are performed in a service development context, one focused on the development of business services and the other on the development of consumer services. Thus, concerning customer information and use, these studies provide the following insights:

²⁷ The third variable was “product testing in company’s personnel” (Avlonitis and Papastathopoulou, 2001, p. 737).

²⁸ The investigation demonstrates that “market testing” was ranked as the least relevant factor, or least performed activity, in the development of both incremental and radical services (Avlonitis and Papastathopoulou, 2001).

- In a B2B setting: customer information and, implicitly its use, contribute positively to the performance of developed *incremental* services, but not to radical ones. (de Brentani, 2001)
- In a B2C setting: customer information and, implicitly its use, *do not contribute positively or negatively* to the performance of *either type* of developed service. (Avlonitis and Papastathopoulou 2001a)

However, Avlonitis and Papastathopoulou found that especially in the case of radical services, developers tend to utilise the launch stage as a means of acquiring customer information and subsequently use this information to further develop the service. Thus, customer information was acquired at a very late phase of the development process. Unfortunately, the study does not reveal in more detail what is meant by “the launching stage”, thus it is difficult to identify whether the customer information was obtained after the ‘final’ launch or if there were pre-launches before a final launch. Furthermore, the study does not reveal how “using the launching stage” as a means of customer information acquisition and subsequent use of that information was linked to the performance of the developed radical type of service.

Moving on to industrial *products*, Rochford and Rudelius (1997) compared the development processes of radical and incremental medical devices. The aim was to find out the *perceived importance*²⁹ of different stages of development activities, the *actual execution* of these activities and the *performance* of each type of new product (incremental versus radical). Related to the three-folded aim, the authors present some propositions.

First, the following was proposed: “product innovativeness influences the perceived importance of each NPD stage” (p. 72). This means that the more radical the product being developed is, the more important it is to carefully carry out each stage of the development process. Related to customer information and its use, the authors suggest the following as an example of activities that could be of critical importance in the development of new radical products:

Market research could be considered more critical for new-to-the-world products than for product modifications where market and customer information may already exist (Rochford and Rudelius, 1997, p. 72)

The results of the study suggest that in the case of radical products, all stages and activities were perceived as more important than in the case of incremental products. Thus, the acquisition of customer information, that is, “market study, market testing” and “customer product testing” are perceived as more important for the development of radical products than for that of incremental ones. The reason for this claim, it is argued, is that the development of radical products is a more uncertain and risky project since the company lacks the experience of developing such a product. Although customer information was not perceived as important to acquire for the development of incremental products, the authors warn against the possible temptation of accelerating the development process by omitting customer information acquisition (and use). Because even though the development is only a modification, the acquisition of customer information is tremendously important especially in the case of medical devices.

²⁹ The perceptions of R&D, marketing, manufacturing managers and top management were investigated (Rochford and Rudelius, 1997).

Secondly, the authors propose: “product innovativeness influences...whether a specific NPD stage is [actually] performed...” (p. 72). Acquisition of customer information is claimed to support their proposition:

Customer testing...would likely be undertaken more frequently for firms launching new-to-the-world products opposed to product modifications since the risks and uncertainties associated with new-to-the-world products would merit careful scrutiny (Rochford and Rudelius, 1997, p. 72)

In other words, the more radical the product is, the more likely it is that each development stage of activities, such as customer information acquisition (and implicitly stated its use), are undertaken during the development process. The results show that in the case of radical products any given development stage (including that of customer information acquisition activities) is undertaken more frequently than for incremental ones.

Third, the authors propose: “performance of specific NPD stages influences the degree of new product success and varies with a product’s innovativeness”. The results of the study demonstrate that customer information acquisition (“market study”) was more frequently undertaken in the development of successful radical products than for less successful radical products or incremental products.

Another study that compared the development processes and performances between radical and incremental products is that of Song and Montoya-Weiss (1998). They investigated 163 really new products and 169 new incremental products developed by firms in high-technology industries. The study does not reveal whether the products in focus are business, consumer or a mix of both. Their findings indicate that similar development activities have different impact on success depending on the degree of newness of the new product. Customer information acquisition, and implicitly its use, can be identified among the measurement items for the set of activities labelled “business and market opportunity analysis”:

- Conducting a market study or market research; a detailed study of market potential, customer preferences, purchase process, etc. (business and market opportunity analysis) (Song and Montoya-Weiss, 1998, Appendix p. 134).

For *radical* products, the acquisition of customer information was identified as having a *negative* effect on the success level. On the other hand, in the case of *incremental* products, customer information acquisition activities were found to have the strongest *positive* effect on the success level and were ranked as the most important determinant of success.³⁰

In the discussion on reasons underlying their findings, Song and Montoya-Weiss argue that for the development of radical products, the negative effect of market studies on success is due to the fact that customer needs are not well defined. In this type of products extensive education is usually needed, involving iterative learning from the market as customer requirements and technological development co-evolve. As a consequence, they argue, the traditional market study is costly since it inaccurately captures customer needs and the desired type of iterative learning. However, in the

³⁰ It should be noted that the customer information acquisition activities of “conducting a market study or market research; a detailed study of market potential, customer preferences, purchase process, etc.” are only *one* part of activities in the set “business and market opportunity analysis”. Included in this set is also the study and analysis of market trends and competitors. Thus, it should be kept in mind that customer information acquisition activities are not *solely* contributing to the success of *incremental* developed products (see Song and Montoya-Weiss, 1998, p. 134).

development of the *incremental* type of products, the reverse is suggested. This type of product is developed for an existing market that is familiar with the technology and detailed market studies are critical for determining the features that will differentiate the product and its position in a successful way.

Interestingly, the findings, related to customer information acquisition (and only implicitly stated its use) during the development processes of incremental versus radical products and their performance are contradictory:

- Customer information acquisition is perceived as more important and is undertaken more frequently in the development of successful radical products than in the development of incremental ones (Rochford and Rudelius, 1997).
- Customer information acquisition during the development has a negative impact on successful radical products and a positive impact on the success level of incremental developed products (Song and Montoya-Weiss, 1998)

Table 6 summarises the focus, type of study, sample, context and findings of the broad focused studies in the incremental/radical stream

Table 6 Studies with a broad focus in the incremental/radical stream

Author	Focus	Type of study	Sample	Context	Findings
de Brentani (2001)	How do NPD success factors for radical services differ from those linked to the development of incremental services?	Empirical. Comparative study of success/failure and incremental versus radical services. Survey using self-administered questionnaires and statistical analysis. Retrospective	276 new services; 150 successes and 126 failures. Subsample of 84 incremental and 64 radical services. Managers (response rate 67.3%)	B2B, various service industries, Canada	Customer information acquisition and (implicitly stated) its use contribute positively to the performance of developed incremental services, but not to radical ones
Avlonitis and Papastathopoulou (2001)	Does the development process for radical services differ from the development process of incremental services and what are the development activities of successful radical versus incremental services?	Empirical. Comparative study of success/failure and incremental versus radical services. Survey using self-administered questionnaires and statistical analysis. Retrospective	100 new services; 58 incremental (27 successes & 31 failures) and 42 radical (27 successes & 15 failures). NPD project leaders (response rate 71.4%)	B2C, financial services, Greece	Customer information acquisition (and implicitly its use) does not contribute positively or negatively to the performance of either type of developed service because the developers very rarely undertake these activities.
Rochford & Rudelius (1997)	To compare new product success between radical products and incremental products by using perceptions of R&D, marketing, and manufacturing managers about the importance and actual use of the NPD stages and activities	Empirical. Comparative study of incremental versus radical successful products. Develops and evaluate propositions. Survey using self-administered questionnaires and statistical analysis. Retrospective	79 successes: incremental products represented 68% and 32% were radical ones. Multiple respondents involved with the new product: R&D, marketing and manufacturing managers (response rate 36%)	B2B, medical device manufacturing industry, USA	Customer information acquisition (and implicit its use) is perceived as more important and is undertaken more frequently in the development of successful radical products than for less successful radical products or developed incremental products.
Song and Montoya-Weiss (1998)	To compare the NPD processes and performance outcomes of radical and incremental products	Empirical. Comparative study of incremental versus radical successful products. Survey using self-administered questionnaires and statistical analysis. Retrospective	169 incremental products and 163 radical ones. Product development project manager/leader and one team member from each project (response rate 33.2%)	B2B or B2C or a mix not revealed. Companies listed in the 1993 High-Technology Industries Directory, USA	Customer information acquisition has a negative impact on successful radical products and a positive impact on the success level of incremental products.

Although the methods in each study are similar, no conclusive findings exist concerning customer information acquisition influences success/failure of the development of incremental versus radical services. A reason for this may be the fact that research on the effect of customer information on incremental and radical outcomes is still in its infancy, and so far, only very few empirically-based studies have been conducted with this focus. The studies all have a broad-brush perspective. Consequently, customer information is not elaborated on in-depth in these studies and use of customer information is not explicitly dealt with. Furthermore, a discussion on potential difficulties with acquisition as well as use of the information is not mentioned. It appears to be taken for granted that the customer information that is acquired is also used in the development.

2.2.2. Customer information exclusively studied – product/service context

Another identified sub-stream of studies within the incremental/radical stream focuses in particular on the role of customer information acquisition (and its use) in the development of radical versus incremental innovations. Thus, in comparison to the previous stream, where customer information acquisition (and its use) is only one among several other variables that were investigated, studies in this stream have a narrower focus on the sole aspect of customer information and its impact on the degree of the newness of the innovation.

To identify the following studies, a “snowball” technique was primarily utilised in which citations found in identified studies were looked up and then citations found in those identified studies were looked up, and so forth. The studies have predominantly been published in management-oriented marketing journals, such as *Harvard Business Review*, *Fortune* and *Business Horizons*, etc. Since customer information and its implicit use in the development of incremental and radical outcomes have attracted a relatively large amount of attention, a selection of studies was made to represent the ongoing debate in this genre from an early “starting point” to more recent studies. To avoid studies repeating exactly the same thing in exactly the same way, the studies differ in some respect from each other.

An early conceptually based study on the relationship between customer information acquisition and degree of newness of the innovation is that of Tauber. Already in 1974, he claimed that customer information should be disregarded when developing radical innovations. By radical innovations he refers to products that are discontinuous in that they significantly “alter or create new consumption patterns”, or, “change our lives” (Tauber, 1974, p. 22). Tauber not only argues that the acquisition of customer information is irrelevant, but even states that it *discourages* major innovations. The core of his argumentation is that several important variables are not sufficiently taken into consideration when information is acquired from the customer. Social interaction, for example, influences customer perception and demand of radically new innovations. However, this, he argues, is not considered when acquiring customer information. Market research is rather based on the idea that man acts alone and total demand is yielded by just summing up the individual demand curves. He illustrates his point with the following example:

An example of a successfully marketed discontinuous innovation that changed the diet of millions is low-fat fruit yoghurt. In its early introductory stages, yoghurt was perceived as a ‘health-nut food with an awful taste’, and concept testing would have dictated a ‘no-go’

decision...as more people began to use the product, it became more acceptable (Tauber, 1974, p.24).

Furthermore, Tauber (1974) questions the basic assumption that underlies the activity of customer information acquisition, i.e. that the customer is aware and can easily express his needs and that the customer is positively disposed toward the products that fulfill those needs:

Major innovation and the need for them are beyond the foresight of masses of people. Few could have perceived a need for automobiles or television. It is the genius of the innovator that he recognizes a need before it is widely perceived (Tauber, 1974, p. 26).

About twenty years later, still in a similar vein, Martin and Faircloth (1995) argue that in order to develop “breakthrough products and services,” product managers should ignore the customer. The authors do not elaborate in-depth on the reasons underpinning their claim. They illustrate their ideas with several examples of launched consumer products and services of well-known companies where the customer information acquired during the development suggested the opposite of what actually happened. Fax machines, VCRs, Federal Express, microwave ovens and frozen food are mentioned as examples of radical innovations that would not have been launched if the companies behind them had acted in accordance with the acquired customer information. Martin and Faircloth argue that customer information can be misleading by quoting an industrial design consultant who states: “what appears strange today can become the accepted norm tomorrow” (1995, p. 123).

Hamel and Prahalad (1990, 1994) are frequently referred to in this area. Related to customer information and its use during development in light of radical versus incremental products and services, they suggest:

Although market research can be helpful [in] fine-tuning well-known product concepts to meet the demands of a particular class of customers...it is seldom the spur for fundamentally new products concepts (Hamel and Prahalad, 1994, p. 110).

The reasoning goes that traditional market research captures only those needs that the customer is capable of articulating, which in turn generates only incrementally new products. The authors argue that the customer has needs that he would like to have satisfied, but cannot articulate them. It is this latter type of customer information, the unarticulated needs, which generate more radical innovations, and subsequently, the type of information the product managers should focus on in order to “compete for the future”.

Another prominent author who argues that the customer may *not* be the source to turn to when developing radical services or products is von Hippel (1986):

Accurate marketing research depends on accurate user judgments regarding their needs. However, for very novel products or in product categories characterised by rapid change such as ‘high technology’ products-most potential users will not have the real-world experience needed to problem solving and provide accurate data to inquiring market researchers (von Hippel, 1986, p. 791).

von Hippel (1986) support his line of reasoning by referring to theory within the area of problem solving. Based on ideas from that area, he argues that the customer’s ability to provide information about radical products and services depends on his real-world experience. The real-world experience tends to set boundaries for the imagination of the customer. In consequence, he continues, the customer “steeped in the present is unlikely to generate novel product concepts which conflict with the familiar” (von

Hippel, 1986, p.791). Nevertheless, von Hippel proposes that *some* groups of customers, whom he calls “lead users”, do possess the required ability to provide information about their needs for novel or radical innovations. Thus, von Hippel suggests that when developing radical products and services, the developer should acquire information from *lead users* rather than information from the average customer.

In line with the thoughts of von Hippel (1986), Ulwick (2002) states that since customers only know what they have experienced³¹, the acquisition (and use) of customer information in development only generates incremental improvements. In addition to von Hippel’s argumentation, Ulwick also argues that developing products exactly as the information dictates tends to result in products that are very similar to those already existent on the market, that is, “me-too”-products:

Customers merely ask for missing features that other manufacturers already offer. In the mid-1980s, for example, market studies conducted by U.S. automakers Ford, Chrysler, and GM revealed that customers wanted cup holders in their vehicles. Because Japanese manufacturers had provided this feature for years, when American companies finally added the frequently requested cup holders, none gained an advantage; customers merely stated, “it’s about time” (Ulwick, 2002, p. 93).

However, as opposed to von Hippel, Ulwick claims that developers should *not* use information from lead users. Lead users represent only a narrow group of customers, and products that are developed based on lead user information may in the future receive only a limited demand. Hence, Ulwick (2002) argues that today’s lead user needs may not necessarily represent that of the broad mass in the future.

With a slightly different perspective, Berthon, Hulbert and Pitt (1999) contend that developed radical products or services can *create* needs, wants and values. The authors argue that technology has the potential of creating markets and customers, thus customers and their needs do not necessarily have to be an antecedent to service or product development. Changes in technology have the potential to “change people’s perceptions, their expectation, and their preferences” (Berthon, Hulbert and Pitt, 1999, p. 43) or “products precede needs and create their own demand by changing the way customers behave” (ibid. p. 42). In addition, the pace of change is suggested as another rationale for *not* acquiring and using customer information. The authors suggest that customer needs and wants change rapidly, and by the time the new service or product is launched, their desires may have changed. Interestingly, this implies that there is a “due date” on customer information when the information expires and is not valid anymore.

Although Berthon et al (1999) suggest that new products can *create* customers, instead of *serving* customers, they also underline that there is not *one* “right” way to go about it when deciding on which of these strategies to apply. Sometimes under certain conditions it is more appropriate to “create customers” and sometimes under other conditions it is more appropriate to “serve the customer”. According to the authors, these two approaches are two distinct strategic orientations that are not necessarily in conflict³². Relating this reasoning to the acquisition of customer information and its use in development, one could argue that sometimes it is perhaps more suitable to develop a product/service first and only secondly, acquire customer information about that product for potential use in further development or refinement. Then again, at other times, it may be more suitable to first acquire customer information and to use it for

³¹ For similar reasoning, see also Bennett and Cooper (1979, 1981).

³² For similar discussions, see also e.g. Johne, 1994; Trott, 2001.

developing new innovations. The main idea is that a company can do both by applying the two strategies in different development projects.

With the purpose of investigating customer information, or “the contributions” made by ordinary users in comparison to professional service developers, Magnusson, Matthing and Kristensson (2003) conducted an empirical study within the Swedish telecommunications industry³³. They found that the information, in terms of ideas for new services, which was acquired from ordinary users, was more original or novel than that of the professional developers. The study was conducted as an experiment in the following manner. Subjects in one group consulted service design experts during two occasions, while the other group had no interaction with experts. Interestingly, the group that had no interaction with experts provided significantly more original service proposals than the “consulted users” and the professional developers:

It appears that the users, during consultation, adopted the experts’ more rigid way of thinking...Just like the experts, the users, when aware of the systems’ technical limitations, tended not to stretch beyond what was currently possible to implement (Magnusson et al., 2003, p. 119).

As opposed to the majority of the previously reviewed studies, Magnusson et al explicitly elaborate on, or at least mention, the actual use of customer information. They state that the information acquired from ordinary users, which was found to be more original, or novel, than that of the consulted users and professional developers, is on average harder “to implement and convert into commercial services” (p.121), or as I put it, to use. Thus, the lower the originality, the higher the potential to use the customer information seems to be.

Regarding customer information acquisition and use, the study by Magnusson et al contributes with important insights. First, the study supports in a concrete way the obvious fact that how the (customer) information is generated has an impact on the content of that information. Second, by explicitly elaborating on the “producibility” of the generated ideas, a very important point is brought to the surface, that is, the distinction between acquisition of customer information *and* the use of that information. As repeatedly shown throughout this review, this distinction is rarely explicitly touched upon.

Table 7 presents the focus, type of study, sample, context and “findings” of studies within the incremental/radical stream that employed an exclusive focus on customer information.

³³ See also the studies by Kristensson, Magnusson and Matthing, 2002; Magnusson, 2003; Matthing, Sandén and Edvardsson, 2004, that to a large extent are based on the same empirical data, but analysed from slightly different perspectives.

Table 7 Studies on incremental/radical new outcomes with an exclusive focus on customer information

Authors	Focus	Type of study	Sample	Context	Findings
Tauber (1974)	New product market research discourages major innovations	Conceptual/ Empirical: illustrative examples	Not applicable (n.a.)	Consumer products	Customer information should not be acquired or, implicitly stated, used in the development of new radical products
Martin & Faircloth (1995)	Customer should be ignored if the company is to develop breakthrough products/services	Conceptual/ Empirical: illustrative examples	n.a.	Mostly consumer products, but also industrial products and services	Customer information should not be acquired or, implicitly stated, used in the development of new radical outcomes
Hamel & Prahalad (1990, 1994)	The customers' unarticulated needs are the ones the company should focus on in order to develop radical products and gain a competitive advantage	Conceptual/ Empirical: illustrative examples	n.a.	Primarily consumer products	Customer information should not be acquired or, implicitly stated, used since this information most likely only contain information on the customers' articulated current needs, which does not generate radical products.
von Hippel (1986)	In order to develop radical products customer information should be acquired from lead users	Conceptual/ Theoretical: propositions	n.a.	Consumer products and services	Customer information should be acquired and, implicitly stated, used from lead users in the development of radical outcomes. Because a lead user have those needs today that the average customers will have in months or years.
Ulwick (2002)	It may be dangerous to acquire and, implicit, use customer information in development because this tend to result in incremental, rather than radical outcomes	Conceptual/ Empirical: illustrative examples	n.a.	Industrial and consumer products and services	Customer information should not be acquired from lead users and, implicitly stated, used in development since lead users are a narrow group and not the average customers.
Berthon et al. (1999)	Instead of acquiring information on customer needs and using this for developing products, radical products can create customers needs	Conceptual/ Empirical: illustrative examples	n.a.	Products, services	It is not an "either-or" issue. Rather, at sometimes customer information should first be acquired and then used to develop products, and at other times, products should be developed without any acquisition or use of customer information in the development. Both strategies can co-exist in the same company, but guide different development projects.
Magnusson, Matthing & Kristensson (2003)	To compare the acquired information or "the novelty of ideas" from ordinary users and professional developers	Empirical: experiment	12 professionals, 19 ordinary users, 20 consulting users	Consumer telecom services	The information, in terms of novel ideas, acquired from ordinary users was more original than that of the professional developers. Thus, the ordinary customer should not be dismissed as a source of novel ideas for the development of radical services. However, they also found that this novel information is also harder to convert into commercial services, i.e., to use in the development.

The studies prescribe that customer information ought to be acquired, and implicitly stated, used in the development of *incremental* products/services, but in the case of radical products/services most, but not all, authors recommend the opposite. The reasons suggested for not acquiring customer information when developing *radical* outcomes appear to be primarily related to the customer himself. For example, the customer cannot articulate the information needed (Hamel and Prahalad, 1990, 1994) and the customer's needs and wants change rapidly, resulting in obsolete developed products (Berthon, Hulbert and Pitt, 1999). Magnusson et al (2003) found that the novel customer information from the ordinary user was less usable. Thus, depending on whether the company is interested in "usable" customer information in terms of action-oriented and *instrumental* use of the information (i.e., to implement it in development) or if the company is after *conceptual* use (enhancement of the understanding of the customer that not necessarily result in any action, such as development), the company can turn to the ordinary customer when developing radical services.

2.2.3. Summary of customer information in the incremental/radical stream

In the following, some key findings on customer information and how this has been studied in the incremental/radical stream are presented.

The reviewed studies, with a broad focus that empirically investigated success/failure factors in the development of incremental versus radical outcomes in a service and product development context revealed rather inconclusive findings concerning customer information. Customer information acquisition, and implicitly its use, in development was found to have a positive impact, a negative impact and no impact on the performance of *radical* outcomes. In the case of *incremental* outcomes, it was suggested that customer information, and implicitly its use, during development have a positive impact, or no impact, on performance.

The reviewed conceptual studies with a narrow focus appear to agree more than those with a broad focus (in 2.2.1). The majority of these studies recommended that in the case of new radical services/products, customer information should not be acquired, and implicitly stated, not used during the development. One exception was identified, von Hippel (1986), who recommended that information should be obtained during the development, but only if this is acquired from lead users. These studies did not in depth elaborate on customer information-related activities. However, they argued that acquiring customer information might not be totally unproblematic and straightforward as it brought to the surface some of the difficulties related to the customer and means of acquisition. This viewpoint is in contrast to the rational and unproblematic notion in the majority of studies in the previously reviewed success/failure stream.

Furthermore, it can be concluded that in order to develop successful radical services, companies should *not acquire nor use customer information*. This contradicts the results revealed by studies reviewed in the success/failure stream that do not make a distinction between incremental and radical outcomes, which claims that customer information acquisition is one of the most critical success factors in development.

The extent to which the acquired customer information is *actually used* in the development was not focused upon. The study by Magnusson et al (2003) is one of the

few that touches upon use and makes an explicit distinction between acquisition of customer information and use. *This study contributed to our understanding of customer information and its use in development primarily by demonstrating that not all information about customers is used in development.* In this case, the way in which customer information was acquired had an impact on its potential use, in other cases there may be other influential circumstances.

The following table summarises the methodologies and methods used by the reviewed studies in the incremental/radical stream:

Table 8 Methodologies and methods used by prior studies – incremental/radical stream

	Inductive, descriptive	Deductive, explanatory	Normative, prescriptive
Empirical: - survey (S) - case study (CS) - interview (I) - experiment (E) - observation (O)		de Brentani (2001) S Avlonitis & Papastathopoulou (2001) S Rochford & Rudelius S Song & Montoya-Weiss (1998) S Magnusson et al. (2003) E	
Conceptual, empirical: - hypothesis (H) - illustrative examples (IE)			Hamel & Prahalad (1990, 1994) IE Martin & Faircloth (1995) IE Ulwick (2002) IE Berthon et al. (1999) IE
Conceptual, theoretical: - literature review (LR) - frameworks, models (M) - propositions (P)			von Hippel (1986) P

Table 8 depicts the methodology and methods applied by the reviewed studies in the incremental/radical stream. Primarily two different approaches were identified. One sub-stream of studies used a broad-brush perspective on success/failure factors in order to identify how they differ between development of new incremental and that of new radical services and products. Here, the most common methodology was empirical, deductive and explanatory. The most frequently employed method in these studies was surveys and the variables investigated were derived from previous studies in service and product development literature. As previously mentioned (see 2.1.5), there may be a danger with this approach since very similar variables are investigated and the chances of discovering other variables than those dictated in prior research are rather remote.

Another sub-stream of studies in the incremental/radical stream had an exclusive focus on customer information. Here, the main methodology employed was normative/prescriptive with conceptually based studies that “topped” their discussions with illustrative empirical examples, except the study by von Hippel (1986) that proposed his idea and supported it with theory from problem solving. Additionally, the study by Magnusson et al (2003) was empirical and based on a deductive and explanatory methodology. The method applied in their study was an experiment in a natural setting.

2.3. Customer information in the means/method of acquisition stream

Another mainstream of studies in the new product and new service development literature focuses on *how* the company or developers acquires, through different means and methods, or *should* acquire, customer information for the purpose of using it in

development³⁴. The underlying premise is that services and products that are developed based on information about the customer's perception and behaviour perform successfully. In addition, there seems to be a general agreement in this stream that the content and quality of the acquired information is largely dependent on the means employed to generate it. The source of customer information is most often the customer him/herself. Thus, a basic assumption is that information *about* the customer (i.e., customer information) should be directly acquired *from* that customer. Nonetheless, some authors assert that the front line personnel (e.g., Easingwood, 1986; John and Storey, 1998; de Jong and Vermeulen, 2003), or the sales personnel (Gordon et al, 1997; von Hippel, 1988b), should be consulted, or involved, when developing services/products³⁵.

In comparison to the success/failure and incremental/radical streams, the research approaches in this stream appear to be more diverse. Some studies (see e.g., Urban and Hauser, 2004) focus on a particular means of customer information acquisition and others (see e.g., Pullman, Moore and Wardell, 2002) conduct a comparison between a few or many. Some studies are empirical (see e.g., Ekdahl, Gustafsson and Edvardsson, 1999) and others are wholly conceptual (see e.g., Kaulio, 1998). Several are conceptual and prescribe, in various detail, one way, or *the* way, of generating and acquiring customer information by illustrating its excellence with examples from practice (see e.g., Leonard and Rayport, 1997). Another approach in the service marketing and management literature is to claim that customer information, and implicit its use, is important in development without further elaborating on any means or methods of how to acquire it in the development (see e.g., John and Storey, 1998). This diversity of approaches in studies on how customer information actually *is*, *can* or *should* be acquired makes the structure of this review a challenging task. As a result, the review is only roughly structured on the basis of the reviewed study's stated context; service or product development. Studies focusing on means/methods in a service development setting are reviewed first. Thereafter, studies that focus on this matter in a product development context are reviewed.

2.3.1. Means and methods of customer information acquisition in a service context

As will be shown, most studies that discuss ways of acquiring customer information in a service development context appear to do so only as part of their study. To my knowledge, no study has been conducted that empirically and exclusively investigates how customer information is acquired in a service development context. The following reviewed studies that, at least to some extent, deal with this topic and explicitly so in a service development context, were identified when a 'general scanning' of studies on service development within the area of services marketing and management was conducted.

³⁴The terms *mean* and *method* are used throughout the review of this stream. Both terms refer to *how* customer information is acquired. However, *means* is used when the reviewed study describes this 'how' in a less detailed manner, while *method* is used when customer information acquisition is described in a more precise manner.

³⁵ von Hippel (1988b), for example, argues that the salespeople spend much time with customers and thus "should be in a good position to obtain information on promising user new-product needs, ideas and prototype solutions" (p 74).

As mentioned, several studies underline the importance of acquiring customer information in a service development setting without further elaborating on any means or methods of how to acquire this information in the development process. For example, in their review of the service development literature, Johnes and Storey (1998) state that the customers are an important group that needs to be managed in an “effective development project”: “It is important to involve customers in the development process and help them articulate their needs” (ibid., p. 204). However, the authors do not elaborate on exactly how the customer should be involved in the development process nor how the customer should be helped in articulating his/her needs, that is, the means to generate and acquire information about the customer’s needs is not revealed.

In a similar vein, Edvardsson and Olsson (1996) claim that understanding customers’ needs and wishes is important when developing new services. In order to achieve this understanding they suggest that customers should be involved or included in the process, that a dialogue with customers is set up, that a close contact is kept with customers, and that the customers are helped to put forth their needs, wishes and requirements:

To understand customers’ needs and wishes properly, it is appropriate and often necessary to involve customers in the process of developing new services. Attractive and customer-friendly services emerge from a dialogue with competent and demanding customers. We believe it is very important to have close contact with the customer when developing new services. This requires us to include customers in service developments projects, to set up a meaningful dialogue with customers and to make it easier for them to articulate their needs, requirements and wishes (Edvardsson and Olsson, 1996, p. 142).

However, the authors do not describe the meaning of *involving* or *including* the customers, of what is meant by having a *close contact* or a *meaningful dialogue* with the customers, or how the developers can *make it easier* for the customers to put forth their comments. Thus, the study does not reveal exactly how customer information should be generated and acquired in order to achieve the recommended understanding of the customer necessary for the development.

Although not exclusively investigating different means and methods for acquiring customer information in service development, some authors have touched upon this matter as part of their empirical studies.

One such early example is the study by Langeard, Reffait and Eiglier (1986). Based on the well known claim that “new services just happen,” they investigated 18 service development projects for the purpose of investigating whether there is a *managerial approach*³⁶ towards service development alongside the frequently suggested intuitive approach. Nevertheless, the findings reveal that project managers had low confidence in **market surveys** and quantitative research in terms of its ability to assess customer acceptance of new services. Interestingly, the findings reveal that although the project managers had low confidence in market surveys, the authors did not find *one* service concept in their sample for which a market survey had not been conducted. The identified reason for conducting a market survey was, however, not to acquire customer information on the new service. Rather, the market survey seems to have been employed for internal reasons. “It fulfilled a need as an instrument of internal marketing when the project team is requesting the possibility of investing in a real test” (Langeard, Reffait and Eiglier, 1986, p. 122).

³⁶ A *managerial approach* was defined as a development project involving on a full time basis more than one person with a budget and a deadline (Langeard, Reffait and Eiglier, 1986)

The study does not reveal possible reasons underlying the managers' low confidence in market surveys. The authors do, however, state that the managers preferred real tests of the service or, if not possible, simulated tests of the service concept.

Alam (2002) also investigated different means of customer information. The main purpose with that study was to explore the process of "user involvement"³⁷ in service development. The study was conducted on 12 case programs, where each case represented four service development projects, in a b-to-b setting within the financial service industry. Alam found six different "modes of user involvement" out of which five are, in my terminology, means of acquiring customer information³⁸:

- **Face-to-face interviews.** The service producers [developers] conducted in-depth interviews to gather user input on various variables of the new services to be developed: users' needs, wants, preferences, likes and dislikes, gaps in the market, competitors' offerings, desired improvement
- **User visit and meetings.** The users were invited to attend several service development team meetings, where they provided input on various variables
- **Brainstorming.** This included group creativity techniques...to arrive at creative ideas or solutions.
- **Users' observation and feedback.** Users were asked to observe and comment on several new service development activities: service delivery process, testing of service delivery process
- **Focus group discussions.** The service producers [developers] conducted discussions with groups of invited customers on several issues related to the development process (Alam, 2002, p. 256).

In addition to the aforementioned, Alam also found that a **weekend retreat** was used in one case as a way to acquire customer information. In-depth face-to-face interviews and user visits were found to be the most frequently employed means because these were perceived as the least expensive and easiest ways to acquire customer information. In contrast, focus group discussion was found to be conducted the least because these were perceived as being a time-consuming and expensive way of obtaining customer information. In addition, the findings reveal that multiple means of information acquisition at various phases in the development process were utilised.

Ekdahl, Gustafsson and Edvardsson (1999) illustrate how Scandinavian Airlines System (SAS) used **observation** as a means to capture customer information for the purpose of developing the company's services based on "the passengers' needs and concerns" (ibid., p 410) or customer information. The service process was divided into five phases; *check-in counter, lounge, gate, in-flight and luggage claim* and customer information was acquired by the use of video cameras at each phase. SAS found that information not previously provided by surveys was captured using the observational means of acquisition and the company prioritized three areas of the service for further development. Unfortunately, the study does not reveal in what way the information acquired through observation was different from that generated by surveys. It could be

³⁷ Alam (2002) defines user involvement: "to interact with potential users and obtain input from them during a new service development program" (ibid., p. 250). The term *program* embraces four recently performed service development projects.

³⁸ The sixth mode of involvement was: "Phone, faxes, and e-mails. Producers informed the users about specific issues of new service development through phone, faxes and e-mails, brochures, and other publications" (Alam, 2002, p. 256). Naturally, one could assume that these means of communication also facilitate information *from* the customer. However, since Alam found that these means were utilised as channels of providing information *to* the users from the developers (rather than the other way around), I decided to not include this potential means of acquisition in the review.

argued that it is generally known that behavioural information (i.e., information on how the customer behaves) is captured through observation as well as the context or situation for that behaviour. However, this is not discussed in the study, nor does the study reveal what kind of behavioural information was obtained and how this information was going to be used in the development.

2.3.2. Means and methods of customer information acquisition in a product context

In his literature review, Kaulio (1998) identifies seven formal means for acquiring customer information during development: QFD (Quality Function Deployment), user-oriented product development, concept testing, beta testing, consumer idealized design, lead user method and participatory ergonomics. Kaulio finds that some means facilitate the acquisition of information at certain stages of the development, whereas others can be utilised independently of the stage of the developed product. The following is a brief description of these means, the suggested point in time in the development process that the means is relevant, and the context where it is applicable.

QFD (Quality Function Deployment). This means of acquiring customer information has its roots in the total quality management movement. It is described as a system to assure that “the voice of the customer” (see e.g., Griffin and Hauser, 1993), or customer needs, is translated into product design characteristics. QFD facilitates customer information acquisition in the beginning of the development process. “Feedback from customers in the latter stages ... is not explicitly supported by QFD” (Kaulio, 1998, p. 144). QFD has been applied in development of physical products as well as in service development contexts³⁹.

By **user-oriented product development** Kaulio refers to the “systematic analyses of the relation between product, user, task and environment”. The situation for use is the starting point for the generation of information on user requirements. Thereafter, field tests of prototypes in real user environments are performed in order for the developers to identify to what extent the product solves the users’ problems and requirements. Hence, this method facilitates the acquisition of customer information throughout the development process. User-oriented product development has been applied in the development of products and in the development of services.

Concept testing or rather concept evaluation test is a means of acquiring customer information on product ideas. According to Kaulio, ideally, the presentation of the concept is as realistic as possible in order to generate relevant specific customer responses. This means facilitates customer information acquisition during the very early points in time in the development process.

Beta testing is a means that is applied in latter points in time of the product development process. “Usually, working prototypes are placed with selected customers in order to test the influence of ‘environmental factors’, as well as the level of customer satisfaction” (p.145). The information acquired through beta testing is used to refine the product or to eliminate ‘bugs’. Since beta testing is performed very late in the development process it is recommended that this means of obtaining information is not the only one. The customer information acquired may suggest changes that would entail great costs that would have been less, for the developer, if the information had been acquired earlier. Beta testing is often applied in software engineering.

³⁹ For a comprehensive review on QFD, see Chan, L-K and Wu, M-L (2002).

Consumer idealised design. This means of acquiring customer information was presented by Ciccantelli and Magdison in 1993, and they describe it as “a process for involving consumers in the actual design of a new manufactured good or service” (ibid., p.341). Consumer idealised design assumes that the ordinary consumer is best suited to design those products and services that are required for situations with which the consumer has become familiar. The actual process takes place in a group session, similar to that of focus groups and the idea is to get the participants to forget existing products/services, what is feasible and to focus on what they desire and would like if they could have anything they wanted: an ideal. The facilitator guides the participants towards their ideal and away from what they perceive as constraints. The session starts with a blank sheet of paper and should end with: “a (new) design, a list of articulated requirements and a record of the underlying reasons for the design choices” (Kaulio, 1998, p. 145). This method facilitates customer information acquisition early in the development process. It has been applied in various product and service industries, such as banking and insurance, healthcare, roofing material manufacturers and food producers, etc.

Lead user method. This method generates ‘solution data’ rather than customer requirements. “Lead users are users whose present strong needs will become general in a marketplace months or years in the future. Since lead users are familiar with conditions which lie in the future for most others, they can serve as a need-forecasting laboratory for marketing research” (von Hippel, 1986, p.791). Four steps constitute this process-like method of customer information acquisition: “(1) specifying lead users indicators, (2) identifying lead user groups, (3) generating concepts (products) with lead users and (4) testing lead user concepts on ordinary users” (Kaulio, 1998, p. 145). Thus, the method facilitates customer information acquisition throughout the development process, and it has been applied in the development of computer aided design (CAD) systems.

Participatory ergonomics is a way of actively engaging the workers/users themselves as designers of their own working environment or living spaces. The basic idea is that by engaging the end user, he/she can contribute to the solution of his/her own problems. It has primarily been applied in improvements of workplaces.

Pullman, Moore and Wardell (2002) compared QFD with another method of acquiring information, namely **conjoint analysis**, in a product development project. The findings suggest that conjoint analysis acquired current customer preferences while QFD acquired information on what the *developers* thought might best satisfy customer needs. In conjoint analysis, customer preferences or choices are directly translated into features as opposed to QFD, where the design team, or developers, convert consumer needs to engineering characteristics. In addition, QFD may generate information on a greater number of product features and at a greater level of detail than conjoint analysis. Similar to Kaulio’s (1998) conclusion above, Pullman et al concluded that the two means are not competing but complimentary.

In a frequently cited article, Leonard and Rayport (1997) argue that **empathic design** is the way to acquire customer information when the customers themselves do not recognise their needs. The key idea is observing the customer in his/her ‘natural setting’ while he/she is using the product or service in the course of everyday routines.

The empathic design is a process of five practical steps. Step one deals with issues related to the observation such as who should be observed, who should do the observing and the behaviour to be observed. The second step includes issues related to

observational techniques. The third step entails reflection and analysis of the information that has been acquired in order to identify the users' possible problems and needs. The result of the reflections and analysis may induce the developers to go back into the field for further observation. Brainstorming for solution comprises the fourth step and the development of prototypes the final fifth⁴⁰. The authors suggest that the prototype is used to elicit feedback from the customer, hence implicitly stating that this information is to be used for further development.

Lynn, Morone and Paulson (1996) studied how information about customers was acquired in the development of successful discontinuous or radical products. Four cases were investigated of which two were development processes of *industrial products* and two were those of *consumer products*. They found that concept testing, customer surveys, conjoint analysis and focus groups were employed in all four cases, and that some of the information acquired by these means proved to be useful. However, they argue that much of the customer information acquired by these means was of limited use, were often ignored, and even misleading. In no case was the information a critical factor used in the development of these radical products:

Here [with radical products] is where some of you people in academia should get out in the real world and see how loosey goosey all of this is-how imprecise these estimates have to be, how difficult it is to be very accurate. You can't forecast all the events that are going to influence the market size, like new technological breakthroughs, or Certificate of Need [i.e., new government regulations] or percent growth of GNP or a competitor having a new development, or at least announcing one (Walt Robb, CEO of GE Medical Systems in Lynn, Morone and Paulson, 1996, p. 15).

Instead of the conventional means of customer information acquisition, the authors identified that the cases employed a **probe and learn process** as a means to acquire information about the customers. The probe and learn process is iterative. In other words, an early version of the product is introduced to a plausible market, the developers learn from the reactions to it, and then develop the product further based on what they have learned, and then they try again. It is argued that the probe and learn process is different from conventional means of acquisition in that it is based on an experimental logic and put less emphasis on analysis. Lynn, Morone and Paulson conclude that probing and learning is never a process of blind trial and error, but rather they found that this was a process of experimental design and exploration that was of strategic relevance to the firm.

In another case study, Veryzer Jr (1998b) explored how customer information was acquired in the development of radical products. He examined the means of customer information acquisition employed by seven development projects at different companies in various manufacturing and service industries. Both consumer and industrial products/services were included. His study reveals that a variety of means of customer information acquisition were employed across the development projects and in different phases of the development processes. During the phase of (1) "concept generation and exploration," it was found that relatively little formal means of acquisition was employed. The development was driven to a large extent by the companies' desire to apply a particular technology, but in three cases ideas were

⁴⁰ Interestingly, Leonard and Rayport (1997) elaborate, though briefly, on prototypes. Sometimes prototypes are developed to emulate just one feature of the intended product, such as function or form, at other times prototypes have both these features. Frequently, a prototype is made out of physical materials (e.g., plastic foam), but a computerised simulation also represents a prototype. Finally, role-playing is a form of simulation that also can represent a prototype. In my view, perhaps simulation (either computerised or 'humanised') would be the kind of prototypes best suited for acquiring customer information in a "pure" service development context.

discussed with **lead users in focus groups**. In the (2) “technical development and design” phase, a variety of means were employed to acquire customer information (e.g., **observational studies** and **immersion**), that is, the developers went to the user environment. Veryzer Jr. states that although a variety of means were employed to generate customer information during this second phase, the amount of research conducted was limited and in some cases customer information was perceived as being of little importance during this phase. In the (3) “prototype construction” phase, the generation and acquisition of customer information was conducted substantially more than in previous phases. A variety of techniques were employed, such as **video ethnography** to examine the “usability” of prototype products and to identify potential customers’ tacit knowledge concerning the products, **experiments using prototypes** that simulate some product attributes under development, **internal “user” testing of prototypes** with staff personnel, **beta testing**, **lead customer testing** and **field testing**. Finally, during the phase of (4) “commercialization,” customer information was acquired in order to further develop or refine the product in five of the seven cases. In this phase the employed means were more formal than in previous phases and information was acquired from larger samples, for example, **market studies**, **expanded beta testing** and **lead user testing**.

Some of the information that was acquired did not come from customers, but from people working within the company (i.e., “product use studies with internal convenience sample”, “internal “user” testing of prototypes”). According to Veryzer Jr (1998b), these “in-house tests” are not surprising considering the inherent difficulties of acquiring information from customers in the development of this type of radical products (e.g., secrecy concerns, lack of familiarity, etc.). However, he warns against relying entirely on information acquired in-house by quoting one manager from one of the studied development projects:

Engineers are NOT real people! Don’t rely on an engineering test sample - they know too much and often think in a way that differs from the people that will be using the product - you need to test the naive user (Veryzer Jr, 1998b, p. 149).

In a more recent case study, Lagrosen (2005) explored customer involvement in product development or, more precisely, in which phases of the development process and in what way customers were involved. Three small local companies and three larger, multinational companies operating in business-to-business markets were investigated. Lagrosen found that the bigger companies tended to use a more structured development process than the smaller companies. Related to means of customer information acquisition, **market requirements form** for continuous acquisition of customer ideas, **focus group interviews**, **QFD**, **beta testing**, **reference groups** of both personnel and customers, and customer visits where teams of employees including developers travelled to the customers’ facilities were identified in the cases. The extent to which customer information was acquired varied between the companies, hence this aspect was not related to the size of the company. For example, in one small company customer information was acquired only to a very limited extent or not at all, and in another small company providing office furniture, the developers and customer interacted throughout the entire development process. In the rest of the companies the customer was mainly involved, or customer information was mainly acquired, during the early phase of development and during the phase of prototype testing.

Urban and Hauser (2004) suggest “**listening in**” as a means of acquiring customer information. This means is especially suitable for identifying new opportunities for product or service development. The basic idea is to acquire information by monitoring

ongoing dialogues between customers and Web-based virtual advisers. Customers use the Internet to search for information and, thus, have an incentive to reveal their needs. Urban and Hauser describe and evaluate “listening in” by applying it to the automotive industry. However, they also suggest that it is applicable in both consumer and business-to-business markets, such as high-end copiers and financial services. The authors argue that in comparison to their suggested “listening in”-method, conventional means acquire similar customer information, however, at a much greater cost:

Listening in fills a gap in existing methods by making it feasible to use inexpensive and readily available data to search large numbers of customer needs to find combinations of customer needs that are desired but not currently fulfilled...(Urban and Hauser, 2004, p. 74).

In line with previously reviewed studies, Urban and Hauser also underline that “listening in” needs to be complemented by other means of acquisition. For example, although the virtual advisor contains qualitative probes, subsequent qualitative and ethnographic means should be employed in order to acquire greater depth on an identified segment.

In a similar vein, Fuller and Matzler (2007), suggest how the Internet can be used as a means of acquiring customer information. They introduce “**customer virtual integration**” as a means of acquiring input from customers via the Internet. Fuller and Matzler (2007) argue that due to the Internet, new products can be experienced before they exist. By the use of 3D modelling software, customers can experience the product and through trial and error come up with new ideas for development. The authors argue that as opposed to traditional market research methods, the means of customer virtual integration supports the acquisition of customer latent needs.

von Hippel suggests “**user toolkits**” (von Hippel, 2001; Thomke and von Hippel, 2002; von Hippel and Katz, 2002) as a means to acquire customer information in development. The basic idea with “user toolkits” is that the developers actually abandon their efforts to acquire information on user needs and wants in detail, and instead provide the customer with tools to design his/her own product/service, which later is produced by the company. The developer’s goal with providing users with toolkits is to use the information, or the user-developed designs, for developing standard products that will address the preferences of as many customers as possible. von Hippel and Katz (2002) argue that some of the users employing a toolkit are lead users, “whose present strong need foreshadows a general need in the marketplace”. The user toolkit is applicable within the software industry.

Nijssen and Lieshout (1995) claim that although numerous articles elaborate on the contents of specific methods in a product development context, *little is actually known about the extent and the way methods are actually, in reality, employed by companies in product development*. In addition, they claim that out of the few empirically-based studies that do exist, most focus on means for idea generation. Against this background Nijssen and Lieshout investigated the awareness of different means and methods and to what extent these are actually employed and why the developers employ them. In all, 75 industrial companies were approached comprising four major industries (machinery, paper, metal, electronics) in the Netherlands. Based on previous research, expert interviews and a focus group discussion, eleven methods were selected to be

included. As opposed to several studies in this stream, ten of the eleven methods in focus of their investigation are briefly described⁴¹:

Brainstorming	A systematic creative group session in which barriers to creative thinking are removed to stimulate the production of new ideas through association.
Morphological analysis	An approach to find a large number of theoretical solutions to a problem by dividing it into smaller parts/problems. For every part, together to solve the whole problem.
Synectics	A creative group session in which the original problem is converted into a much wider problem or analogy. For this alternative problem solutions are generated. At a later stage, these solutions are transformed back into solutions for the original problem.
Delphi method	A multi-survey consisting of several sequential rounds in which a number of experts are asked to give their opinion and vision on developments. Through feedback one general vision is established.
Focus group	A group session of customers in which they react to and discuss a number of topics. The aim is to gather information on underlying needs, wants, etc.
Product life cycle	Construct in which the sales/volume of a product are/is mapped over time, resulting in an S-shaped curve. It can be used to determine the life-cycle phase in which the market exists and help to draw conclusions with regard to the need to adapt existing products or start looking for new products.
Concept test	A method of asking a number of customers to evaluate a particular product concept. The product concept can be explained to the customers in writing or can be visualized by simple means.
In-home use test	An approach that has a number of customers test a new product "at home" for a certain period of time. Afterwards experiences/problems encountered are discussed.
QFD	A method designed to help the new product development project team identify and interpret the needs and wants of customers. The aim is to establish the importance of product attributes and transform them into technical requirements.
Limited roll-out	An approach for introducing a new product to the market. The new product is first introduced on a small scale, with the objective to expand slowly in order to limit market risk. During the introduction the content of the market strategy may be modified. (Nijssen and Lieshout, 1995, appendix, p 43).

Related to the *awareness* of the methods, the result reveals that on average only 30 percent of the respondents were familiar with the name of the methods. In addition, six of the eleven methods had, by name, a very low level of awareness, that is, less than 15

⁴¹ Conjoint analysis was missing from their description list, but was still empirically investigated.

percent of the respondents were familiar with each of the following: morphological analysis, conjoint analysis, quality function deployment, limited roll-out, synectics and delphi method. The authors speculate about possible reasons underlying these low levels of awareness and suggest that the fact that companies frequently contract market research consultants to assist them in customer information acquisition could be one reason of the low levels of awareness.

Related to the extent in which the methods were *actually employed*, the results reveal that on average the methods were used by 30 percent of the respondents, which is about half the number of respondents who knew about the methods after they had been explained to the respondents⁴². Interestingly, the authors also investigated why the methods were employed. The number one reason, which was found for ten of the eleven methods, was to identify problems. Unfortunately the authors do not further describe or exemplify what is meant by problems. The second most common identified reason for employing means/methods of information acquisition was to improve the success rate of the developed product. Thus, it seems as though the respondents were convinced that acquiring customer information contributes to a successful developed product. The main finding and contribution of the study is that *the means/methods of information acquisition is barely known or employed in development by companies*. In the concluding discussion some ideas are provided that could motivate why the methods are barely employed by the studied companies:

The main shortcomings of the use of...methods are the time they take to execute and implement, predict unforeseen problems and the fact that the market may be too complex to capture all its intricacies by the model [or method] (Nijssen and Lieshout, 1995, p. 40).

Nijssen and Lieshout contribute further to our understanding by *empirically* investigating to what extent formal methods actually are familiar to, and used by, companies. The study takes eleven means and methods as a starting point. However, by focusing only on a certain amount of a pre determined set that, in addition, is very formal, other means and methods, both formal and informal that may be employed are not captured.

Taking a different approach than most studies in this stream, Mahajan and Wind (1992) explored, without a predetermined set to choose from, what types of means and methods firms *actually* use in product development. They found that only one method, focus groups, was used by more than 50% of the studied firms. In second place was “limited rollout” (42%) and “concept tests” (26%) was the third most used method. Thus, despite the numerous articles that elaborate on different methods to acquire customer information, most of these are *not* widely employed in practice.

2.3.3. Summary of customer information in the means/method stream

In the following, key findings on customer information and how this has been studied in the means/method stream are presented.

Independently of the service or product development context, most studies suggest sophisticated and formal methods for information acquisition. One exception is Alam (2002), who found that in addition to formal means, the informal way of a weekend retreat together with business customers proved to be a beneficial way of acquiring

⁴² *Brainstorming*, *concept testing*, and *in-home use test* were mostly used (i.e., about 60 percent of all the respondents stated that they use them). The three least used methods were *the delphi method* (6%), *synectics* (10%) and *limited roll-out* (17%).

customer information. “Systems” for receiving customer information such as complaints or suggestions of improvement is missing in this stream of literature. In addition, *the customer is the primary and direct source of the acquisition*. This finding is particularly surprising considering development in a *service* context. Because, in order for services to “come about,” the customer needs to interact with the service company, often directly with front line personnel. Thus, surprisingly little empirical research has been conducted that focuses on how front line personnel may be employed as a means to acquire customer information to be used in development.

When to acquire the information from the customer varied between studies. Some methods were recommended as more suitable at certain stages of the development process than others (e.g., concept testing in the beginning of the development process). However, it was also recommended that developers employ a combination of several methods entailing that customer information is acquired throughout the entire development process. The beginning of the development process was frequently suggested as the most critical stage to acquire customer information (von Hippel, .

The following table summarises the research approaches used by studies in the means/method stream.

Table 9 Methodologies and methods used by prior studies – means/method stream

	Inductive, descriptive	Deductive, explanatory	Normative, prescriptive
Empirical: - survey (S) - case study (CS) - interview (I) - experiment (E) - observation (O)	Lagrosen (2005) CS Mahajan & Wind (1992) S	Langeard, Reffait & Eiglier (1986) CS Alam (2002) CS Lynn, Morone & Paulson (1996) CS Veryzer Jr (1998b) CS Pullman, Moore & Wardell (2002) CS Nijssen & Lieshout (1995) S	
Conceptual, empirical: - hypothesis (H) - illustrative examples (IE)			Ekdahl, Gustafsson & Edvardsson (1999) IE Leonard & Rayport (1997) IE Urban & Hauser (2004) IE von Hippel (2001) IE Thomke & von Hippel (2002) IE von Hippel & Katz (2002) IE Ciccantelli & Magidson (1993) IE
Conceptual, theoretical: - literature review (LR) - frameworks, models (M) - propositions (P)			John & Storey (1998) LR Kaulio (1998) LR

AsTable 9 illustrates, various methodologies and methods have been employed by studies in the means/method stream. Few studies had an inductive, descriptive empirical focus on what types of methods that actually are employed by developers. Thus, despite numerous methods in theory, little knowledge exists about how customer information is acquired in practice. The current thesis contributes by filling some of this gap. In the following chapter the methodology and methods used in the thesis is discussed.

3 AN ETHNOGRAPHIC METHODOLOGY

This chapter begins by presenting the ethnographic methodology and methods used in the study to collect the data. It continues with a discussion about the case, informants, field setting and field relationships. The chapter ends with a thorough discussion about strategies used to enhance the quality of the study.

3.1. Ethnography

The term *ethnography* refers both to a particular research methodology and to its eventual outcome; a written product. In a broad sense, ethnography as a research approach is based on an emergent logic that includes fieldwork using a variety of research techniques (primarily observation) over an extended period of time. The approach emphasises descriptive detail as a result (e.g. Aull Davies, 2005). Ethnography has its roots within anthropological research of exotic societies. Pioneers such as Malinowski, Boas and Mead were influential in developing an approach that involved going to the source and becoming immersed in the world of others (Schwartzman, 1993; Mariampolski, 2006). By the 1980s, the methodology was increasingly used within marketing research, and in particular, in research on consumer behaviour (see e.g. Arnould & Wallendorf, 1994; Wallendorf & Arnould, 1991). In service marketing and management, the ethnographic approach is not well established. Nonetheless, studies have been conducted in this area with a customer focus (cf. Arnould, Price & Tierney, 1998; Harris & Baron, 2004; Korkman, 2006; Swan & Bowers, 1998), and to a lesser extent with a focus on service managers (cf. Wägar, 2007). The current ethnographic study focuses on the use of customer information in a service development project, thus it contributes to service marketing and management research.

In the previous chapter, it was concluded that in mainstream NSD/NPD research, the most frequent methodologies and methods are: i) retrospective, deductive and explanatory, empirically-based with survey as the main data collection method, and ii) normative and prescriptive, conceptual with illustrative empirical examples. Thus, the ethnographic methodology has not been frequently employed in research on NSD/NPD. Indeed, as Workman Jr (1993) argues:

Whereas much effort has been directed toward developing normative procedures to help product development, there has been little empirical research on what actually goes on in marketing and where new product development activities take place...Much of the research on marketing activities has used surveys to measure the tasks and responsibilities of product managers (p. 406).

To my knowledge, Workman Jr (1993) is, if not the only one, at least one of the very few that in a development context has used an ethnographic methodology in marketing. Within the organisation and management field, ethnography has been more frequently employed in studies on product development and innovation (see e.g., Dougherty, van de Ven & Poole, 1990). The ethnographer seeks to provide data or analyses that are new (Lofland, 1995). It has been held that in order to make a contribution an ethnography must end with new concepts (Stewart, 1998) or, at least, help us to reconsider or “reconstruct” interesting theories (Wolcott, 1994). The ambition with the current study has been to provide novel findings by employing a different methodology than mainstream marketing studies in NSD/NPD.

The ethnographic approach generates descriptive detailed contextual real-time data, including that of the seemingly insignificant, the mundane and the taken-for-granted, which is needed to gain in-depth understanding of customer information in service development. Additionally, the ethnographic methodology is emergent and exploratory. “Exploratory” is often used in a condescending sense as a label for “pre-research,” pilot studies or research in a new field. However, as Mintzberg (1979) puts it: “No matter what the state of the field, whether it is new or mature, all of its interesting research explores” (p. 584). Hence, when using ethnography the problem is not defined in a precise manner *a priori* entering the field (e.g., Hammersley & Atkinson, 1983; Jorgensen, 1989; Lofland, 1995; Pettigrew, 1990). How well the problem is defined differs between ethnographers (e.g., Aull Davies, 2005). When I started the field study of the service development project, the focus was on how the customer is taken into account by developers when they develop a service. From early observations made in the field in conjunction with insights gained from a review of prior research, I learned that there existed a gap between practice and theory and decided to focus on identifying different types of *use* of customer information in service development.

The ethnographic methodology is open-ended and flexible, allowing the researcher to focus on interesting and novel issues as they emerge during the process (e.g., Aull Davies, 2005; Ball & Ormerod, 2000; Lofland, 1995). In this way, ethnography facilitates the researcher’s learning process (Forsythe, 1999; Hammersley & Atkinson, 1983; Schwartzman, 1993) and places a premium on the production of new propositions and knowledge (Lofland, 1995).

Based on emergent findings, I realised that aspects related to customer information acquisition, such as the source of the information, the temporal aspect and means of the acquisition were different than found in prior research and that a contribution could be made if these were further investigated. Thus, based on the emergent findings, the following research questions were formulated and further explored in the field: From what source is customer information acquired? When is it acquired and how?

Ethnography requires the researcher to study up-close both what people say and what people do in the natural, “everyday” setting. It involves extended and experiential participation by the researcher in the studied setting. The methodology includes several methods of data collection such as observation, interview/discussion and the inspection of documents. However, observation in real-time, or *in situ*, is considered the main method of ethnography (Arnold & Wallendorf, 1994; Aull Davies, 1999; Lofland, 1995; Stewart, 1998).

Before conducting the current ethnographic study, I performed another study at the bank where I interviewed branch office managers and asked them to describe in retrospect customer information acquisition and use in service development at the bank. Although the respondents had either participated in a development project at the bank or otherwise had knowledge about it, to describe in retrospect proved to be too difficult. For example, although the managers assured that the customer was taken into account, I did not receive any concrete or detailed examples of use of customer information in service development at the bank. Thus, I realised that a direct access to data that allowed me to “see it for myself” in real-time and not having to solely rely on the memory of informants was the key to capture the use of customer information.

3.2. Methods for collecting data on customer information

The empirical material was collected through a combination of three methods: 1) participant observation, 2) interviews/informal discussions, and 3) documents. For about 13 months, between the 16th of February 2005 and 21st of March 2006, I went back and forth into the field several times per week and studied the development process of a website in its natural cultural setting, that is, in a development project at a bank, while the process unfolded from the early stages of the development process to the launch of the developed service, and some time after. Through observations of development meetings, through interviews and informal discussions with development project members and by analysing documents, I investigated customer information use in the development, from what source(s) it came, and how and when it was acquired. To keep track of the collected information, I created a logbook (see 3.2.4). In the following text, the methods that were employed in the study are discussed.

3.2.1. Participant observation

Participant observation is the key method within ethnography. This method has been described as:

Getting data...by subjecting yourself, your own body and your own personality, and your own social situation to the set of contingencies that play upon a set of individuals...You're artificially forcing yourself to be tuned into something that you then pick up as a *witness-not as an interviewer, not as a listener, but as a witness* to how they react to what gets done [by], to and around them...(Goffman, 1989 in Lofland, 1995, p.44-45).

Observation captures real time, which means that customer information use and acquisition was investigated while it was evolving. In this way observation is less dependent on what people *say* they do, have done, or will do since the observer can hear and see this for himself (Einarsson & Hammar-Chiriac, 2002). Observation offers obvious advantages over surveys or secondary sources. Although questionnaires appear to deliver valid and reliable quantified information, there may be a world of difference between what people actually do and what they respond in a questionnaire about their doings (Silverman, 1998). Consequently, interesting discrepancies between sayings and actual doings may be captured through observation (Schwartzman, 1993, Stewart, 1998). In the current study these kinds of discrepancies were identified on several occasions.

When observing, the researcher takes a “short cut” to the issue of interest, that is, the researcher does not have to go through the tricky path of implicit assumptions and expectations held by the informant on “the answer that the researcher is after” (Stewart, 1998). Hence, to have “direct access” to the issue of interest is one of the key strengths with observation. By observing and reflecting on what is being observed, the researcher may capture behaviour that is taken for granted by the informants, and thus would never surface in an interview or as expressed by Patton (2002):

Because all social systems involve routines, participants in those settings may take them so much for granted that they cease to be aware of important nuances that are apparent only to an observer who has not become fully immersed in those routines (p. 263).

In the current study, issues that were taken for granted by the developers were revealed on several occasions.

Thus, in observation both the emic (insider) and the etic (outsider) perspective are captured (Arnould & Wallendorf, 1994; Stewart, 1998). This means that the researcher is not limited to relying on only the informant's interpretation of the issue of interest, but can complement it with his own interpretation, thus representing the etic perspective. The researcher's personal experience that is derived from participant observation is an extremely valuable source of information (Jorgensen, 1989). Thus, the etic perspective is written down usually in the form of reflective notes that are used in the emergent analysis. In this way observation differs from other methods since both the insider's *and* outsider's views constitute the collected data that is used for analysis.

The observer investigates the problem in its "natural" setting. Consequently, in this study the investigation of customer information was conducted in the context in which it naturally appeared. Observing customer information use in the field generated an understanding of the 'bigger picture.' In addition, the up-close immersion in context increases the likelihood of revelatory incidents that are naturally occurring in real-time. These incidents stimulate real-time insights that launch systematic analysis of additional data (e.g., Arnould & Wallendorf, 1994). Observing the development meetings generated hints on circumstances that triggered the use/non-use of customer information in the development. This means that by merely observing the developers' reasoning, negotiating and decision making on developmental issues, the question of *why* was occasionally answered.

The researcher's role may be conceptualised on a continuum from a complete outsider to a complete insider (Einarsson & Hammar-Chiriac 2002; Hammersley & Atkinson 1983; Jorgensen, 1989; May 1997). What the researcher is able to hear, see, smell, touch, taste or feel is determined by participant role involvement (Jorgensen, 1989). Four roles are frequently identified: the complete observer, the participant-as-observer (more observer than participant), the observer-as-participant (more a participant than observer) or the complete participant (Einarsson & Hammar-Chiriac 2002; Hammersley & Atkinson 1983; Jorgensen, 1989; May 1997). The complete observer refers to a situation when the persons observed are not aware of the researcher's intentions. The observer is either not visible or anonymous to the social setting that is being studied. The more distanced the observer is, the greater the potential is for misunderstandings and inaccurate observation. The complete participant is similar to the complete observer in that those that are observed do not know the intentions of the researcher. However, here the researcher has become a member of a group or an organization or is already a member that decides to conduct a study of the social setting he/she belongs to. It has been suggested that this role is the ideal to which the researcher should aim. However, this strategy is limited for example, because of the difficulties of taking field notes without being disclosed or as pinpointed by Hammersley & Atkinson (1983, p. 94-95), "some potentially fruitful lines of inquiry may be rendered practically impossible, in so far as the complete participant has to act in accordance with existing role expectations." The most likely roles are those in between the extremes. Thus, the ethnographer is either a participant-as-observer (more an observer than participant) or an observer-as-participant (more a participant than observer).

In the current study, it was made clear from the very beginning that my role in the project would be that of a passive observer. Thus, I adopted the role of being a participant-as-*observer*. My identity as a researcher was revealed to all project members, but I never went into details about my project. Instead, it was explained to the observed in non-specific terms such as "to investigate service development and the role of the customer." Additionally, to be as unobtrusive as possible, I strove to rather

say too little than too much about my research and myself, but enough to gain informants' confidence and minimise potential suspicions and misconceptions. I only revealed my research and purpose of "being there" when asked, a situation that did not happen very often. For example, it took about 7 months before some project members even asked about my project, and since they seemed content with my answer of "the role of customer information in service development," I did not explain it any further.

My ambition was to be a 'fly on the wall' and I was even named and referred to as "the fly" in a humorous sense. The nickname actually served as a reminder of my role as a passive observant to everyone involved in the project. In line with the ethnographer's concern about presenting data and analyses that are "true" (Lofland, 1995), I wanted the development process and activities to be conducted in the same way as they would have been if I had not been there observing it. Thus, at all times I strove to behave in such a way that the activities that I observed would not significantly differ from those that occurred in my absence (Bogdan & Taylor, 1975).

Conducting participant observation entails choosing what and when to observe. All in all, I observed 54 development meetings/workshops where the developers were reasoning, negotiating, making decisions on the development, performing development activities, reviewing completed "action points" and dividing new ones. I aimed to observe every meeting that took place during the development process, and this aim was largely met. In total, I missed less than 10 meetings (out of approximately 65) over a period of about one year. The reasons for not attending these meetings were either sickness or that the key informant had forgotten to inform me about a meeting, which only happened in the beginning of the process before my role as an observer became "established." I received the agendas and meeting minutes for every meeting, including the ones that I had not participated in. In this way I kept up with what was going on, and subsequently, increased the coverage of potential data on customer information use that might have transpired while I was off the field.

As a field investigator I was concerned with how to cover possible instances of use and acquisition of customer information taking place in the field while I was off it. As mentioned above, one way to increase the coverage was to investigate the agendas and meeting minutes of meetings I did not attend. Another way was the agreement made with two of the core developers whom I called at agreed times once a week to learn about the development activities that had been performed since my last call. After some time these telephone calls proved to be unnecessary because my observations of meetings together with e-mails and other collected documents provided much the same information. Hence, the phone calls only confirmed what I already knew and were ended. It also became clear that most decisions that were made about development activities were made formally during the development meetings, or if not, still revealed in discussions among the developers during these meetings. I also observed two out of three user tests with an early prototype of the developed website. In addition, I observed interactions between developers and other organisational members, for example, during lunch breaks. Three different kinds of observation were conducted: *face-to-face observation*, *telephone observation*, and a mix of *face-to-face and telephone observation*. These are described next.

Face-to-face observation

I observed, face-to-face, 10 development meetings among the core team of developers. These meetings took place in a specific room at the bank's headquarters and varied in length from one and a half hours to full-day workshops. I also observed two out of three user tests with customers performed by one of the developers at the headquarters.

These lasted 15 minutes and 30 minutes respectively. All observations of meetings and the user tests were audio-recorded. I also observed face-to-face informal interactions and communication between developers and other bank personnel. For example, on one occasion one of the developers briefly exchanged some words with the call centre manager about customer information issues in the lunch queue. During the observations, I made field notes of reflections and questions were written down to be clarified later.

During all observations, I strove to interfere as little as possible. Thus, I did not ask any questions during the observed meetings. In the beginning of the field study, the developers would occasionally look my way as if searching for my opinion on the matter that was being discussed. On these occasions I did not respond verbally, but instead I would write something in my logbook and through body language, “behave as a researcher” to remind them about my role. Eventually, my role became established in the group and the developers “learned” that there was no point in turning to me. They also appeared to get familiar with the situation of having a researcher “hanging about” (e.g., Hammersely & Atkinson, 1983) as they paid less attention to me and appeared comfortable with the situation.

Telephone observation

Most often, that is on 32 (out of 54 observations) occasions, I observed the development meetings by participating over the telephone. These meetings were held at the headquarters. The project leader called me and connected me to a small speaker situated on the table of the meeting room, and thus I listened to the meetings from my office at Hanken. The fact that I observed the majority of meetings by telephone facilitated unobtrusive observation. The developers were either not aware of my participation or forgot about it. In the beginning of the field study, the key informant would start the meetings by saying (in a humorous manner) things like: “Ok, we have the fly participating on line so good morning to you too.” As development meetings and weeks went by, the key informant less frequently mentioned my presence, seemingly assuming that the rest of the project team already knew that I was participating. However, at the end of several meetings, when I said: “Thank you and good bye,” it became evident that one or more in the group had not been aware of my presence, or had simply forgotten. Finally, the fact that the organisation of the bank is geographically dispersed and that those being studied frequently rely on audio and video conferences to communicate with one another facilitated unobtrusiveness. In short, they were familiar with the small electronic device situated on the table of the meeting room and subsequently, seemed to pay no attention to it. All telephone observations were audio recorded.

Face-to-face and telephone observation

I observed 12 meetings that were a mixture of face-to-face and telephone meetings. These observations took place at the key informant’s bank office. The key informant communicated and participated in meetings via audio conferences with developers physically located at the headquarters and other branches. The observations were audio-recorded. One advantage with this kind of observation was that I often could, immediately after the meeting, get those issues clarified that I had not understood.

In retrospect, I am convinced that I would never have captured the different types of use and acquisition of customer information, had I not been in the field observing and registering these activities as they transpired. For instance, would they have told me: “Every once in awhile during the development process we put ourselves in the shoes of

the customer and try to imagine what the customer would prefer and then we develop accordingly” - most likely not. Observation, however, made it possible to capture this kind of tacit information. In addition, from observing their discussions it was clear that in their minds, customer information primarily equalled data from traditional surveys or focus group interviews rather than, for example, information created by themselves in development discussions.

3.2.2. Interview and informal discussion

Interviewing by ethnographers, whose main research strategy is participant observation, is often unstructured and very close to a “naturally occurring” conversation (e.g., Aull Davies, 2005; Jorgensen, 1989), or informal discussion (Workman Jr, 1993). The essence of the informal discussion is that the ethnographer does not decide beforehand the questions to ask, but rather may have a repertoire of topics to select from when the moment seems appropriate (Aull Davies, 2005; Elliott & Jankell-Elliott, 2003; Hammersley & Atkinson, 1983; Jorgensen, 1989). The informal discussion is free flowing, allowing the informant to control it. However, even in informal discussions, ethnographers have in mind topics they wish to explore and questions they would like to pose, thus they tend to direct the discussion with the research in mind, without imposing much structure on the interaction. “Good ethnographic conversationalists” do not violate the rules for introducing or taking up a topic, and they conform to similar rules for taking turns and recognize the implicit right of other people to join the conversation. The discussion is also informal because it is not planned, but rather it is seen as spontaneously “just happening.” Thus, it may take place in a wide variety of contexts such as talking before observations of meetings and after or during breaks in meetings (e.g., Aull-Davies, 2005; Jorgensen, 1989).

In addition to informal discussions, interviews are useful especially since they allow the researcher to systematically ask the same questions to different insiders. When interviewing, the ethnographer employs a list of predetermined questions (Jorgensen, 1989). Normally, the researcher has to make some special arrangements to conduct the interview and it is characterised by being “formally bracketed and set off in time and space as something different from usual social interaction” (Aull-Davies, 2005).

Due to the longitudinal aspect of ethnography, the ethnographic interview and informal discussion usually take place between individuals who share more than the interview/discussion encounter. This means that the ethnographer has established an ongoing relationship with the informant(s), thus points made in the interaction are usually with reference to both a shared history and with an awareness of a future connection. In this way the ethnographic interview and discussion differs from more traditional interviews and surveys. The longer-term relationship between the researcher and informant increases the validity of the data. (Stewart, 1998)

In the current study, both interviews and informal discussions were used to generate a gradual understanding of customer information use and acquisition in the service development project. Participant observation was the main method, but to make sure that I captured as much of the phenomenon as possible, I conducted interviews usually with the aim to clarify issues that I had written down during observations or to check whether my interpretation as an outsider was “correct” (see appendix 1). Although there is no such thing, as a “correct” interpretation, the ethnographer aims to “gather the best possible evidence, knowing that rarely is any set of evidence perfect or even exhaustive of the meanings people apply to the circumstances of their daily lives”

(Jorgensen, 1989, p. 55). Thus, I strove to make sure that I had understood the meaning of the insider's language observed in meetings since this understanding formed the basis of my interpretation and analysis. The importance of learning the language of the people being studied has been emphasised by several ethnographers (e.g., Aull-Davies, 2005; Bogdan & Taylor, 1975). In addition, to clarifying issues and to double check my interpretations, interviews were conducted to gain an understanding of internal documents such as development planning documents and policies, but also technical documents with an - to me - unknown technical "language." The majority of interviews were conducted with the main key informant face-to-face at his office. As previously mentioned, in the beginning of the investigation I also conducted recurrent telephone interviews with two other informants. Eventually, however, these proved unnecessary, because the data generated in these interviews was also captured in observations and documents. All interviews were audio-recorded.

In addition to the interviews, I also had numerous recurrent "informal discussions" with the core development team members. These discussions typically resulted from talking before or after observed meetings or during breaks, and lasted from 15 minutes to about one hour. The discussions provided the opportunity to ask questions beyond the activities I observed, such as historical, political, organizational, structural and development process issues. Thus, these discussions provided much background or contextual information, which contributed indirectly to my understanding of the research problem. In addition, these informal discussions served as an "arena" for exchanging information of a more personal character, which seemed important for establishing and maintaining field relationships based on trust and cooperation (e.g., Jorgensen, 1989). In cases where the informal discussion provided data specific for the research problem, I made field notes of this as soon as possible during the same day. Thus, I did not audio-record the informal discussion, as this would have been too obtrusive.

In both the informal discussions and the scheduled interviews, I avoided asking questions directly related to customer information. The reason for this was that if I would have asked questions like, "are you going to ask the customer's opinion on that?" or "why do you, or do you not, turn to the information you already have acquired on the customer's perception and behaviour and start the development on that specific aspect from there?," I might have influenced the developers' behaviour. Rather, I wanted the development process activities to be conducted in the same way, as they would have if I had not studied them. Additionally, I avoided "why" questions and questions that asked informants to explain what they "mean." These kinds of questions convey an evaluative judgement and may put informants on the defensive or make them feel pressured. Instead, as an ethnographer I strove to at all times ask "what," "when," "where," and "how," questions that are more likely to generate descriptive information (Spradley, 1979 in Jorgensen, 1989).

3.2.3. Documents

In the course of participant observation, the ethnographer usually encounters a wide array of documents. Organisations are routinely, often extensively, involved in the production and consumption of written materials. However, documents are not restricted to written materials. Digital resources such as websites, electronic bulletin boards and e-mails are also ways in which documentary realities are produced by organisations. Hence, documents are produced for both internal and external consumption. The field investigator should pay careful attention to the inspection of the

documents themselves and also to how they are produced, circulated, read, stored and for what purposes. Documents can serve as distinctive data in their own right or can be used to support or validate other findings (Atkinson & Coffey, 1997; Hammersley & Atkinson, 1983; Jorgensen, 1989; Workman Jr, 1992).

In the current study, a vast amount of documents were collected and inspected. Documents specific to the studied development process such as project plans (e.g., project organisation and responsibilities, timetables), development plans (e.g., a pre-study, templates and site maps for the structure), meeting agendas and minutes, copies of presentations made at meetings and technical specifications were scrutinised. I also inspected general documents such as policies at the bank. In addition, documents produced by a market research firm and market communication firms were investigated.

In addition to written materials, I received a vast amount of e-mails (about 300) from the developers. The e-mails were of three kinds:

- 1) I was put on the distribution list together with the core development team members. Some messages were just a few lines long, simply announcing the time and date of the next meeting, and others contained attachments with dozens of pages of the type of written documents already mentioned above. Before and after every meeting, the project leader sent the agenda and meeting minutes to everyone on the list. All mails were downloaded, saved, printed out and filed.
- 2) In addition to automatically receiving mail by being on the distribution list, I also corresponded directly with informants by e-mail. Informants forwarded e-mails to me they thought I might be interested in. These usually contained communication between two or more of the developers, or between developers and other members of the bank. In some cases, the forwarded e-mail contained several e-mails representing "back and forth" correspondence that had taken place between developers about the new website. In addition to the unsolicited mails, I also requested mails of correspondence that I learned from observation that had taken place.
- 3) Finally, I also used e-mails to schedule interviews and observations with informants or I would ask specific questions to clarify, for example, technical terms.

The documents were insightful and supported my gradual understanding of the researched phenomenon. For example, an insider document labelled "the pre-study" included results from two focus group interviews conducted with the bank's customers early in the development process. Although the results of the focus group interviews very seldom were discussed in observed meetings, I could, since I had the acquired customer information documented, compare and analyse how much of it was actually used. Other important documents were meeting agendas and minutes that I inspected to catch up on meetings I had not been able to observe. When comparing data in the documents and data collected in the observations, I identified discrepancies as well as convergences between the written and the actual "sayings and doings."

Already early on during the field study, I realised the advantages of using several methods. For example, continuously reading documents increased the understanding of the observed development discussions and conversely, the observations improved the comprehension of the documents.

3.2.4. The logbook

In order to keep track of the empirical material, I created a logbook (see appendix 2). Like a calendar, the logbook can be best described as a running, chronological record of the fieldwork. Unlike the calendar, however, it is a more substantive record of all the interactions and experiences I had in the field (cf. van Maanen, 1988). This means that interactions where no data collection took place were also recorded, such as telephone calls received from the key informant about delays, cancellations or changes of meeting time. During and immediately after an encounter with the informants, I systematically made notes in my logbook (the two “systems” for making notes are described below). Later, during the more focused analysis, I found these notes invaluable because they directed me to document(s) or recorded tape(s) with information central to the research problem. Thus, the logbook functioned as a directory to other sources of data that were further investigated and analysed. In addition, I also found the logbook a valuable source of data in its own right. Not only did it contain my field notes and my reflective notes, but the logbook also illustrated the evolution of the development process. This facilitated the identification of when the use and acquisition of customer information took place in the development process. As field interactions and the collection of empirical material increased, the number of pages grew and by the end of the field study, the logbook constituted a document of 143 pages.

I used two different systems for organising and recording the field interactions in the logbook. For observations and interviews, I recorded *the type of interaction*, that is, whether it was face-to-face, telephone or a combination of face-to-face and telephone, *the place of interaction*, *the date*, *the time* the interaction started and ended, and *the names* of the participants involved in the interview or the observation. Additionally, I always made some notes of *the main purpose and results* of the encounter. If the customer had been discussed or only mentioned, I also made notes about this. Later, these notes helped me to recall the encounter’s substance. In addition to summarising the main results of the interaction, I referred to documents that had been central to the interaction and to audiotapes with a full record of the interview or observation. Finally, some encounters generated *reflections* that also were written down. Table 10 depicts the system for organising observations, interviews and documents in the logbook

Table 10 The system for organising observations, interviews and documents

Interaction	Description
Type	For example: Face-to-face, Telephone, Face-to-face/Telephone
Place	For example: The bank’s headquarters, Restaurant, The key informant’s office, Meeting room at branch office x, Consultant’s premises
Date	Any between 16.02.2005 – 21.03.2006
Time	During business hours
Participants	From one to several informants and I
Purpose	For example: to produce the project plan, to develop content, structure, functionality, weekly review meeting, to get updated on last week’s development, to clarify issues that were discussed in observed meetings
Result	Summary of main results, including whether the customer was discussed. Reference to documents central to the interaction: <i>insiders’ doc. title/date</i> Reference to audio recording: <i>purpose of interaction/date</i>
Reflective notes	Occasionally the interaction generated reflective notes

In addition to being downloaded, printed out and filed, e-mails and SMSs were copied into the logbook as they were received. Meeting agendas and minutes attached to e-mails were also copied and pasted in the logbook. Initially, I translated the material produced by the informants from Swedish to English. However, as the development process went by and the interactions with the field intensified, I found the translating

too time consuming.⁴³ I also found it very difficult in some cases to translate the language without losing some of its nuances and character. To avoid losing some levels of meaning and in line with ethnography, I decided to keep the material in its original language (e.g., Aull-Davies, 2005). Table 11 illustrates the system for organising e-mails and SMS.

Table 11 The system for organising E-mails and SMS

Interaction	Description
Type	e-mail or SMS
Date	Any between 16.02.2005 – 21.03.2006
Information	Name of sender, receiver(s) Copy of the e-mail, agenda and meeting minutes in full length
Reflective notes	On some occasions an e-mail or SMS generated reflective notes

As mentioned, the empirical material was collected during about one year. It was chronologically stored by time of collection and by the end of the field study the empirical material consisted of more than one thousand of documentary pages (e-mails included) produced by the bank and informants, the logbook on 143 pages with recorded field interactions together with field notes and reflective notes, 82 audio tapes (with recordings spanning from 15 minutes to 2 hours per tape) of recorded observations and interviews. In regards to the amount of empirical material, I found the logbook invaluable when I started the more focused analysis after leaving the field.

3.3. The case, informants and the field setting

The selection of a case is interrelated with the problem investigated and the aim of the study. This means that the researcher should continually keep in mind the requirements of the research and seek out an appropriate case in light of the research problem and the aim of the investigation (Aull-Davies, 2005; Hamel, Dufour & Fortin, 1993). The purpose of the current study is to identify and describe different types of customer information use in service development. The approach is to go for the depth, not breadth, understanding, not prediction. In ethnography, *access* is of main concern and usually constitutes the main selection criterion of case and setting (e.g., Hammersley & Atkinson, 1983; Patton, 2003; Schwartzman, 1993).

In the current study, the development process of a website constituted the case and context for the investigation of customer information use and acquisition. This choice was based on the possibility to gain access to the “closed setting” of a development project, which can be considered relatively difficult (Jorgensen, 1989). Although many aspects of a company may be open to almost anyone, certainly not all of the activities going on there are open to the participant observer as an outsider. The embedded notion of secrecy and “magic” in service and product development makes the information about any activity that goes on in these processes “sensitive,” thus, to gain access to such a setting was a privilege. The choice of informants was a rather straightforward task. Because the development process was organised and performed by a group of people, the development project, the project members represented the informants. The development process took place in a bank setting that, consequently, represented the field setting. In the following sections, the circumstances that

⁴³ Between 16th of February and the end of May 2005, I interacted with the field on average 1.6 days per week and 1-4 times per day of interaction. From June 2005 to the launch of the new website in March 2006, I interacted with the field on average 3 days per week and between 1-7 times per day. The period between September 2005 and January 2006 was the most intense. During this period the interactions were more or less on a daily basis, that is 4-5 days per week and often several times per day.

generated the choice of the case, field setting and informants are presented followed by a description of the case and the informants.

3.3.1. Selection of a case and field setting

The decision to conduct the current study on a development process of a website at *the bank* was based on the following circumstances. Due to stipulations made by the foundation, which at that time financially supported me, the study needed to be conducted within the financial service industry. A large number of studies in NPD and in NSD have been conducted in the financial service industry. However, as previously mentioned, the majority of these are in a business to business context. In addition, there is a lack of ethnographies in service development conducted in this industry (and in others).

The choice of focusing on *the bank* as a field setting was further motivated by access⁴⁴. During the fall of 2004, negotiations were conducted with *the bank* about the possibility to gain full access to a development process. It was made clear that I needed to conduct participant observations of development meetings, make recurrent interviews with developers and collect documents. In short, I needed full access. The fact that I had already performed a study at *the bank* and had gained some rapport was to my advantage in the negotiations. Since the context for my investigation of customer information concerned a strategically important process such as NSD, confidentiality and people's anonymity were an issue. Thus, it was expected of me to not reveal names or other details that would reveal the case, the field setting or informants.

During the winter of 2004, it was decided that I would be granted full access to a development project concerning the bank's website that started in February 2005.

In addition to access as the key selection criterion, this choice was motivated by several other issues. First, it was stated that the development would only take about 6 months, thus, it seemed to be a time-effective project that suited well with the planned timetable for the dissertation (eventually, the development took about 12 months). Second, the project was just about to start, which granted me the opportunity to conduct the investigation of customer information from the very beginning of the development process throughout the entire process to the launch of a new service. In this way the investigation covered the whole process, which increased the probability to capture all data on customer information use and acquisition. Investigating the whole development process also provided the opportunity to identify when use and acquisition emerged in the process. Later, it was revealed that although the development project was new, the development process had already started once before, about one year earlier and after about half a year it had been "put on hold." Nevertheless, the development process was in the very early stages when my field study began, so I decided to continue the investigation. The "missing" initial part of the

⁴⁴ The access was facilitated by an opportunity that I was granted already in 2003. In that year *the bank* participated in the CERS Award competition and I was appointed as their tutor. CERS (the Centre of Relationship Marketing and Service Management) annually organize a competition for Finnish companies called the *CERS Award for excellence in relationship marketing and management*. The idea behind the competition is: "...to raise the awareness of relationship management issues in Finland, share and transfer knowledge regarding Relationship Management, as well as to give recognition to a Finnish company that has excelled in customer orientation." (CERS Award Brochure, 2003, p.2)

As a tutor, I gave feedback on *the bank's* self-assessment of its implementation of a relationship strategy. At that time I had just decided that the topic for my study was going to be service development and the role of customer information in that process.

development process, the bank's so-called "pre study," was investigated retrospectively by inspecting its documentation and by interviewing the person that had been responsible for it

A final issue that motivated the choice of the development project was the ongoing discussion of the evolution of "an information society and digital economy." In regards to this "general buzz," the development of a *website* as the case and context for the investigation of customer information seemed timely and relevant.

The bargain

To get into an organisation as an outsider and to get access to material for a longer time period, in my case for little more than one year, it is common practice in ethnographic studies that the researcher gives something in return. I conducted an internal survey among the front line personnel at the bank's branch offices. To link the development project with the rest of the organisation and to make sure that the eventual result of the development would be supported by as many people as possible in the bank, the director of business development thought that it would be a good idea that an outsider, such as myself, could find out how managers at the different branches wanted the website to be developed. At first, I was a bit concerned about the effect my investigation might have on the neutrality of the findings. Soon, however, I realised that this would not be a problem. On the contrary, the survey provided an excellent opportunity to investigate up-close the path of the customer information, that is, how it was acquired and how it was used in the development. The questions that I posed had been formulated by the project leader and been sent by e-mail in advance to the branch offices. Thus, my role was to call the branch offices and collect the answers on two questions:

1. What are the three biggest weaknesses with today's website?
2. If you could wish for three services/functions that could exist on the website in the future, which ones would it be? (E-mail, 29.06.2005).

The answers were reported to the developers in the form of a written document. I did not analyse them, but simply wrote down the answers branch office by branch office. It could be mentioned that from my point of view, the survey turned out like a small test. First, some of the results of the survey contained customer information that branch offices had acquired and wanted the developers to use. Second, after I had e-mailed the survey results to the developers, I observed up-close in development meetings how the developers reacted to the customer information that the front line personnel wanted them to use. The customer information that over time had been acquired by branch offices and that was formally provided to the developers through the survey, and later also informally by some branches, was part of the data that was analysed in the current study.

3.3.2. Description of the case

The bank's website consists of two parts, an online bank that is available only to the bank's customers and a portal that is open to anyone. At the online bank, the customers can take care of their private affairs, such as checking the account balance, paying bills, etc. They have to log in with a personal password and a code. The portal is "open" and available to any visitor and it is this part that was the focus of the development, and hence, this dissertation. This part consists of information about the bank's services (e.g., different kinds of accounts, loans, bank and credit cards, etc.) the location of

branch offices, contact information, the organisation of the bank, etc. The login to the online bank is also a part of the website's open part, which means that users of the online bank have to go via this part. Three aspects of the website were developed; *the actual content*, that is, what information to include and how it should be expressed and exposed; *the structure*, that is, under what heading and on what hierarchical level to put the content; and *the functionality*, that is, underlying technology that cannot be seen by the visitor but still influences what is seen, for example, the navigation logic, interactivity of content, cookies, etc.

The studied development process concerned a bank's website. The "self-service technology" of the Internet, allows the customer to serve himself (Bitner, 2001). This means that in order to receive the information on the bank's website, the customer has to participate in the service delivery by interacting with a technological interface. The result of this technology-based encounter, such as customer perceived value, is thus, largely dependent on the customer's understanding of how to interact with the website in order to gain the wanted information. (Bitner et al., 1997; Meuter et al., 2000.) Thus, to use customer information, particularly when developing a service where the level of customer participation is high, could be viewed as being of paramount importance to the company. Taken together, the participant role of the customer in the service delivery makes the development process of a website as the context for the current study an interesting case.

The studied development process of the bank's website represents the third in chronological order since the bank first was established on the internet. Thus, the development can be viewed as incremental in nature. The development process started in February 2004, and two years later, the new website was launched. The field study started in February 2005 and ended some time after the launch in March 2006. The main activities of the development process, together with the data collection methods, are presented in Table 12. A more detailed discussion of the development process and its activities is presented in chapter four.

Table 12 Description of the case and data collection methods

Time period	Main development activity	Data collection methods
Feb 2004 - June 2004	Bank's pre study	Field study, (Feb 2005 – March 2006): • Participant observation • Interview, informal discussion • Inspection of documents
June 2004 - Jan 2005	Development "put on hold"	
Feb 2005 - May 2005	Development of the technical platform	
June 2005 - Feb 2006	Development of the structure and content	

3.3.3. Selection and description of informants

The selection of informants is critical for the ethnographic researcher as for any researcher in any study. In spite of the importance of informants, the process of selecting them is not a one-way procedure. The selection depends upon factors such as their accessibility and willingness to assist in the research as well as their knowledge and insight. Thus, ethnographers are often as much selected by their informants as the reverse. (Aull-Davies, 2005)

According to Stewart (1998), the purpose of sampling in ethnography is to achieve strategic coverage of "the system," in my case the use and acquisition of customer

information in the chosen development process. Thus, a good ethnography is expected to sample the entire distribution, and not just the central tendencies of the topic studied. “What good ethnographic sampling is about is establishing the range of the phenomena, not establishing the proportions of traits in a population at large” (Stewart, 1998, p. 35). This means that randomly selecting informants is ill-advised and quite unfeasible in ethnography. As a rule of thumb, the researcher needs to identify those people that are close to the research problem and that are familiar with relevant details (Henard & Szymanski, 2001) or, in other words, those that the researcher expects to be “the best-informed informants” (Dalton, 1967 in Stewart, 1998, p. 36).

In the current study, the selection of informants was a rather straightforward task. After I had gained access to the development process of the new website, those people involved in it, “the developers” were the natural choice. The development was organised as a project involving people at the bank from different functional areas and external consultants. The informants with their development tasks and responsibilities were divided into *the project board*, *the core development team* and *the reference group*.

The project board

The project board consisted of two informants: Mr. Director of Business Development and Mrs. Director of Human Resources. As a “gatekeeper,”⁴⁵ Mr. Director of Business Development was also the person that granted me access to the development project. Without his consent, the study of customer information use and acquisition in this particular case and setting would not have been possible. According to an insider document labelled “the project plan,” the purpose of the board was “to support the project leader and to ensure that the development process is performed within the limits of the specified budget and time frame” (p. 5). This means, for example, that to formally change the launch date (which happened on several occasions), the project leader had to meet the project board. The project board was not involved in the actual development work and was not responsible for the content, structure or functionality of the new website.

The core development team

The core development team represented the study’s key informants. This group was responsible for the actual development, which means that they were involved in the day-to-day activities of the development. Hence, the majority of the observations are from meetings between members of this group. As key informants, these “core developers” were familiar with relevant details, monitored the development process closely, and were expected to be the best-informed informants. The key informants belonging to the core development team were Mr. Project Leader and Mr. Technician (from the business development function), Mr. Marketing Manager and Ms. Marketing Manager (from the marketing function) and Mr. Technical Project Leader (from the bank’s IT function). Since Mr. Project Leader had the main operational responsibility of the development, he represents the study’s main key informant. As the main key informant, he was also the contact person that informed me about meetings, provided me with most documents and the majority of the recurrent interviews were also conducted with him (see appendix 1).

The constellation of the key informants varied to a certain extent depending on the meeting’s agenda. For example, Mr Technical Project Leader was only present when

⁴⁵ A gatekeeper is a person who has the power to grant access to a research setting (see e.g., Bogdan & Taylor, 1975; Hammersley & Atkinson, 1983).

issues concerning the underlying technical platform were discussed and decided upon. Additionally, on these occasions, several technical engineers participated. The most frequent constellation of the observed meetings was Mr. Project Leader, Mr. Technician, Mr. and Ms. Marketing Manager. In addition, the core development team cooperated with consultants in web design and market communication, and occasionally these would participate in the development meetings as well.

The reference group

Four informants, Mrs. Call Centre, Mrs. Sales Director, Mr. Private Banking, Mrs. Business Support, represented the reference group. Based on the information from the core development team, this group gave ideas and feedback on the development, but did not have any formal decision-making power. The reference group was also responsible for continuously communicating back the proceeding development work to the rest of the organisation, and to report internal feedback to the development team, after which the project leader decided upon revision. Thus, the reference group functioned as a formal link between the core development team and the rest of the organisation.

Although all members of the three groups represented the informants, the extent to which they participated in development meetings, and thus were observed, varied. Some were frequently observed, but only during a limited period of the process (e.g., in the development of the underlying technology), some were frequently observed throughout the whole process (the core development team), and finally, some were observed throughout the whole process, but only now and then (the project board and the reference group). As a consequence, their contribution to the empirical data varies (see appendix 3).

3.3.4. A few words on the field relationships

As recommended in ethnography, the informants were strangers to me when I started the field study (Bogdan & Taylor, 1975). In addition, I had no prior professional knowledge about service development in practice and I have never worked at a bank. Thus, the ethnographic importance of being naïve was not perceived as a problem. To stay naïve, I also kept a reflexive and open mind throughout the process and never forgot that my primary purpose of being there was to learn about their use of customer information in the development process. As time went by, relationships were developed with the core development team, or the key informants, and there were no signs of personality clashes, which facilitated the process of gaining access and building rapport. To build rapport is important because without it the information collected is likely to be of low quality (Elliott and Jankel-Elliott, 2003). The relationships to the informants could be characterised as “professional” rather than “close friendship.” The informants knew their roles as information providers and that mine was that of the researcher interested and curious about their development process. Proximity in age with most of the informants could be considered as possibly contributing to establishing the favourable relationships.

3.4. Strategies to increase the quality of the study

Ethnographic research has been both criticised and praised in the light of arguments about its satisfying the research criteria of validity, reliability and generalisability. It is widely agreed that this qualitative methodology produce highly valid results, but is

deficient in regard to reliability and generalisability (Aull Davies, 2005; Deshpande, 1983; Jorgensen, 1989; Stewart, 1998). In the following paragraphs I will discuss how validity, reliability and generalisability should be interpreted in the current study and the coping tactics that were used in the study to enhance these criteria.

3.4.1. *Validity/Veracity*

A central question of validity in statistics-oriented studies is whether one has measured “correctly” (e.g., Aull Davies, 2005; Kirk & Miller, 1986). In ethnography, it has been argued that the concept of validity is overly laden with connotations of measurement (Wolcott, 1994). Thus, as another term for validity, *veracity* has been suggested (Stewart, 1998). Veracity means “1: devotion to the truth...2: power of conveying or perceiving the truth...3: conformity with truth or fact” (Merriam-Webster’s Collegiate Dictionary, 10th ed., in Stewart, 1998, p. 15). Meaning number two seems attuned to empathic understanding, and hence, the most ethnographic. However, number one and three are also of fundamental importance in ethnographic studies (Stewart, 1998).

In every study there are inevitable limits to capture “the truth,” even if one believes as in this study, that the truth is only provisional and based on one’s best understanding. Stewart (1998) discusses limits that are related to the field and limits related to the ethnographer. Related to the field is the impossibility of the researcher to be everywhere at once, thus this limit concerns how well the researcher has covered relevant pieces of data. There are also limits related to the fieldworker or ethnographer. Due to information processing limits, the ethnographer misunderstands, forgets and can attend to only so much at once. “They mishear [and] do not recognize what [they] see,” (Stewart, 1998, p. 19) and the unfamiliarity with the observed language and culture makes it difficult to make sense of the observations (ibid).

In the current study, coping tactics such as *prolonged fieldwork*, *attentiveness to context* and *multiple modes of data collection* were used to reduce the aforementioned field- and fieldworker-related-limitations and thereby enhance the study’s veracity. These tactics are discussed in the following text.

Prolonged fieldwork

Unlike other qualitative methodologies, ethnography emphasises, or even requires, that the researcher spends a long time in the field⁴⁶. It has been argued that this is the single most important tactic the ethnographer has to enhance veracity (Stewart, 1998). The underlying notion is that by spending time in the field, the ethnographer learns and by large, to “get it right” or, simply put, it takes time “*to undergo* what ethnography is: a process of learning” (Stewart, 1998, p. 21). The current field study lasted for about 13 months. During this period, I observed the development process and interacted with the field and with the same informants. This prolonged engagement facilitated my learning not only about the immediate research problem, but also about the development process, the developers, the language used, the greater context of the bank setting, the relationships between the developers and between the development project and the rest of the organisation. This understanding helped me in “getting it right” and thus, enhanced the study’s veracity (cf. Lincon & Guba, 1985).

⁴⁶ It has been argued that the minimum amount of time that the ethnographer is expected to spend in the field is one year (Alvesson and Deetz, 2000).

As suggested by Stewart (1998), the longer time of the study provides more opportunities to disclose discrepancies between what the informants say and what they actually do, which also enhances the veracity of the findings. These kinds of discrepancies were revealed repeatedly, particularly in the case of *the potential use* of customer information. Additionally, the probability of discovering short-lived factors and changes that might exert important influences on the use of customer information increases with time (van de Ven and Poole, 1990). In the current study the short-lived factor of chance was captured in *the almost postponed use*.

Attentiveness to context

As discussed by Stewart (1998) and by Miles and Huberman (1994), the context of the data collection influences veracity. It is widely agreed that good ethnography includes not only interviews, but more important observation of “speech-in-action.” Interviews of key informants are convenient, but ethnographers should “listen carefully to what people say, watch what they do, and keep their voices down” (Smith, 1990, p. 369, in Stewart, 1998). The ethnographer needs to be sensitive to the context when observing and to the context for interviewing as well. For example, employees say different things in the presence of peers and supervisors. Thus, the data collection should take place in different social contexts, that is, multiple contextual biases should be sampled. In this study, observations, interviews and informal discussions took place in different social contexts. Thus, data was collected from informants in groups and from key informants, one to one. Data was collected at various locations such as the bank’s headquarters, the office of the project leader, the headquarters’ lunch restaurant, in public restaurants and at the consultant’s premises, etc.

Miles and Huberman (1994, p. 268) suggest the following list of circumstances that may strengthen or weaken the quality of collected data:

Stronger data

Collected later, or after repeated contact
Seen or reported firsthand
Observed behaviour, activities
Fieldworker is trusted
Collected in informal setting
Respondent is alone with fieldworker

Weaker data

Collected early, during entry
Heard second-hand
Reports or statements
Fieldworker is not trusted
Collected in official or formal setting
Respondent is in presence of others, in group setting

In the current study, data was collected during entry and throughout the 13-month period of repeated contact. The analysis is based on data that primarily was collected firsthand in observation of speech-in-action, but also second-hand data, such as documents, were collected. Since the development concerned a website, some of the actual development activities were conducted during the meeting, since a laptop was the only physical resource required. Thus, not only did I observe discussions including negotiations and decision making about the development, but also actual activities of development work. I also observed three user tests on the website prototype. Furthermore, Miles and Huberman (1994) suggest that stronger data is produced if the fieldworker is trusted. Trust is something one earns over time and I believe that after some time I gained the core development team’s confidence and trust. As invariably described in ethnographies, I was assigned the role of confidant (Johansson, 2008). As mentioned earlier, data was collected in various settings such as formally in meetings and informally during breaks, lunch and immediately after scheduled interviews.

Additionally, data was collected from informants in the presence of others, in group settings, as well as from key informants one to one.

Multiple modes of data collection

To employ multiple modes of data collection and to use multiple sources is another tactic to enhance the veracity. This is important because different kinds of data are generated by different techniques and no one particular source or informant is error-free (Stewart, 1998). In this study, firsthand real-time data was collected through observation and retrospectively through interviews and informal discussion. An overriding strength with observation is that it produces data with the least response bias of any data collection technique (Boote & Mathews, 1999). Second-hand data was collected in documents. In line with Arnould and Wallendorf (1994) suggestion, multiple sources or informants were used to generate varying perspectives of customer information use and acquisition. In addition, the different informants' views of the same phenomenon may improve the researcher's understanding of the research problem (Kumar, Stern & Anderson, 1993). Data was collected *repeatedly* by more than one technique from the same informant, most often all three techniques (i.e., observation, interview, informal discussion) were employed to generate data from the *same* informant.

3.4.2. Reliability/Dependability

Reliability is concerned with consistency of results and refers to the extent to which a procedure or measurement, produces the same result with repeated usage. Consistency is likely to be obtained when the procedure is simple, and highly standardised as with most forms of quantitative measurements. (Jorgensen, 1989)

Ethnographic research cannot be replicated literally in a conventional statistical sense (Aull Davies, 2005; Jorgensen 1989; Stewart, 1998). Due to the emergent and open-ended research approach, ethnography is a continuous learning process about the topic of interest - the people, their relationships - that are themselves in flux. Consequently, replication in a traditional sense is difficult as people and contexts continually change. This seems especially true considering the current study of a specific development project, which by its very nature is time-specific as it exists only once during a certain period of time. In addition, the majority of the key informants of the core development group do not work at the bank anymore, and as pinpointed by Aull Davies (2005), even the same ethnographer is a different person on subsequent field trips to the same research site. Hence, as with all knowledge, we must accept its incompleteness and contingent character. However, this does not mean that we have to sink into a relativistic hole in which no evaluation or improvement in knowledge is possible. Although reliability in a conventional statistical sense is not applicable and even not appropriate in ethnographic research, there is still a fundamental concern that is central to the independent research approach and that is to generate *dependable* findings (Guba, 1981; Jorgensen, 1989; Stewart, 1998).

A central question in regard to a study's dependability is (Stewart, 1989, p. 16): *how well do the findings transcend the perspectives of the researcher?* In the current study, the tactics of *reflexivity* and *specification of the research* were used to enhance the dependability of the findings. These tactics are discussed in the following text.

Reflexivity

Reflexivity expresses “the researchers’ awareness of their necessary connection to the research situation and hence their effects upon it” (Aull-Davies, 2005, p. 7). Due to the subjectivity of the researcher, these effects or biases are inevitable from the initial selection of topic to the final written product. By critically reflecting on the biases stemming from researcher effects on the studied field and vice versa, attempts to minimize these biases can be made. Additionally, by discussing and trying to disclose the choices made throughout the research, the critical sources of biases may provide a picture of “traceability of invariance” (Guba, 1981, p.81).

The discussion in this methodology chapter on tactics used in the current study to enhance veracity and reliability is one way in itself of showing a consciousness about the potential researcher effects on the current study. In the discussion on data collection methods (3.2), the ambition has been to be up-front about potential research effects and to emphasise both the positive and negative sides of each method. Naturally, attempts were made throughout the 13-month period to be as unobtrusive as possible in every interaction with informants. The main data collection method of observation that was used in the study has been claimed to be unobtrusive as it allows the researcher to collect data from a distance and to keep interaction to a minimum (Aull-Davies, 2005). This seemed especially true in the case of the telephone observations, where informants occasionally forgot or were not aware of my presence. In addition, as has been found by other researchers, the reactivity of the insiders appeared to decline very rapidly over the period of observations (Stewart, 1998).

As suggested by Miles and Huberman (1994), it was clear that one is not such an important presence in the lives of the studied informants and therefore one should not “overrate” the researcher impact on the insiders. Hence, it is important that the researcher effect is not given too much weight as the critical question is “whether or not the research process or the characteristics of the researcher have affected the behaviour that was observed...*in the respects that are relevant to the claims made (and to a significant degree)* [emphasis added]” (Hammersley, 1990 in Stewart, 1998, p. 31.).

Specification of the research

Equally important as reflexivity for the generation of dependable results is to *specify* the research circumstances, so that readers could make their own informed judgements about the interpretation and findings that are presented. Thus, the researcher needs to specify “the ethnographer’s path,” which includes a specification of the network of informants that the ethnographer has engaged (Stewart, 1998). In 3.3.3, a description of the informants and how they were selected was presented. In appendices 1 and 3, the extent to which informants were observed and interviewed is specified. This specification is important as it shows the different informants’ or groups of informants’ contribution to the study’s analysis and findings. In appendix 4, the reader is given access to a large number of verbal reports from the key informants. These provide information on the variation in perspectives that were witnessed and the reader can not only judge the dependability of the findings, but also make his/her own interpretations.

Additionally, in order to judge the dependability, it should also be possible for the reader to assess the extent and type of partisanship on the part of the author and the success in attaining deep and privileged access within at least some social units (Stewart, 1998). The type of partisanship was discussed in 3.3.4 together with the field relationships that were established. In regard to the access that was gained, it has been suggested that the researcher should have a rather good feel for his/her overall success

in this respect (Stewart, 1998). I believe that I did gain access that can be labelled “deep and privileged.” I had full access to all meetings concerning the development process. Thus, not only was I privileged to attend all core development meetings, but also the project board meetings that concerned aspects such as the budget for the development and its time schedule. All of the informants had an open and positive attitude towards me and the study, and they never hesitated to help out in any way they could. For example, without asking I received several documents by e-mail from informants who assumed that the document could be of interest to me. As mentioned earlier, I was not only “the fly” or “the researcher,” but I was also assigned the role of “confidant” by several key informants. Thus, it appeared as though the insiders trusted me, which is important in order to gain “deep and privileged access.” Finally, as suggested by Stewart (1998), the ethnographic depiction itself and in this case primarily the verbal reports in appendix 4, are sufficient testimony of the access that was gained in the study.

3.4.3. Generalisability/Perspicacity

A third important research canon is generalisation. Ethnographic research has often been criticised of its lack of generalisability (Aull Davies, 2005). Whereas research using large samples is perceived as being scientific, proven and true, the results from small samples, such as those in ethnography, enjoy the dubious pleasure of being labelled tentative, illustrative and anecdotal (Biemans, 2003). In support of the ethnographic approach Mintzberg (1979) states the following:

Too many of the results have been significant only in the statistical sense of the word...What, for example, is wrong with sample of one? Why should researchers have to apologize for them? ...Measuring in real organizational terms means first of all getting into the field, into real organization. Questionnaires often won't do (p. 583, 586).

If generalisation is understood in the aforementioned notion of samples and populations, then the quest for generalisability will be as pointless as the quest for conventional reliability (Stewart, 1998). However, when interpreted as *perspicacity* or *theoretical inference*, generalisation may be applied to and evaluated in ethnographic research as well (Aull Davies, 2005; Stewart, 1998).

Ethnographers not only could, but should aspire to generate insights than can be applied elsewhere. Perspicacity refers to the extent to which the ethnographer can develop a concept or theory, about processes, structures or relationships that are specified adequately so as to be applied beyond the site of the research. Hence, perspicacity refers to the transferability of the findings to another time and place than the studied field (Stewart, 1998). Theoretical inference refers to findings or conclusions that are seen to be generalisable in the context of a specific theoretical debate (Aull Davies, 2005).

Relevant questions concerning the generalisation of findings are: *Do the findings include enough “thick description”⁴⁷ for readers to assess the potential transferability, appropriateness of their own settings? Does a range of readers report the findings to be consistent with their own experience? Are the findings congruent with, connected to, or confirmatory of prior theory?* (Miles & Huberman, 1994, p. 279). With the

⁴⁷ The concept of *thick description*, which was coined by Geertz (1973), refers to the researcher's attention to detail and has been described as “densely textured facts” (Geertz, 1973, p. 28, in Folger & Turillo, 1999, p. 743). A thick, richly detailed ethnography allows the reader to step into the described scene, into the circumstances and assess the transferability to his/her own experiences.

exception of the last question, which is discussed in chapter 5, these questions are discussed in the following text.

Thick enough description?

The field study resulted in approximately 45 pages of verbal accounts on two types of use and four types of non-use of customer information in a development project (see appendix 4). These detailed accounts have been preserved unobscured together with the detailed description of the empirical investigation in this chapter, and the description of the analysis process in the next, explicate how the research has landed in these findings. It is here argued that, taken together, this information represents a thick enough description for the reader to assess the transferability to his/her own experiences.

Findings can also be general and transferable within the same research site. In the current study, during an observation it was revealed that at least the finding of the *potential use* of customer information is transferable within the bank. At that particular observation, one of the developers stated to another that in a previous development project they had had similar intentions to acquire and use customer information, but due to scepticism concerning the usability of the potential information, the intentions were never realised. Thus, the statement lends support to the finding's transferability to other development projects at the bank.

Consistent with other researchers' experiences?

When discussing the research results with company managers and other researchers, findings of the current study have shown to be consistent with their experiences. For example, in discussion with product and service managers from various industries (e.g., industrial paper industry, advertising industry), the findings that customer information is acquired, but not used, in development, is consistent with their experiences. Furthermore, another researcher found in her study that customer information appears to be implicitly known, and thus, it is not acquired from any particular source. The context of her empirical investigation was the Finnish restaurant industry, where she focused on customers' and employees' quality perceptions. Her finding that restaurant employees know that customers do not like to wait for an available table, and that this happens more often on weekends due to peak in demand, was one example that lends support to the transferability of the current finding of implicit customer information to the restaurant industry. Another researcher that previously worked as a developer in a big Swedish telephone company revealed that the current finding of developers themselves generating customer information through speculations was consistent with his prior experiences as a developer. His stated reason for this behaviour was also consistent with the observed one in the current study, which is perceived time pressure.

4 USE OF CUSTOMER INFORMATION IN A SERVICE DEVELOPMENT PROJECT

This chapter presents the analysis and findings of the empirical study. First, the process of analysis is presented. Thereafter, the development process and the development project are described followed by a presentation of the findings.

4.1. The process of analysis

Fundamental to ethnography is the process of emergent analysis (e.g., Coffey, 1999). Its main features are the gradual accumulation of data through observation as the main method and an inductive analysis of these data (Lofland, 1995). Arnould and Wallendorf (1994) note that “as in all data analysis, ethnographic interpretation also requires researcher creativity and insight rather than rote adherence to a sequence of steps” (p. 495). Thus, the process rests on the ethnographer’s sensitivity and intuition and is also very much a creative act (Lofland, 1995). Referring to the open-ended and inductive features of the analysis process, Atkinson states:

Making it all come together...is one of the most difficult things of all...Quite apart from actually achieving, it is hard to inject the right mix of (a) *faith* that it can and will be achieved; (b) recognition that it has to be *worked* at, and isn’t based on romantic inspiration; (c) that it isn’t like the solution to a puzzle or math problem, but has to be *created*; (d) that you can’t pack *everything* into one version, and that any one project could yield several different ways of bringing it together (in Lofland, 1995, p. 47).

As the traditional path in ethnographic studies, the analysis process started already during the field study (e.g., Aull- Davies, 1999). During the observations of the development meetings, for example, I listened extra carefully whenever the customer was referred to. The customer had many “names.” In addition to “the customer” or “the potential customer,” “they,” “you,” “the visitor,” “the user,” and “one” were used by the developers. Independently of names denoting the customer, the customer was only referred to and discussed in about *one third* of the observed development meetings. Instead, other topics were the focus in most of the discussions (these other topics will be described later). It should also be mentioned that in this one third the customer was not the exclusive focus of discussion, but rather one topic among others. The observation that the customer was not much discussed is noteworthy, as Patton (2002) suggests that it is appropriate to note that something did *not occur* when the observer’s basic knowledge of an experience suggests otherwise. General knowledge in marketing suggests that the customer should be taken into account in service and product development (see also, e.g., Alam, 2002).

During and after the field study I transcribed the collected data. The logbook (see 3.2.4) functioned as a directory and those observations and interviews where the customer had been mentioned were transcribed. Occasionally, these transcripts directed me to other data that subsequently were further investigated.

As analysis is a search for *patterns* (Spradley, 1980), the transcripts, documents and the logbook with its field notes and reflective notes, were reviewed several times. Coffey and Atkinson (1996) suggest that “the analytic process should be comprehensive and systematic but not rigid” and that “data are segmented and divided into meaningful units” and “organized according to a system derived from the data themselves.” I

reviewed the data and found activities and themes that were recurrent and that, in my view, relate to the study's purpose and research questions. I grouped these together.

I decided that customer information was categorised as *used* when the development work of the website was based on that particular information. This means that the developers would discuss a piece of customer information, reach an agreement on how to develop accordingly and implement it. In addition, customer information was also categorised as *used* if the developers had not discussed it, but the information had been acquired, for example in focus group interviews, and the website was developed accordingly. I also recurrently identified instances where customer information was within reach of the developers, but for some reason was not used in the development, I labelled these instances *non-use* of customer information. "Within reach" means a situation where customer information was discussed by the developers or had been acquired. The identified overarching categories of use and non-use were further grouped into different types of use. Hence, the *immediate use*, *almost postponed use* represent use and the types of *postponed use*, *almost use*, *potential use* and *immediate non-use* represent non-use. The aspect of time was the primary issue differentiating one subgroup from another. These will be further discussed later.

The ethnographic approach with the emergent process of analysis allows the researcher to further explore unanticipated empirical findings (e.g., Aull-Davies, 2005; Lofland, 1995). In a similar vein, Pettigrew (1990) points out that in inductive field research the research may begin with only a broad definition of the research problem, which is sharpened by a complex and evolving mixture of literature analysis and data collection and the uncovering of themes, patterns and propositions. While reviewing the data, I realised that some themes related to customer information acquisition recurrently emerged. Since these were different than the literature analysis suggested, I decided to explore these further and grouped them into the following: *the source of the information*, *the time and means of the acquisition*.

Reporting

With respect to the emphasis that is put on context and interaction in ethnography, the final reporting of the text should include rather fuller statements and sections of dialogue rather than heavily edited and isolated quotations (Aull-Davies, 1999). This is also in line with the production of a "realist tale," where the text focuses more on the sayings and doings of the people studied and less on the researcher's experience of the studied (van Maanen, 1988). However, to include many quotations of lengthy discussions would make the text less reader friendly; hence, I decided to keep the presentation of the findings concise. The observed discussions and other analysed data are therefore shown in detail in appendix 4.

4.2. Setting the scene - the development process and developers

The development process of a website constituted the context of the empirical study and the members of the development project the investigated users of customer information. In this section the development process will be described followed by a presentation of the development project.

4.2.1. The development process of a website

The studied development process started in February 2004 and ended two years later with the launch of the new website. The development was incremental in nature as the studied development process of the website represented the third in order, since the bank first launched its services on the Internet. The initiative to develop the website came from the marketing department:

The open website with all its content has grown and become disproportionate in comparison to the structure, which is, independently, perceived as difficult to navigate by the visitor. To publish on and withdraw content from the web is too time consuming ("The pre study," p. 11, 2004).

Initially the aim with the development was stated as: "to increase the flow of new customers acquired via the website" ("The pre study," p. 8).

Later, the aim was stated as:

To strengthen the bank's relationship through improved communication with its three segments: customers, potential customers and media and investors. Improved communication means that we consider the needs of each segment to a greater extent. In addition, it means new graphic design, new navigation and a functionally improved publishing tool ("The project plan v.3," 2005, p. 1-2).

Hence, instead of targeting *potential* customers as in the initial aim, the primary target of the new website was changed to *existing* customers:

This is a strategic change. However, acknowledging the facts it is easy to understand this new aim, i.e., looking at the statistics of visitors of the old website we can conclude that it is not economically viable to primarily target potential customers. Besides, we are convinced that by turning to our existent customers we will acquire *new* customers. Let us clarify with an example: Imagine it's Friday night and you're walking past a house. Inside there is a party going on, you can tell by the laughter, music and the sound of ice cubes in glasses of cocktails coming through the open window. How do you react? Most likely you would become curious and would want to be invited.

Advertising agencies have used this principle since the beginning of time. Humans become curious of things that are not actually meant for them. This party-in-the-house phenomenon can be applied to the new website. Of course, the new website will contain high quality pages for potential customers who would like to know more about the bank. The point is that when these visit our website for the first time we will communicate to them as if they already were our customers ("Definitions of the website project," 2005, p. 3-4).

However, despite the changed and formally stated aim, in the observed meetings, no distinction was made between existent and potential customers. Frequently it seemed as if the aim with the development still was to increase the number of new customers acquired via the website.

Table 13 presents the main activities of the development process after which they are shortly described.

Table 13 The development process of the bank's website

Time period	Main activity
February 2004 - June 2004	The pre-study
July 2004 - January 2005	The development "put on hold"
February 2005 - May 2005	The underlying technical platform
June 2005 - February 2006	The structure and content

The Pre-Study

The development process started with a “pre-study”. This was lead by Ms. Marketing Manager, who also participated in the core development team. The purpose of the pre-study was to generate suggestions and map out different alternatives for the development of the new website. The pre-study resulted in an extensive document of 60 pages and 16 attachments with ideas and suggestions concerning content and functionality of the new website. As part of the pre-study, two focus group interviews were conducted to acquire customer information. The purpose with the interviews was:

“...To clarify the bank’s customers and other banks’ customers perception of the current website and how one could develop it further. To clarify what information visitors search and what information the website should contain...Central questions are:

- What comes to one’s mind when surfing on the bank’s website (open part)?
- What is good and bad on it?
- Why does one visit the bank’s website?
- What information does one search for?
- How does the bank’s website position itself: what does it inform and convey about the bank?”
(The pre study, 2004, p.38)

Interestingly, in an observed meeting about one and a half years later, some of the developers expressed their views on these focus groups. According to one developer, not much insightful and new customer information was ever acquired, and according to another one, the reason for this lied in the focus group technique used (TO, 30.6.2005). Hence, the customer information that was acquired with this method was rarely used in the development.

The development “put on hold”

The development work was planned to start as soon as the pre-study ended (June 2004) but was “put on hold” until February 2005. There were primarily two reasons for the delay. First, the summer holidays started in June and it was perceived as a bad idea to start the development project before all potential project members were back at work. Second, after the summer holidays another development project with a higher priority had to be completed and the development of the website could not start because of lack of resources.

The underlying technical platform

Between February and May, 2005 there was much discussion concerning the website’s underlying technical platform. In particular, different publishing tools, the application server, estimated amount of hours for development of the “the back-end” solution were discussed, decided upon, revised and decided upon again. People at the bank’s IT function developed the technical platform based on the requirements made by the members of the development project.

The structure and content

The development of the structure and content started with a kick off in June 2005. As expressed by one developer the website was in need of a “face lift” and old content should be “recycled” (FTFO/TO, 13.05.2005). In order to link the development work of the new website with the views of the rest of the organisation, an internal survey was first conducted among front line personnel at the branch offices. With the aid of the survey, customer information was acquired from the frontline personnel who interact

with customers on a daily basis. For example, the majority of branch offices stated that something really had to be done to the loan calculator on the old website because customers had complained a lot about its functionality. During the development of the website's structure and content, customer information was also directly acquired through a small usability test conducted by one of the developers. The purpose with the test was to identify if there were any "big mistakes" made in the development of the navigation. The usability tests did not indicate any such mistakes and the development continued as planned. In February 2006, in other words, the same month as the launch of the new website, customer information was also acquired through a small e-mail survey among non-customers. This was initiated in order to get some views on the final development from people who were not as familiar with the old website as managers at the bank. It was believed that the information from this group would be different and potentially more insightful, as the non-customers would not have the old website as a frame of reference when evaluating the new one.

In sum, excluding the period when the development was put on hold, the development of the website took one and a half year. In regards to customer information acquisition and use, these activities were most frequent during the development of the website's content and structure during the last nine months of the process. The content and its structure are visible to the customer visiting the website. Most likely, this was the reason why customer information was acquired and used most frequently during this period.

4.2.2. The development project

The development was organised as a project involving people at the bank from different functional areas and external consultants. According to the organisation of development projects at the bank, the project members were divided into: *the project board*, *the core development team* and *the reference group*. The tasks and responsibilities of each are described next.

The project board

The project board consisted of Mr. Director of Business Development and Mrs. Director of Human Resources. As a "gatekeeper,"⁴⁸ Mr. Director of Business Development was also the person that granted me access to the development project. According to an insider document labelled "the project plan," the purpose of the board was "to support the project leader and to ensure that the development process is performed within the limits of the specified budget and timeframe" (p. 5). This meant, for example, that to formally change the launch date (which happened on several occasions) the project leader had to meet the project board.

The core development team

This group was responsible for the actual development, which means that they were involved in the day-to-day activities of the development. Hence, the majority of the observations are from meetings between members of this group. As key informants, these "core developers" were familiar with relevant details, monitored the development process closely, and were, thus the "best-informed informants" (Dalton, 1967 in

⁴⁸ A gatekeeper is a person who has the power to grant access to a research setting (see e.g., Bogdan & Taylor, 1975, Hammersley & Atkinson, 1983). Without the consent of Mr. Director of Business Development, the study of customer information use and acquisition in this particular case would not have been possible.

Stewart, 1998). The key informants belonging to the core development team were Mr. Project Leader and Mr. Technician (from the business development function), Mr. Marketing Manager and Ms. Marketing Manager (from the marketing function) and Mr. Technical Project Leader (from the bank's IT function). Since Mr. Project Leader had the main operational responsibility of the development, he represents the study's main key informant. As the main key informant, he was also the contact person that informed me about meetings, provided me with most documents and the majority of the recurrent interviews were also conducted with him (see appendix 1).

The constellation of the core development team varied to a certain extent depending on the meeting's agenda. For example, Mr. Technical Project Leader was only present when issues concerning the underlying technical platform were discussed and decided upon. Additionally, on these occasions, several technical engineers participated. The most frequent constellation of the observed meetings was Mr. Project Leader, Mr. Technician, Mr. and Ms. Marketing Manager. In addition, the core development team co-operated with consultants in web design and marketing communication, and occasionally these would participate in the development meetings as well.

The reference group

Four persons, Mrs. Call Centre, Mrs. Sales Director, Mr. Private Banking, Mrs. Business Support, represented the reference group. Based on the information from the core development team, this group gave ideas and feedback on the development, but did not have any formal decision making power concerning it. The reference group was also responsible for continuously communicating back to the rest of the organisation the proceeding development work, and to report internal feedback to the core developers. Thus, the reference group functioned as a formal link between the core development team and the rest of the organisation.

Although all members of the three groups represented the informants, the extent to which they participated in development meetings and were observed varied. Some were frequently observed, but only during a limited period of the process (e.g., in the development of the underlying technology), some were frequently observed throughout the whole process (the core development team), and, finally, some were observed throughout the whole process, but only now and then (the project board and the reference group). As a consequence, their contribution to the collected and analysed data varies (see appendix 3).

4.3. Use of organisational and competitor information

As mentioned earlier, the customer was referred to and discussed in about *one third* of all the observed development meetings. Other information that was discussed and used in the development concerned in particular two subjects: the organisation itself and competitors. The organisational information concerned the image the bank wants to communicate and the position it wants to create in the market. Thus, the organisational information used in the development was mainly based on the bank's marketing communication policies and strategies⁴⁹. In addition to the content of the website, such

⁴⁹ However, policies and strategies were not always *existent* but were also *developed* in conjunction with the development of the website. Throughout the development process the project team ran into issues that raised questions like: *How should this be handled, what is our policy on this?* In most cases there were no rules or policies to turn to. Thus, as a result many sub-projects were conducted where rules, policies and even strategies were developed.

as what services the bank offers, the organisational information concerned also *how* the content should be expressed and presented, that is, the “tone of voice” and the graphic design and colours.

The competitor information concerned in particular how competitors have developed their websites. Occasionally, the developers would turn to the Internet to check out other banks’ websites for guidance on developmental issues such as how to label certain content and where to position it, etc. Competitor information was also brought up in the discussion to explain, underline or justify the developer’s suggestion on how to develop, or to exemplify how the bank should not develop, the website. Together, organisational and competitor information were used more frequently in the development than customer information. Additionally, if the information about the customer’s thinking and acting was in line with the organisational information, the customer information seemed to have a greater potential of being used than if it was not.

4.4. Use of customer information

While observing the developers throughout the entire development process, an understanding of different types of customer information use emerged. As assumed, use is not a straightforward “black or white”-kind of issue, but rather more complex and “colourful.” The current study found that customer information at the extremes can be *immediately used* or *immediately not used*. In between these extremes four additional kinds of use were identified. There was the use that almost was postponed for future development, but still was used currently (*the almost postponed use*). There was the use that *was* postponed for the future (*postponed use*). There was the almost kind of use (*almost use*). Finally, there was the potential use where the information was planned to be acquired and used, but the plans were never realised (*potential use*). In sum, the study found two types that represent customer information use and four types that represent customer information non-use.

As implied by these labels, the aspect of time was acknowledged in order to present a picture that more closely represents the aforementioned complexity. In the following text the different types of use are described. In appendix 4, detailed examples of each type of use are presented.

Use:

The immediate use

The immediate use represents customer information use that took place within the timeframe of the focal development process. Typically, the developers would all agree to develop the service in line with the customer information. The mutual consent appeared to facilitate the use. Most often the customer information that was immediately used concerned content that existed on the old website, which consequently was “recycled”. For detailed examples of the immediate use of customer information, see appendix 4, A4.1.1

The almost postponed use

The almost postponed use refers to a situation when the customer information for a substantial period of the focal development process repeatedly emerged in the development discussions. It was clear that the developers wanted to develop the website in line with the piece of customer information, but at the same time they

believed that this would delay the launch. Hence, the use was postponed and seemed destined for future development. However, just before launch, due to unexpected and coincidental circumstances, the information was used. One apparent reason the developers wanted to use the customer information was that a large number of the front line personnel wanted them to. Indeed, the use of customer information concerning the development of some website content came up as the number one issue the personnel wanted to change. For a detailed example of the almost postponed use of customer information, see appendix 4, A4.1.2

Non-Use:

The postponed use

In comparison to the almost postponed use, in the postponed use the developers decided that the customer information would *not* be used currently, but in the future. The developers considered the customer information, thought it was important, and liked the idea of developing the website in line with the information. But, due to perceived lack of time, the usage was postponed for future development of the website. It is not known whether the information actually would be used in the next development of the website as intended. However, since there was no systematic way of filing and saving the ideas for future development, and the majority of the core development team does no longer work at the bank it is likely that it will not. For detailed examples of the postponed use of customer information, see appendix 4, A4.2.1

The almost use

Another kind of non-use was the almost use. At first, the intention among the developers was to use the customer information, but the information was not used. The developers wanted to use the information because using it seemed, at first glance, easy and would not take much extra effort. However, when the information was going to be used some unforeseen problems emerged and the use ended up as almost used. The problems that arose were primarily of technological character. For detailed examples of the almost use of customer information, see appendix 4, A4.2.2

The potential use

Another kind of non-use was the potential use. The potential use represents a situation where the developers discussed and planned to acquire and use customer information. However, as the development process proceeded the acquisition was repeatedly postponed for the future and the use thereof stayed in a planned or potential kind of mode. The potential acquisition and use were discussed on numerous occasions from the very beginning of the development process to as late as only one and a half month before launch. For detailed examples of the potential use of customer information, see appendix 4, A4.2.3

The immediate non-use

The immediate non-use is the opposite of the immediate use. In this case the customer information was within reach of the developers, but was not used in the focal development process. In this case, in comparison to the other kinds of non-use, the developers did not clearly postpone the use, there was no initial intention to use it, as in the almost use, and there was no plan to acquire and use customer information as in the potential use. Instead, in the immediate non-use the developers would sometimes not even mention the customer information that had been acquired, even though the customer's view concerned the part of the website that was discussed at that moment.

For detailed examples of the immediate non-use of customer information, see appendix 4, A4.2.4

4.5. The sources of customer information

As concluded in chapter two, most prior studies tend to focus on the customer as the main source of customer information. This means that, traditionally, in the development literature, the customer is the explicit source of customer information. However, in addition to the customer as the explicit and only source, I found the developers themselves being sources of customer information. I also found that in some situations it was very difficult to observe or determine *any* source and the customer information appeared to be implicit and taken for granted. Table 14 presents the identified combinations of use and source of customer information. In the subsequent sections the sources of the customer information, which was used in the development, are described. Each combination was identified in several situations and some combinations more frequently than others.

In Table 14 the identified combinations of use/non-use and explicit customer information, speculative customer information and implicit customer information are depicted.

Table 14 Use and non-use of customer information from different sources

	SOURCE OF CUSTOMER INFORMATION		
	EXPLICIT	SPECULATIVE	IMPLICIT
USE:			
IMMEDIATE USE	X	X	X
ALMOST POSTPONED USE	X		
NON-USE:			
POSTPONED USE	X		X
ALMOST USE	X		
POTENTIAL USE	X		
IMMEDIATE NON-USE	X	X	X

^a X indicates a particular combination identified in the field study

Explicit customer information

Explicit customer information denotes a situation where the customer was the explicit source of the information. This was typically referred to, by statements such as: “from the focus groups it became clear that...,” “every now and then we have received some suggestions from customers that...,” “we know that the currency converter is something that is asked for on the website...,” “customers have complained to us that...,” “we have received much feedback from the customers on...,” “we know from earlier that the customer appreciate that...,” etc. In addition to the customer being the explicit source, another feature characterising this category is that the information concerned the particulars of the bank and its website.

The *immediate use of explicit customer information* represents the combination most often referred to in mainstream service and product development literature and this “traditional” combination was identified also in this case. However, additionally, and as shown in Table 14, the explicit customer information could be categorised into the use type of *almost postponed use*, and further into all the identified kinds of non-use; *immediate non-use*, *almost use*, *postponed use* and *potential use*.

Speculative customer information

Speculative customer information denotes a situation where the developers turned to themselves as sources of customer information. Through speculation, or fragments of knowledge, they created information about how the customer thinks and acts related to the website, or how the customer *would* think and act if it were developed in one way or another. Statements that typically indicate the speculative information were: “ok, but what if we were the customers here now...,” “viewing this with the customer cap on...,” “I think the customers think that...,” “investors probably know how to find the information they need anyway,” etc. Thus, the developers tried to put themselves “in the shoes of the customer”⁵⁰ As shown in Table 14, the speculative customer information was *immediately used* and *immediately not used* during the focal development process.

Implicit customer information

The implicit customer information that emerged from the empirical material seemed to be taken for granted by the developers and the bank, and, occasionally, to determine its source was difficult. Most likely the information about how the customer thinks and acts had been acquired over time through experience of earlier development work of the website and by working at the bank. The implicit information seemed to be generally known, that is, it seemed to be shared among many individuals. Typically, the implicit customer information concerned perceptions and behaviours related to websites, banks and financial services in general, rather than issues specific to the bank and its website. In the field study statements such as: “...you should always strive to reduce the number of clicks for the customer or visitor,” “you could pick up any book on web design and one of the very first commandments you’ll read is: make sure your contact information is clearly visible!,” etc. denoted implicit customer information. In addition, rumours on the market about the bank and its services were discussed among the developers, and were considered to be used in the development. These rumours were also categorised as implicit customer information. They appeared to be generally known and to determine a particular source was difficult. Instead, the rumours came from an anonymous mass; the market. As shown in Table 14, situations of *immediate use*, *immediate non-use* and *postponed use* of implicit customer information were observed in the field.

4.6. The temporal aspect of customer information acquisition

During the field study I learned that customer information that was acquired *currently*, that is within the timeframe of the development process was used. In addition, I found that customer information that had been acquired *previously*, that is before the focal development process of the website started was also used. I also recurrently identify situations where the developers planned to acquire customer information in the near future and labeled this kind *potentially* acquired customer information. Table 15, depicts acquisition of customer information and its use/non-use from a temporal perspective. The cells marked with an X represent the combinations identified in the field study.

⁵⁰ This notion of trying to put oneself in *someone else’s position* is also what distinguishes this “turning to oneself” from that of introspection. A person that examines and considers his own thoughts, feelings and actions, i.e., who reflects on his *own* reactions from his *own* horizon would generate introspective information.

Table 15 Use and non-use of customer information from a temporal perspective

	TIME OF CUSTOMER INFORMATION ACQUISITION		
	PREVIOUSLY	CURRENTLY	POTENTIALLY IN THE FUTURE
USE:			
IMMEDIATE USE	X	X	
ALMOST POSTPONED USE		X	
NON- USE:			
POSTPONED USE	X	X	
ALMOST USE		X	
POTENTIAL USE			X
IMMEDIATE NON- USE	X	X	

^a X indicates a particular combination identified in the field study

Starting with the information most often referred to in product and service development literature, the *currently* acquired customer information. With the exception of the potential use, the “current” information was subject to all the identified types of use and non-use. Hence, information about the customer acquired within the timeframe of the focal development process was subject to the immediate use, the almost postponed use, the immediate non-use, the postponed use and the almost use. Interestingly, this “traditional” kind of customer information was subject to several recurrent situations representing each kind of *non-use*. Hence, the acquisition of customer information is not a guarantee that it will be used.

Previously acquired customer information was immediately used, immediately not used and postponed for future use.

The *potentially* acquired customer information was only potentially used. Since, the potential customer information was planned to be acquired in the near future, but not actually acquired, the use could, in this case, not be anything else than potential. Interestingly, a very hypothetical situation emerged where even the potential use of the potential customer information was potentially postponed. In this situation, the developers discussed the extent to which the potential customer information, when it would be acquired, would be used. Based on the discussion they came to the conclusion that the potentially acquired customer information that would *not* be used would be postponed. Since the information had not been acquired and the use of it could not, subsequently, be postponed, this means that the developers, in fact, were discussing a case of potentially postponed use.

The temporal aspect of acquisition that emerged during the field study provides a broader picture than the one found in mainstream service and product development literature. Thus, this study suggests that acquisition of customer information and its use do not necessarily take place within the timeframe of the same development process as assumed in main stream NSD/NPD literature.

4.7. Means of customer information acquisition

During the field study I found that the means by which the customer information ended up on the developers’ agenda occasionally differed from what I learnt from literature. The general key characteristic among the means of acquisition presented in NSD/NPD literature is that the information should be *formally* acquired directly from the customer (see 2.3). This means that typically the acquisition is planned, has a goal and is solicited directly from the customer according to a predetermined structure or form.

However, in the field study, situations where customer information was or had been acquired *informally* also emerged in the empirical data. This way to acquire the information was less structured, and frequently, the information was received by the developers rather than searched for. For example, customers had made suggestions of service improvements or had complained about the old website in service encounters with the bank. This information was informally forwarded to the developers in discussions with the front line personnel. Another example of informally acquired customer information was rumours about what the customer thinks about the bank and its services that had been acquired by the developers over time. Here, the information appeared implicit and came from the market or an anonymous mass, rather than directly from the customer.

In Table 16, the identified combinations of means of customer information acquisition and its use/non-use are depicted. With the exception of potential use, formally and informally acquired customer information was subject to all the identified situations of use and non-use. The potential use concerned information that was planned to be solicited from the customer according to a predetermined form. However, the acquisition was repeatedly postponed and took never place during the focal development. Thus, it would be more correct to label the formal customer information in this case “potentially” formal customer information.

Table 16 Use and non-use of formal and informal customer information

	MEANS OF CUSTOMER INFORMATION ACQUISITION	
	FORMAL	INFORMAL
USE:		
IMMEDIATE USE	X	X
ALMOST POSTPONED USE	X	X
NON-USE:		
POSTPONED USE	X	X
ALMOST USE	X	X
POTENTIAL USE	X	
IMMEDIATE NON-USE	X	X

^a X indicates a particular combination identified in the field study

4.8. Summary of customer information use

In Figure 2, the types of use and of source, time and means of acquisition are combined. As shown to the left in the figure, the current study identified six different types of customer information use. *The immediate use* and *the almost postponed use* represent customer information use, and *the postponed use*, *the almost use*, *the potential use* and, *the immediate non-use* represent different types of customer information non-use. At the top of Figure 2, the three research questions are displayed and beneath them the findings. Thus, the first research question was: *From what source(s) is the customer information acquired?* The findings revealed that the information came *explicitly* from the customer, was created in *speculation* among the developers and already existed *implicitly*.

The second research question was: *when is the customer information acquired?* The findings showed that customer information was *currently* acquired, that is, within the timeframe of the studied development process, or it was already known as it had been acquired *previously*, or it was planned to be acquired in the future, that is *potentially*. In some situations customer information that was already known to the developers was again acquired, or rather, received.

The third question was: *how is the customer information acquired?* The information was found to be *formally* or *informally* acquired and in some situations the same information came in both a formal and informal way.

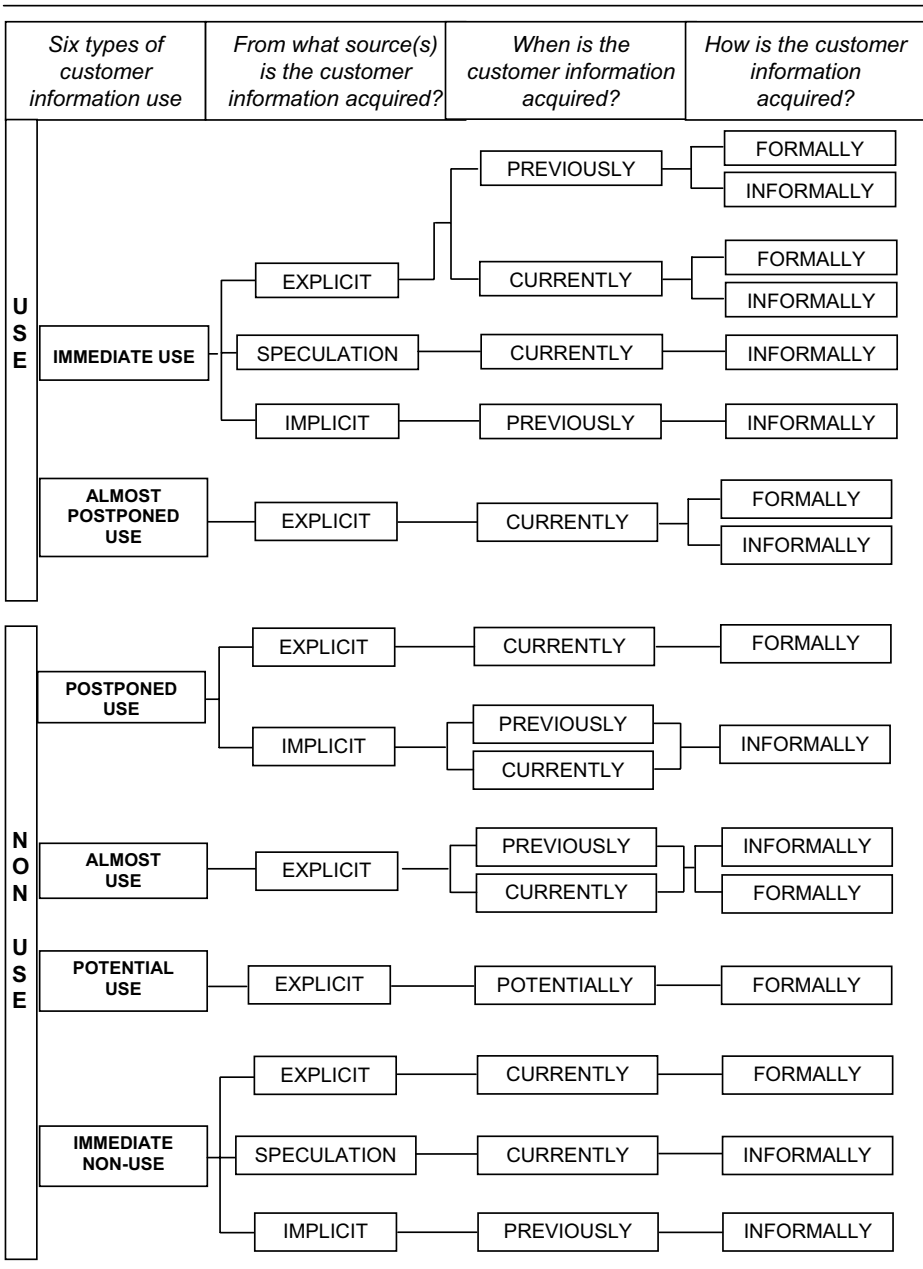


Figure 2 Six types of customer information use

In sum, the customer information that was *immediately used* came either explicitly from the customer, from speculations or already existed in an implicit way. The explicit information was acquired previously or currently or both. Furthermore, the previously acquired explicit information had been acquired in an informal way (e.g., customer complaints, praise) and the currently acquired explicit information was formally or informally acquired, or, occasionally, in both ways. The information that was created in speculation was currently “acquired” from the minds of the developers. The information was created by the developers in an informal manner. Finally, customer information that was immediately used was in some situations implicit and had been previously acquired over time. Exactly how this information had been acquired was difficult to trace, but it is plausible that it had been received informally through the developer’s experience of working at the bank.

The customer information that was *almost postponed* came explicitly from the customer and was acquired within the timeframe of the development process (i.e., currently) by the developers in both formal and informal ways.

The information about the customer that was subject to the *postponed use* came explicitly from the customer or was implicit. The postponed explicit information was currently and formally acquired. The postponed implicit information was informally acquired previously and currently.

The information that was *almost used* came explicitly from the customer and was acquired both previously and currently. It was acquired, and had been acquired, either formally or both in a formal and an informal manner.

The *potential use* of customer information was planned to be acquired, in the near future, directly from the explicit source of the customer in a formal way. Since the acquisition stayed in a “planned mode,” the acquisition was never realised and the information was therefore only potentially acquired.

Finally, the information that was subject to the *immediate non-use* came explicitly from the customer, was currently acquired in a formal manner. In addition in this category, customer information came from speculation that was acquired currently and informally. Finally, implicit customer information acquired previously and informally, was also subject to the immediate non-use.

5 DISCUSSION

This chapter begins by summarising the study's main contributions. Thererafter, the contributions to each of the research streams discussed in chapter 2 are elaborated on. After that, the study's methodological contribution to service marketing and management research is presented. The contributions and implications to research on customer involvement and to customer orientation are presented thereafter, followed by the managerial implications of the study. The chapter ends by presenting some avenues for further research.

5.1. Theoretical contributions and implications

In this section the study's main contributions are summarised.

The purpose of the current study was *to identify and describe different types of customer information use in service development*. Use of customer information in service development was understood as the implementation of customer information in the new service. Customer information was broadly defined as information about the customer's service related perception(s) and behaviour(s).

The study identified and described six types of use. Two types of use; *the immediate*, and *the almost postponed use*, and four types of non-use; *the postponed*, *the almost use*, *the potential use* and *the immediate non-use* of customer information in service development were identified. These findings provide novel insights. The use of customer information has not been the focus of much attention in prior marketing research. In two major streams of development research, the use of customer information has been treated in an implicit way (see 2.1 success/failure stream, 2.2 incremental/radical stream).

Based on the emergent empirical findings, the following sub-questions were also formulated:

- *From what source(s) is the customer information acquired?*

The findings showed that the customer information came *explicitly* from the customer, from *speculation* among the developers or already existed *implicitly*. Prior research has mainly focused on the customer as the information provider and the explicit source to turn to for information. Hence, by identifying the additional speculative and implicit customer information, the current findings extend prior knowledge and open up avenues for further research.

- *When is the customer information acquired?*

The study found that the used and non-used customer information was acquired *previously*, *currently* within the time frame of the focal development process, and *potentially* in the future. Prior research has primarily focused on the currently acquired customer information, i.e. within the timeframe of the development process. Hence, the findings of the previously and potentially acquired customer information widen the prior time horizon of when the used information is acquired.

○ *How is the customer information acquired?*

The used and non-used customer information was *formally* and *informally* acquired. In prior research a large number of sophisticated formal methods are suggested for the acquisition of customer information to be used in development (see 2.3 means/method stream). Hence, the finding that customer information was informally acquired, and in some situations both formally and informally, extends prior knowledge.

In the current study, the *use* of customer information was the point of departure. Hence, instead of focusing on the acquisition of customer information, this study turned the traditional approach “backwards” and started from the use of customer information. In sum, this novel “backward” approach brought new insights on use of customer information in service development. Additionally, it contributed by providing a broader, holistic and nuanced view of the acquired customer information or the ‘information in use’.

Figure 3 summarises the main contributions. Indicated in grey text is the combination of categories most often focused upon in prior marketing research in service and product development. Hence, information that is acquired *formally* and *currently* (i.e., within the time frame of the development process) from the *explicit* source of the customer is, implicitly stated, immediately used in the development process. The rest of the categories in the figure represent the contributions of this study’s findings.

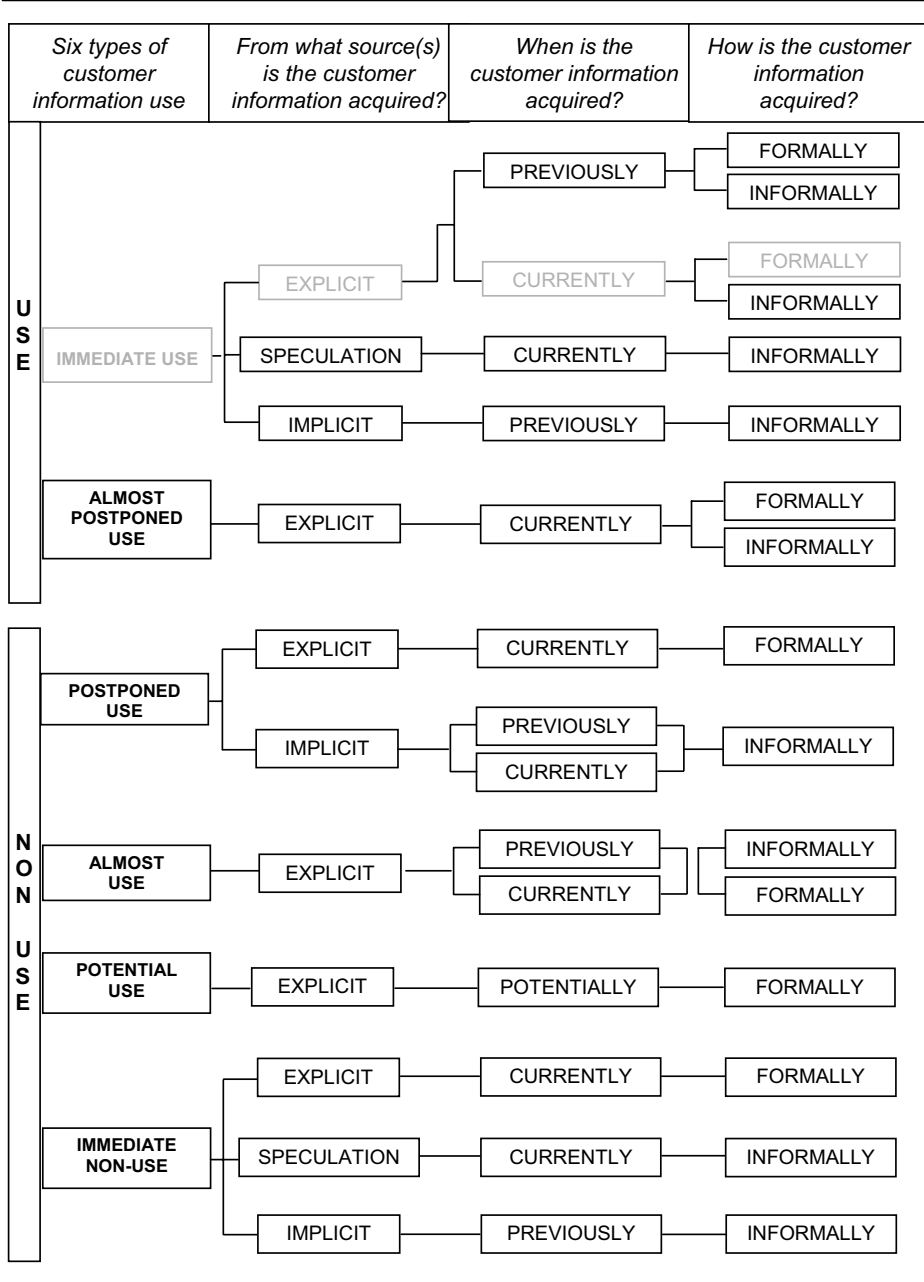


Figure 3 The contributions of the study

In the following sections, the contributions and implications of the study's findings to each of the main streams in NSD/NPD research are discussed. Thereafter, the methodological contribution to service marketing and management research is elaborated on. Following that, the contributions and implications to research on customer involvement and to customer orientation are presented, followed by the

managerial implications of the study. The chapter ends by presenting some avenues for further research.

5.1.1. Contributions and implications for research on NSD/NPD success/failure

In the majority of prior research on success/failure it is claimed that acquisition of information from the customer generates successful new services and products (e.g. de Brentani, 1991; Storey and Easingwood, 1993; 1996; Oldenboom and Abratt, 2000). Studies in this stream have claimed that customer information is a key success factor in development without investigating to what extent the acquired information was used in the development of the new successful service. As illustrated in Figure 1, use has not been explicitly investigated. Thus, use can be labelled as “black-boxed” in prior studies.

The current study aimed at opening up the black box and focused on how customer information is used in a service development project. The study found that use of customer information is not a straightforward task that “easily” follows upon the acquisition. Rather, use of customer information was far from being an “either-or” issue, and was more complex. Indeed, two different kinds of use were identified and four different kinds of non-use. At the extremes customer information was *immediately used* and *immediately not used*. In between these two kinds of use, four additional kinds of use were identified. There was the use that almost was postponed for future development, but still was used within the time frame of the development process (*the almost postponed use*). There was the use that was postponed for the future (*the postponed use*). There was the almost kind of use (*the almost use*). Finally, there was the potential use where the information was planned to be acquired and used, but the plans were never realised (*the potential use*).

Hence, *the study contributes by identifying six different kinds of use* and by showing that use is not a straight forward task that unproblematically follows upon acquisition of customer information. On the contrary, four different kinds of non-use of customer information were identified. From the findings of non-use, *the study contributes in particular by demonstrating that the acquisition of customer information does not guarantee that the information will actually be used in development*. Thus, researchers should not let acquisition of customer information be the sole determinant of the outcome of the development process. In order to generate more valid findings, a clear distinction between acquisition and use needs to be made and these activities need to be separately investigated.

The study captured discrepancies between “sayings and doings” on several occasions. Hence, although the intention was to use the acquired information, it was not used, and although the intention was not to use the acquired information it was used. Additionally, the finding on the potential use showed that customer information was planned to be acquired (and used), but was not. Therefore, the findings of the study demonstrate that if we only study managers’ intentions without following these up, we might not generate valid findings. In sum, *the current findings contribute by demonstrating the importance of studying actual managerial actions rather than intentions*.

In conclusion, the study identified several different kinds of use and non-use. It showed that the acquisition of customer information is not a guarantee that it will be used.

Moreover, the intention to use the acquired information is not a guarantee that it will be used.

In the majority of prior studies on success/failure, the acquisition of customer information, and its implicit use, is limited to the time frame of the studied development process (see e.g., de Brentani, 1991; Edgett, 1994; Oldenboom and Abratt, 2000). The current study contributes by showing that the acquisition of information and its use do not necessarily take place within the time frame of the same development process. Thus, customer information was acquired but postponed to be used in future development of the same service. Conversely, it also shows that use of customer information can take place during the studied development even though no customer information is acquired during the development process. Instead, the information had been acquired previously and already existed. Thus, in studies on new service success and failure, *researchers need to widen the time horizon to also include prior acquisitions of customer information and to acknowledge the fact that humans and organisations learn.*

In sum, *research on success/failure should shift its focus from acquisition to use. Unless the customer information is used, then it is unlikely to have an impact on the development task and, ultimately, on the performance of the new service. From the perspective of information in use, researchers can learn what type of customer information is actually used, that is, where it comes from, when and how it is acquired. This holistic understanding of customer information and its use/non-use opens up avenues for further research.*

5.1.2. Contributions and implications for research on incremental versus radical new services

In the majority of studies on incremental versus radical new services/products, a distinction is rarely made between acquisition of customer information and use. Similar to studies in the success/failure stream, these studies rarely explicitly investigate the actual use of customer information in the development of the incremental/radical outcome. Several studies focus, however, on the impact of customer information acquisition on the “newness” of the new product/service. For example, in the case of radical innovations, several studies recommend that customer information should not be acquired and, implicitly, not be used either (e.g., Hamel and Prahalad, 1990, 1994; Martin and Faircloth, 1995; Ulwick, 2002). Other studies recommend the opposite (von Hippel, 1986).

In the case of incremental outcomes it has been suggested that companies should acquire, and thereby use customer information (de Brentani, 2001; Song and Montoya-Weiss, 1998). Hence, the finding that customer information was both used and not used in the development of a new incremental service contrasts prior research. This is in line with Berthon et al., (1999) who argue that customer information can be used and not used within the same company, that is, that both strategies can co-exist, but are applied differently in development projects. *The current study extends our knowledge by showing that customer information can be used and not used, even within the same development project.*

In a study that made a distinction between the acquisition and use of customer information, Magnusson et al. (2003) found that the more novel or radical the information was, the harder it was “to implement and convert into commercial

services” (Magnusson, et al., 2003, p.121). In a similar way, the current study found that *the customer information that was immediately implemented, or used, was not radical, but rather suggested only minor changes*. Hence, the *information* that was immediately used was “incremental.” This finding is in keeping with Deshpande and Zaltman (1982) who suggest that surprise inhibits the use of market research results. The authors state that “some degree of surprise would be tolerated... [however] even positive surprise implies a change in status quo, which in turn may create problems. These are not considerations that managers weigh lightly. Surprise, then, is used as one arbiter of what information is accepted and used and what information is questioned or discarded” (p.25).

In sum, *the findings of the study indicate that not only the novelty of the developed service, but also the nature of the information used or non-used should be taken into account in future research.*

5.1.3. Contributions and implications for research on means/method of customer information acquisition in NSD/NPD

The current study contributes to the area of new service development in general, and in particular to the means/method stream in NSD/NPD. First, in spite of the numerous sophisticated formal methods suggested in literature, in the current study *formal methods of customer information acquisition were sparsely employed*. Additionally, informal means of customer information acquisition has been of little interest in prior research. The current study found that *used information about the customer was acquired informally*. Second, in prior research the customer is the explicit source of the information. The current study enriched our understanding by showing that *the customer is not the only source of customer information*. Customer information can be created by the developers and, additionally, it exists implicitly. Third, in prior research the development process is viewed as a one time event, consisting of a number of stages that are sequentially executed in a rational order. Hence, the customer information is usually acquired and, implicitly stated, used at certain stages, within the time frame of the development process. The findings of the current study show that *the development process was not viewed as a one time event*, but rather as an infinite process that would continue until the service is no longer offered by the company. This means that the studied development process, from start to launch, was viewed as yet another phase of development in this infinite process. *Customer information, thus, was not acquired and, as mentioned earlier not used, at certain specific stages*. Instead, customer information had been acquired earlier before the project started, and was acquired during the focal project, but rather throughout the whole process than at certain specific stages, and was planned to be acquired in the future. In the following, these areas of contribution are discussed.

Formal/informal means of acquisition and the role of the frontline personnel

Prior research lists a large number of formal methods that can be used in order to acquire explicit and external customer information in service and product development (e.g., Alam, 2002; Griffin and Hauser, 1993; Pullman, Moore and Wardell, 2002; Urban and Hauser, 2004). In the current study, formal means were sparsely employed. The most extensive formal method employed was two focus group interviews conducted by market research consultants early in the development process. However, the results of the focus group interviews were rarely discussed in the development. It was also observed that some of the developers viewed the information acquired in this way as useless. Another formal means of acquisition was a small usability test of a

prototype. A larger usability test was planned to take place later, when the service had been more developed: however, primarily due to the perceived lack of time, this never happened.

Nijssen and Lieshout (1995), claim that although numerous articles elaborate on the contents of specific methods, little is actually known about the extent to which, and the way in which, the methods are, in reality, employed by companies in product development. They investigated eleven formal methods and found that these were barely known or employed in development by companies. The authors suggest some ideas that could motivate why the methods were barely employed:

The main shortcomings of the use of...methods are the time they take to execute and implement, predict unforeseen problems and the fact that the market may be too complex to capture all its intricacies by the model [or method] (Nijssen and Lieshout, 1995, p. 40).

Hence, their study supports the current finding that *formal methods were sparsely employed, and that the perceived lack of time negatively influenced the formal acquisition of customer information in the development.*

In prior NSD/NPD research, little is known about informal acquisition of customer information. In the current study, *customer information was informally acquired* in discussions during development meetings with consultants, generated in discussions in the core development meetings, information had been acquired in service encounters and was informally received from the frontline personnel through e-mail communication, telephone and even in the lunch queue. The current study contributes by providing insights on how customer information, in the development project at hand, was informally acquired.

Interestingly, the current study found that the developers even discussed and considered to use customer information from rumours about the bank and its services. *The finding that customer information was acquired from rumours stands in stark contrast to the numerous formal methods prescribed in development literature.* This finding contributes by enhancing our understanding of how customer information can be acquired. Support for this finding can be found outside NSD/NPD research. For example, Mintzberg (1972) found that “gossip, hearsay, and speculation constitute a large part of the manager’s information diet” (p. 95). In a similar vein, Feldman and March (1981) suggest that “organizations gather gossip...in situations in which relevance cannot be specified precisely in advance” (p. 176; cf. Aguilar, 1967). In conclusion, *researchers should broaden their focus, from customer information that is acquired through formal methods to that which can also be informally acquired.*

Smith and Fischbacher (2005) found that “customers are dormant stakeholders, thought to lack the knowledge/experience to contribute meaningfully to NSD. Their interests and needs are channelled through other stakeholders” (p. 1025). In the current study, it was found that the same piece of customer information was acquired both informally from the frontline personnel and formally from the customer. The developers did not discuss the customer information that was formally acquired, but when the same piece was internally acquired it was discussed on several occasions and also used. Hence, if the same customer information had not been acquired internally, the information would most likely have gone unnoticed and not been used. The fact that *the frontline personnel was the customer’s advocate and reinforced the customer information* is supported by the prior finding by Smith and Fischbacher (2005).

Several authors argue that the frontline personnel should be consulted or involved in NSD/NPD (e.g., Gordon et al., 1997; Johne and Storey, 1998). However, these studies tend to lack empirical investigations. This lack of attention is surprising considering the resources needed in order to acquire information externally in comparison to that of starting “closer to home” and acquiring it internally. Indeed, from a resource perspective, it could be viewed as a waste of the firm’s resources not to use, or at least consider, the customer information that is readily available within the organisation. Hence, if we accept that “organisations innovate, in part, through combinations of existing and new knowledge” (Kogut and Zander, 1992), *researchers need to not only investigate how customer information is externally acquired, but also how it is acquired internally.*

The customer is not the only source of customer information

In prior NSD/NPD research the customer information comes explicitly from the customer (see e.g., Edvardsson and Olsson, 1996; Leonard and Rayport, 1997; Matthing, 2004; Sandén, 2007; Urban and Hauser, 2004). The current study found that in some situations the customer information was generated by the developers themselves. Based on “fragments of knowledge,” the developers speculated and created a customer sense. Thus, rather than being acquired from the customer, the developers discussed, negotiated and imagined how the customer reacts, or would react, if the service was developed in one way or another. The speculations resemble the phenomenon of sense making. Sense making has been described as a process of dealing with a perceived gap in knowledge, which has to be filled in order to proceed. Additionally, information as such has been conceptualised as “that sense created at a specific moment in time-space by one or more humans” (Dervin, 1992, p. 63 in Kaye, 1995, p.44). Thus, *instead of acquiring information from the customer, the developers speculated, created and negotiated a “customer sense” in order to proceed with the development.* Hence, the identification of the speculative customer information advances our understanding of information sources in service development.

In prior NSD/NPD research, the existence and use of speculative customer information has not received much attention. Still, van Riel and Lievens (2004) found that developers very often, due to time pressure, would use their ability to imagine and anticipate customer requirements and possible customer reactions. The reason for this was that the development managers considered conventional market research to be too time-consuming (cf. Nijssen and Lieshout, 1995). In the present study, perceived lack of time was a key aspect that emerged frequently throughout the development process and it is plausible that this influenced the use of speculative customer information in the development. Moorman (1996) further lends support to the finding of speculative customer information in a development context. Her preliminary key finding was that managers tended to use personal information, that is, turn to themselves, far more than “factual” information (i.e., information from the customer) to guide their decision-making in the development⁵¹. More research is needed in order to investigate how widespread the use of speculative customer information in service development is. Moreover, *further research is needed to determine how the use of speculative customer information influences the performance of the new service.*

In addition to the developers and the customer as the sources of customer information, the current study identified situations where it was very difficult to determine any

⁵¹ Her paper “When the Manager Becomes the Measure: The Use of Personal Information in the Development of Managers’ Understanding of Consumers” was briefly summarised in a “special session summary”. I contacted her, to get some more information on the study, but unfortunately the study has not been published.

source, and *the used customer information appeared to be implicit and taken for granted*. The finding of the implicit customer information in a development context lends some empirical support to that of von Hippel's anecdotal finding:

The third and final paradigm which I hypothesize will be found appropriate to some classes of industrial products-and for which I have anecdotal evidence only-is one in which "everyone knows" what the customer wants. "Everyone knows" that the customer wants more calculations per second and per dollar in the computer business...Thus, computer manufacturers do not stop and rest on their laurels after introducing a faster computer-waiting for a user to approach them with a request for a still faster one. Rather, they continue to move down the clearly defined "dimension of merit" of greater computing speed..." (von Hippel, 1978, p. 48).

von Hippel refers to information about customers that is implicit in the sense that "everyone knows" it without it being acquired in a conventional way. From von Hippel's anecdote it seems as if this implicit customer information resembles an industry norm, that is, an industry code of practice. From this it follows that it is plausible to infer that the implicit customer information is generalisable across certain services or products, but varies between industries. Examples of implicit service specific customer information found in the present study were "to reach his/her goal the customer wants to click as few times as possible," "the contact information should be clearly visible and easy to find" (for a discussion about the generalisation of the findings, including that of the implicit customer information, see 3.4.3).

Implicit customer information has not received much attention in prior NSD/NPD research. In order to capture the implicit and taken for granted customer information, observation in real-time is needed. Thus, the fact that observation has not been much used in prior marketing research could be a reason for the lack of this finding (see Table 17). However, in organisation theory, and in the areas of organisational knowledge and learning, support for the finding of implicit customer information can be found in studies of organisational memory (cf. Easterby-Smith, Crossan and Nicolini, 2000; March, Sproull and Tamuz, 1991; March, 1991; Miner and Mezias, 1996; Tsoukas and Vladimirou, 2001). Moorman and Miner (1997) introduced the organisational view on memory to the marketing literature and the context of product development. They found that organisational memory enhances product performance and that memory dispersion affected both the new product performance and creativity. They did not discuss the use of implicit customer information in service development, or what in their terms would have been labelled the use of "memory of customer perception and behaviour." Nonetheless, in particular the following suggestion supports the existence of implicit customer information in a development context: "declarative memory refers to the memory of concepts, facts or events. Memory here might consist of knowledge about customer preferences..." (Moorman and Miner, 1997, p.93)

To conclude, if attention is limited to the study of acquisition from the external and explicit source of the customer, a vital part of the used customer information, might be neglected. This, in turn, could result in erroneous conclusions about for example, how customer oriented the studied development process actually is.

The time aspect of customer information acquisition

Studies in NSD/NPD research claim that the information from the customer is, or should be, acquired at certain specific stages of the development process. Authors (e.g., von Hippel, 1988; More, 1984; Neale and Corkindale, 1998) argue that the acquisition takes place, or should take place, during the early phases of the development process. Others (Alam, 2002) argue that it is very important at the initial and later stages of the

development process. Still others, (Lagrosen, 2005) found that customer information was acquired mainly during the early phase of the development and the phase of prototype testing. Viewing customer information acquisition from the temporal perspective in prior research, the findings of the current study contrast prior research in several ways.

*The studied development process as such did not follow a neat process of stages executed in a sequential order representing specific activities that flowed logically from the initial idea to the launch, as suggested by the majority of scholars in service and product development (cf. Bowers, 1989; Cooper, 1990; Edgett and Jones, 1991; Edgett, 1996; Johnson et al., 2002; Rochford and Rudelius, 1997; Scheuing and Johnson, 1989). Instead, I found the development process to be more in line with the later work by Stevens and Dimitriadis (2005) that describes service development as a continuously moving process with “back and forth” communication and decisions. In addition, it also resembled the one described by Dougherty (1990, 1992), who suggests that the development is an iterative process with social interaction being of primary importance. Notably, studies that lend support to my finding have employed similar methodologies to the one chosen for this study, that is, they are exploratory and, as in the work by Stevens and Dimitriadis (2005), also *in-situ*. The studies that argue for the rational linear sequential development process, on the other hand, are based on a deductive and retrospective methodology.*

In the studied case, the development process was not viewed as a one time event. The development project was, but not the process. It was clear that the project members shared the view that the development process is an infinite process that goes on as long as the service exists. In their mind, the entire development process from start to launch of the new website was viewed as an additional phase in this infinite development. Thus, during the development meetings both previous and future development activities of the same service were discussed, including acquisition and use of customer information. The view that the development process is infinite appears to facilitate a broader time horizon of both acquisition of customer information and its use. Hence, the current study found that the acquisition of customer information was not limited to some specific stages, but was obtained throughout the whole development project.

Moreover, in contrast to the main focus in prior research on acquisition within the time frame of the development process, I also found that *used customer information had been acquired previously, that is, before the start of the focal development project.* Considering that development is usually incremental and not radical, the lack of attention in prior NSD/NPD research on previously acquired customer information is surprising. In comparison to a radical development, an incremental one entails only smaller changes. Thus, it is likely that customer information has been acquired before. One study by Storey and Easingwood (1996) found a negative link between the amount of customer information acquisition activities and the degree of success of the new services. They suggest that a plausible reason for this outcome may be that the successful new services were aimed at highly familiar markets where customers were already understood, and hence little research was undertaken. Therefore, their finding supports the current finding that customer information can be used without it being acquired during the studied development project.

In conclusion, the current study advances our understanding of the time aspect of customer information acquisition by identifying that “old” customer information can be currently used. Hence, research should widen the time horizon of customer information acquisition to also include prior acquisition.

5.1.4. Methodological contribution to NSD/NPD research

Table 17 shows the methodologies used in prior NSD and NPD research. Hence, it can be concluded that primarily two research approaches have been used; 1) a deductive and explanatory approach, with an empirically-based study, using survey as the main data collection method and, 2) a normative, prescriptive approach, with a conceptually-based study with illustrative empirical examples. In addition, the majority of prior research is retrospective in nature.

The ethnographic methodology used in the current study is also indicated in Table 17. In order to capture the phenomenon of use of customer information, I needed to be there to “see for myself” and to get involved firsthand (cf. Kunda, 1992). Hence, in comparison to the retrospective studies in prior research, the current study used a real-time approach. This approach was perceived as necessary in order to capture valid insights on the phenomenon of use. The real time approach is suitable when more inductive exploratory research is conducted. In one of the last discussions I had with the project leader, the superiority of the real time approach was evident:

Mrs PhD Student:	Can you give some examples of the newly developed service, where you can say: “-this we have done because of the customer’s view and/or behaviour?”
Mr Project Leader:	Yes, that is...everything.

Although the more intense development work was not far back in time (the discussion took place just before the launch of the new service), the developer could not give one example of customer information that had been used in the development. According to the statement the developers took into account customer information in everything they did. However, based on observations I was able to confirm that this was not the case. Hence, it is here argued that the real-time approach is a more suitable research strategy to further our understanding of the role of the customer in service development.

The ethnographic methodology used in the current study has rarely been used in prior marketing research on NSD/NPD, or in service marketing and management research in general, and never as an approach to the understanding of customer information use in service development. Additionally, in the current study the whole development process was studied, from start to launch of the new service. This holistic approach and longitudinal aspect contributed in particular to the understanding of the different kinds of use. Although this approach has been called for by several researchers (e.g. van Riel and Lievens, 2004), few marketing studies have conducted longitudinal research that covers the whole development process. The ethnographic methodology used in this study contributes to prior service research.

Table 17 Methodologies used in prior NSD/NPD research

	Inductive, descriptive	Deductive, explanatory	Normative, prescriptive
Empirical: - survey (S) - case study (CS) - interview (I) - experiment (E) - observation (O)	Means/method stream: Lagrosen (2005) CS Mahajan & Wind (1992) S <i>Use of Customer Information: An Ethnography in Service Development</i>	Success/failure stream: Mayer & Marquis (1969) S Cooper (1976, 1979a, 1979b, 1980) S Rothwell, et al (1974) S de Brentani (1991) S Storey & Easingwood (1993, 1996) S Easingwood & Storey (1993) S Edgett & Parkinson (1994) S Edgett (1994) S Oldenboom & Abratt (2000) S Gruner & Homburg (2000) I, S Athanassopoulou & Johné (2004) I, S Martin Jr & Horne (1993, 1995) S Incremental/radical stream: de Brentani (2001) S Avlonitis & Papastathopoulou (2001) S Rochford & Rudelius S Song & Montoya-Weiss (1998) S Magnusson et al. (2003) E Means/method stream: Langeard, Refait & Eiglier (1986) CS Alam (2002) CS Lynn, Morone & Paulson (1996) CS Verryzer Jr (1998b) CS Pullman, Moore & Wardell (2002) CS Nijssen & Lleshout (1995) S	Incremental/radical stream: Hamel & Prahalad (1990, 1994) IE Martin & Faircloth (1995) IE Ulwick (2002) IE Berthon et al. (1999) IE Means/method stream: Ekdahl, Gustafsson & Edvardsson (1999) IE Leonard & Rayport (1997) IE Urban & Hauser (2004) IE von Hippel (2001) IE Thomke & von Hippel (2002) IE von Hippel & Katz (2002) IE Ciccantelli & Magidson (1993) IE Success/failure stream & incremental/radical stream: von Hippel (1978, 1986) P Means/method stream: Johné & Storey (1998) LR Kaulio (1998) LR
Conceptual, empirical: - hypothesis (H) - illustrative examples (IE)		Success/failure stream: Cooper & Kleinschmidt (1987) H	
Conceptual, theoretical: - literature review (LR) - propositions (P)			

5.1.5. Contributions to research on customer involvement in NSD

Studies on customer involvement in NSD emphasise how to acquire customer information from the customer (cf. Matthing, 2004; Sandén, 2007). Thus, supporting techniques and means of customer information acquisition have been investigated, including observation (Gustavsson, Edvardsson and Sandén, 2002), service guarantees (Lidén and Sandén, 2004) and experiments (Magnusson, Matthing and Kristensson, 2003; Matthing, Sandén and Edvardsson, 2004). In addition, the creativity of the customer has been investigated (Kristensson, 2003), as well as the phases of the development process the customer is involved in (Alam, 2002; Sandén, 2007). *The current study contributes to the literature on customer involvement by identifying different types of use of customer information.* Two extremes, immediate use and non-use, were discovered. In between these extremes, customer information use varied between almost postponed, postponed, almost used and potentially used. Hence, the findings brought to surface the complexity of involving the customer in development.

When measuring to what degree the customer is involved in the development process, researchers tend to focus on the acquisition of customer information, and more specifically on the type of methods used in the development process (cf. Alam, 2002; Sandén, Gustafsson and Witell, 2006; Wind and Mahajan, 1997). Consequently, it has been claimed that, no acquisition of customer information equals no customer involvement and, that, for example, “knowledge-based marketing research” or “co-specification and development” equals extreme involvement (e.g. Wind and Mahajan, 1997). This study found that customer information can be used, without it being acquired during the development process, and vice versa. Hence, *this study suggests that in order to capture the degree of customer involvement, the use of customer information should be studied separately. It is the use of information rather than acquisition that determines to what extent customers are taken into account during service development.* The current study also contributes to the field of customer involvement by showing that the customer is not the only source of customer information, that used information can be acquired prior to the development process, and that informal means of acquisition should not be neglected.

5.1.6. Contribution to research on customer orientation

A firm's market or customer orientation is often measured by surveys using questionnaires. A popular scale is that of Narver and Slater (1990) where the following six items measure customer orientation: “1. We constantly monitor our level of commitment and orientation to service customer's needs, 2. Our business objectives are driven primarily by customer satisfaction, 3. Our strategy for competitive advantage is based on our understanding of customer needs, 4. Our business strategies are driven by our beliefs about how we can create greater value for customers, 5. We measure customer satisfaction systematically and frequently, 6. We give close attention to after-sales service” (Lukas and Ferrell, 2000, p.245). Hence, these studies measure customer orientation at the aggregated level of the firm and thus, view customer orientation as one unit. Such studies are insensitive to internal variation and little attention is, thus, paid to nuances between organisational members. The assumption is that the more frequent customer information acquisition takes place, such as a satisfaction survey, the more customer-oriented the firm. No attention seems to be paid to whether the satisfaction survey results actually are used.

In her study, Isberg (2006) contrasted this view. She found that each organisational member creates his own view of who the customer is and “who we [as an organisation] are here for” (p. 211). She suggests that market orientation is multifaceted and each

organisational member constructs his view of “the market.” Similar to her findings, I found that during the observations of the development discussions, it was usually the same developer who brought up the customer in the discussion, and consequently, made the others start reflecting on, and discussing the customer. The specific developer appeared customer oriented in the sense that she tried to view the consequences of the development decisions from a customer perspective. This insight is supported by Isberg (2006) and enhances our understanding of customer oriented service development by suggesting that *a customer orientated development process is created at the operational and individual level of the development manager*. From this follows that there may be as many different customer orientations in a development project as there are project members.

5.2. Managerial implications

The findings of the study are expected to be useful to managers in particular two ways.

First, in order to use customer information in service development, an understanding of what customer information is needs to be developed. This study showed that customer information is not limited to the results of conventional market research. Rather, the used customer information was found to be informally acquired or it was created by the developers themselves. Moreover, customer information already existed internally inside the organisation, primarily in the minds of the frontline personnel, or it was implicitly known. Thus, managers could start the development project by making an “inventory” of what customer information the firm already possesses. To reveal such customer information the following questions could be posed: *What are the rumours on the market about us and our services? What is the customer’s view about our service x or service y? What does the customer repeatedly complain about? What do the results of our annual survey on customer satisfaction say? What suggestions of improvements have we received? How and why does the customer consume our services?*

In order to reach detailed and actionable information, it is preferable that the inventory seeks information on the service level and not only at the general company level. To get as complete inventory as possible, and due to the different “departmental thought worlds” (Dougherty, 1992), it is suggested that the inventory is conducted at all functional areas and at all levels of the company. Hence, the search for information about the customer should not be limited to the, perhaps, most obvious areas such as the front line personnel (e.g. call centre, sales) and the marketing function, but should also cover areas such as technical functions, and the management group.

The inventory will help in generating an understanding of what the company already knows about the customer, which, in turn, facilitates an understanding of what information about the customer the company might need. Although, it can be difficult to reach such an understanding, at least the company, in this way, may reduce the risk of spending money on acquiring information it already knows. Additionally, the company may realise unexpected information that provides opportunities for the development of a more radical service. Because of the difficulty to capture the implicit and taken for granted kind of customer information, it is suggested that an outsider participates when the company makes such an inventory. For such an endeavour, the observation techniques described in chapter 3 are suitable. When the inventory is completed, an analysis can be made of the possibilities to use the information as a resource in the company’s development of new services or in the improvement of existent.

Second, marketing researchers have repeatedly underlined the importance of acquiring customer information in order to develop attractive services and products. This study took a different starting point and explored how customer information is *used*. It identified six different kinds of use: *the immediate use, the almost postponed use, the postponed use, the almost use, the potential use and the immediate non-use*. In discussions with practitioners, it has been revealed that these different kinds of use are recognised in the contexts of their companies. Hence, the different labels, denoting the different types of use, can as such initiate a discussion about how customer information is used in the company. In this way, the different kinds of use can be utilised as a tool to evaluate how customer information is used in the company's development practices. From the evaluation the manager can learn what barriers and facilitators that influence the use of customer information in the particular context of his development project or company. For example, why was the information immediately used? Why was the information almost postponed and what hindered it not being so? What customer information ends up being postponed for future use or ends up being immediately used? From what source does the information come from and how was it acquired? From the perspective of use, the manager will gain a holistic understanding of the customer information and the factors that influence the use in that particular project. This understanding can then be utilised in other projects in order to generate a picture of what barriers and facilitators of use that are general at that particular company. In this way, actions can be taken at the strategic level to support more customer focused service development practices at the company.

5.3. Suggestions for further research

This study argued that prior marketing research has primarily focused on the antecedents and outcomes of an assumed customer information use. Thus, as a first attempt, this study explored how customer information is used in the service development process and identified six new types of use. Four of these types represent non-use. To further validate the six types of customer information use, more studies are required. Thus, perhaps the most significant contribution of this study is that it provides a useful starting point for future research. Avenues for this future research are discussed below.

Use of customer information in development in other settings

The different types of customer information use were in the current study identified in the context of an incremental service innovation. These types of use should be investigated in the context of radically new services. Moreover, use of customer information was in the current study investigated in a consumer service setting. To validate the identified six different types of customer information use, further empirical research is needed both in i) other consumer service settings and in ii) industrial service settings.

Explanatory research needed

This study used ethnography, which is an emergent and descriptive methodology. Hence, the study contributed to our knowledge by identifying and describing different types of customer information use. As the traditional ethnography, the current study did not focus on answering "why" type of questions, that is it does not provide any answers as to why customer information was immediately used, almost postponed, postponed, almost used, potentially used and immediately used. From a managerial point of view this is problematic, because this study does not give any information on factors that influence type of use, nor does it give any advice on which type of use managers should focus on in order to develop a successful new service. Hence,

explanatory research is needed in order to develop insights on antecedents as well as consequences of customer information use.

Novelty of the information

The study indicated that customer information suggesting minor changes, i.e. 'incremental' information, was used. Companies and researchers argue that customers have difficulties in expressing their needs and preferences related to radical innovations. However, could it be that companies are hesitant to use non-confirmatory and 'radical' information provided by the customer? Are the most creative customer inputs discarded? It would be of interest to further investigate how such radical information could be processed and whether it would be of value in service development.

New methods for customer information acquisition needed

Customer information acquisition is frequently used as a measure of customer involvement/orientation in the development process. The predominant view is that customer information should be acquired during the development process, preferably during the early stages. Hence, the fact that the developing firm may already know the customer's preferences or how the customer behaves in relation to its service before the development process starts, seems to be neglected in prior research. This investigation found that customer information that had been acquired earlier was used in the current development. Hence, in order to generate more valid findings on customer involvement/orientation, further research should develop methods that capture both the older and the newly acquired customer information, and the extent to which these are used.

Use of customer information in other contexts

The context of the current study was service development. To increase the general understanding of use of customer information, more research is needed to explore this topic in other contexts. How is customer information used in relationship management, in order to initiate, develop or determine a customer relationship? How is customer information used in market communication, for example with regard to the company's choice of marketing channels or with regard to advertising?

Use of other types of information

The current study found that competitor information was used in the development process. However, since the current study was limited to the investigation of customer information use, it did not focus on identifying different types of competitor information use. This can be an avenue for further research.

Downside of use

The underlying assumption in development literature is that the use of customer information is desirable, has a positive impact on the performance of the new service, and thereby also has a positive impact on the overall performance of the firm. However, the potential downside of using customer information has not been empirically explored. Hence, more research is needed on the potential pitfalls with using customer information in a development context and in other contexts.

Use of customer information versus related concepts

To develop marketing knowledge on customer information use, further research is needed to explore how use of customer information relates to allied concepts. Hence,

how does use of customer information relate to customer orientation, customer learning and customer knowledge?

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APPENDIX 1 OVERVIEW OF SCHEDULED INTERVIEWS

MONTH/YEAR	DATE	INFORMANTS
FEBRUARY 2005	16 th	Mr. Project Leader Mr. Dir Bus. Devel.
MARCH 2005	11 th 16 th	Mr. Project Leader "
APRIL 2005	15 th 22 nd	" "
MAY 2005	9 th 16 th 17 th 27 th	" " " "
JUNE 2005	8 th 23 rd 28 th	" " "
JULY 2005	4 th 7 th 14 th	" " " " "
AUG 2005	4 th – 11 th 29 th	Managers at branch offices & Call Centre Mr. Project Leader
SEP 2005	9 th 19 th	Mr. Marketing Mgr. Mr. Project Leader
OCT 2005	3 rd 20 th 25 th 31 st	" " " "
NOV 2005	3 rd 3 rd 4 th 9 th 18 th 24 th 24 th 24 th	Ms. Marketing Mgr. Mr. Technician Mr. Project Leader Ms. Marketing Mgr. Mr. Project Leader " Ms. Marketing Mgr. Mr. Technician
DEC 2005	8 th 9 th 19 th 29 th	Ms. Marketing Mgr. Mr. Technician Mr. Project Leader "
JAN 2006	9 th	"
FEB 2006	2 nd 16 th 28 th	" " Mr. Marketing Mgr.
MARCH 2006	2 nd 10 th 15 th 21 st	Mr. Project Leader Mrs. Call Centre " Mr. Project Leader

APPENDIX 2 EXTRACTS FROM THE LOGBOOK

INTERACTION TYPE	FACE-TO-FACE/TELEPHONE
PLACE	BANK'S BRANCH OFFICE X – OFFICE OF Mr Project leader
DATE	Tuesday 12 th of April 2005
TIME	11.15-12.00
PARTICIPANTS	BANK'S BRANCH OFFICE X – OFFICE OF Mr Project leader: Mr Project leader and me BANK'S HEADQUARTERS – Mr Director of business development, Mr Technician, Mr Marketing director, Mr Technical project leader, Mr Technician 2, Mr Programmer
PURPOSE	Thought I was going to Interview Mr Project leader (see document "Questions for Mr Project leader 12.04.2005") but instead I observed or listened to a meeting that he participated in via audio conference. Mr Project leader said that he had sent me an SMS on the matter (i.e. meeting instead of interview), however he had sent it to my old number - my fault. But everything worked out very well anyway. The meeting physically took place at the headquarters. The discussion focused mainly on a list of technological requirements that had been made by Mr Technical project leader.
RESULT	Different tasks, i.e. to 'check up this and that', together with deadlines were divided among the participants, so called 'action points'. See audiotape: "Technical meeting 12.04.2005", See document: "Infosidor, Teknisk specification, v1.0, 11.04.2005"
INTERACTION TYPE	TELEPHONE
PLACE	BANK'S HEADQUARTERS
DATE	Thursday 14 th of April 2005
TIME	10.00-11.00
PARTICIPANTS	Mr Project leader participated from his home via telephone, me from Hanken, at the headquarters: Mr Technician, Mr Marketing director, Mr Technical project leader, Mr Technician 2, and Mr programmer.
PURPOSE	To decide upon a publishing tool/supplier. Discussion focused around three different ones, their advantages and disadvantages.
RESULT	Action points are divided among the participants together with deadlines for when they should be accomplished. It is decided that there will be a new meeting tomorrow. See tape: "14.4 diskussion av publ.verktyg" See document: "Publiceringsverktyg_ Jämförelse", See E-mail from Mr Technician 2 to Mr project leader on 14 th of April subject: "publiceringsverktyg".
INTERACTION TYPE	TELEPHONE
DATE	Monday 29 th of August 2005
INFORMATION	Mr Project leader called and we agreed that I come by his office at 14.00 to get updated
INTERACTION TYPE	FACE-TO-FACE
PLACE	Mr Project leader's office at the Branch office x
DATE	Monday 29th of August 2005
TIME	14.00-15.10
PARTICIPANTS	Mr Project leader and I
PURPOSE	Att bli uppdaterad om vad som hänt de senaste 2 veckorna då jag varit på semester
RESULTS	See tape: "update med Mr Project leader 29.8.2005"

INTERACTION TYPE	TELEPHONE
PLACE	BANK'S HEADQUARTERS
DATE	Tuesday 30th of August 2005
TIME	13.00-14.00
PARTICIPANTS	Mr Project leader, Mr Marketing director, Mr Technician, Ms Marketing and me. Everyone was physically at the headquarters except me who participated from Hanken via telephone.
PURPOSE	Gå igenom projektplanen (se dokument "Hemsidorna_Projektplan.doc"). I denna finns bl a ett tidsschema med vem som gör vad och när av medlemmarna i projektgruppen, projektstyrelsens, projektgruppens och referensgruppens roller, risker etc.
RESULT	Justerade tidsschemat samt diskuterade när man ska göra användartester bland kunder. Fördelar och nackdelar med att göra detta vid ett tidigt skede eller senare diskuterades. Beslutades att sannolikt göra två tester ett mindre test i ett tidigt skede och ett större vid ett senare tillfälle. Man siktar på att lansera tjänsten i mitten av november eller mitten av december. Kundsack. See 2 audio tapes: "Project/development plans 1, 30.8.05" & "Project/development plans 2, 30.8.05"
REFLECTION	Det verkar som det kan vara en idé att hålla fast vid distinktionen formell/informell kundinformation
INTERACTION TYPE	TELEPHONE
PLACE	BANK'S HEADQUARTERS
DATE	Wednesday 7th of September 2005
TIME	11.30-12.15
PARTICIPANTS	The core development team: Mr Project leader, Mr Marketing director, Mr Technician, Ms Marketing manager. Everyone was physically at the headquarters except me who participated from Hanken via telephone.
PURPOSE	Agenda: "xxxx"
RESULT	Projektplanen som uppdaterats, reviderats på basen av mötet förra veckan gicks igenom. Mr Technician kommer att genomföra ett mindre användartest om ca 2 veckor. Mr Project leader gick inte igenom rapport från Mr Technician 2 beträffande det tekniska. Mr Marketing director kommer att ha kontakt med referensgruppen. Kundsack. See tape: "Weekly review meeting 7.9.2005"
INTERACTION TYPE	TELEPHONE
PLACE	BANK'S HEADQUARTERS
DATE	Wednesday 7th of September 2005
TIME	12.30-13.00
PARTICIPANTS	The project board : Mr Director of business development, Mrs Director of Human resource and Mr Project leader. Everyone was physically at the headquarters except me who participated from Hanken via telephone.
PURPOSE	Att stämma av den reviderade projektplanen (reviderad enligt kommentarerna förra veckan)
RESULT	See tape: "Projektstyrelsemöte, 7.9.2005" Se dokumentet "Projektplan för hemsidoprojektet v.2"
REFLECTION	Först nu frågar Mr Director of business development om mitt projekt, han frågar vad titeln på min avhandling är.
INTERACTION TYPE	E-MAIL
DATE	Friday the 9th of September 2005
INFORMATION	Mr Project leader forwardar ett mail som han skickat till Mr Marketing director som kommer att gå ut till referensgruppen. Det är Mr Marketing director som kommer att ha kontakten med referensgruppen. Så här såg e-målet ut: "xxx"

INTERACTION TYPE	E-MAIL
DATE	Wednesday 12th October 2005
INFORMATION	Mr Project leader skickar agendan för dagens möte, "Såja, i god tid före mötet kommer här agendan som ni kan bekanta er med. Enjoy! //" Mr Project leader "Agenda XXX"
INTERACTION TYPE	TELEPHONE
PLACE	BANK'S HEADQUARTERS
DATE	Wednesday 12th October 2005
TIME	09.00-10.00
PARTICIPANTS	Mr Project leader, Mr Marketing director, Ms Marketing manager, Mr Technician, Mr Technical project leader. Everyone was physically at the headquarters except me who participated from Hanken via telephone.
PURPOSE	Se agendan i E-målet skickat av Mr Project leader just före mötet började.
RESULT	Under mötet gick man igenom förra veckans actionpoints och nya delades ut- i vanlig ordning - till projektmedlemmarna. Kunden nämndes. Se tape: <i>"Weekly review meeting, 12.10.05"</i>
REFLECTION	Kundorientering verkar finnas i olika utsträckning samt se olika ut på olika nivåer i organisationen. Dessutom är kundorientering personspecifikt.
INTERACTION TYPE	TELEPHONE
PLACE	BANK'S HEADQUARTERS
DATE	Wednesday 2nd November 2005
TIME	09.00-10.00
PARTICIPANTS	Mr Project leader, Mr Marketing director, Ms Marketing manager, Mr Technician, Mr Technical project leader Everyone was physically at the headquarters (except me who participated from Hanken via telephone).
PURPOSE	Se agendan i E-målet skickat av Mr Project leader just före mötet började (ovan).
RESULT	se tape: <i>"Weekly review meeting, 2.11.2005"</i> .
INTERACTION TYPE	E-MAIL
DATE	Wednesday 30th of November 2005
INFORMATION	Får följande mail från Mr Project leader med bifogad agenda inför dagens veckomöte: "Vänner, bifogar dagens agenda. Till min stora förskräckelse insåg jag att jag än en gång glömt skriva protokollet från förra mötet så jag har istället bakat in några av förra mötets AP:s direkt i den här agendan. Men hoppas ni kommit vidare trots icke-dokumentationen. Väl mött! //" Mr Project leader "Agenda XXX"
INTERACTION TYPE	FACE-TO-FACE/TELEPHONE
PLACE	BANK'S HEADQUARTERS – OFFICE OF Mr Project leader
DATE	Thursday 12th January 2006
TIME	15.00-16.00
PARTICIPANTS	BANK'S BRANCH OFFICE X – OFFICE OF Mr Project leader: me and Mr Project leader. BANK'S HEADQUARTERS: Mr Director of business development, Mrs X, Mr X, Mr X Tekniska risker med inloggningen till Internet banken
PURPOSE	See tape: <i>"Teknikmöte, säkerhet, 12.1.2006 15.00- 16.00, mkt. kundsnack"</i>
RESULT	

INTERACTION TYPE	TELEPHONE
PLACE	BANK'S HEADQUARTERS
DATE	Wednesday 25th January 2006
TIME	14.30-16.00
PARTICIPANTS	Mr Project leader, Mr Marketing director, Mr Technician, and me Everyone was physically at the headquarters except me who participated from Hanken via telephone.
PURPOSE	Contentgranskning - sista
RESULT	See tape: <i>"Content meeting, 25.1.06"</i>
INTERACTION TYPE	E-MAIL
DATE	Wednesday 25th January 2006
INFORMATION	Får följande mail av Mr Project leader: "P-styrelsemöte i morgon 13-14.00 Welcome! /"Mr Project leader
INTERACTION TYPE	E-MAIL
DATE	Tuesday 31st January 2006
INFORMATION	Får följande mail av Mr Project leader: "Hello! Vi tar ett race i morgon 10.00 - 11.30, då går vi också igenom respons från referensgruppen. Du är väl med?" //Mr Project leader
	Jag svarar: "Hej, ja jag är gärna med, kommer ju även att vara med på ref.grp mötet i morrn bitti/C."
INTERACTION TYPE	FACE-TO-FACE
PLACE	Mr Project leader's office at the Branch office X
DATE	Thursday 2nd February 2006
TIME	08.45-10.00
PARTICIPANTS	Mr Project leader och jag.
PURPOSE	Att diskutera om hemsidorna och resultatet av ett möte som jag missade.
RESULT	Se dokument: <i>"Frågor till Mr Project leader, 2.2.2006"</i> Se tape: <i>"Intervju. med Mr Project leader, 2.2.2006,"</i>
INTERACTION TYPE	E-MAIL
DATE	Thursday 9th February 2006
INFORMATION	Jag skickar följande mail till Mr Project leader: "Hello, jag springer snart iväg o föreläser tills kvart i tolv, blir det nån avstämning idag?/ flugan"
	Mr Project leader svarar: "Icke, vi jobbar nu med att lansera tröskverket internt vid 13-snåret, flås-flås. Kom förbi i morgon? // "
	Mr Project leader
INTERACTION TYPE	FACE-TO-FACE
PLACE	Mr Project leader's office at Branch office x
DATE	Thursday 2nd March 2006 (1 week after the launch)
TIME	09.30-10.30
PARTICIPANTS	Mr Project leader och jag
PURPOSE	Att diskutera om eventuell feedback som kommit in och vad projektgruppens respons till den har varit eller inte varit samt om utvecklingen var lyckad. Kunds snack.
RESULT	See tape: <i>"Intervju med Mr Project leader om kund feedback, success mm, 2.3.2006".</i>

APPENDIX 3 OVERVIEW OF OBSERVED DEVELOPMENT MEETINGS

MONTH/YEAR	DATE	DURATION	TYPE	INFORMANTS	NUMBER OF PARTICIPANTS
MARCH 2005	23 rd	3h	FTFO	2CDT + 2CT	4
APRIL 2005	12 th	45 min	FTFO/TO	3CDT + 3TN + 1 PB	7
	14 th	1h	TO	4CDT + 2TN	6
	15 th	30 min	TO	4CDT + 2TN	6
	20 th	1h	TO	2CDT + 1TN	3
	29 th	1h	FTFO/TO	2CDT + 1TN + 1PB	4
MAY 2005	13 th	1h	FTFO/TO	2CDT + 1TN + 1PB	4
JUNE 2005	21 st	5h 15 min	FTFO	5CDT + 3CT	8
	30 th	1h	TO	1CDT + 2PB	3
JULY 2005	7 th	2h	FTFO	1CDT + 1ct	2
AUG 2005	30 th	1h	TO	CDT	4
	31 st	1h 30 min	TO	CDT	4
	31 st	1h	TO	1CDT + 2PB	3
	7 th	45 min	TO	CDT	4
SEP 2005	7 th	30 min	TO	1CDT + 2PB	3
	13 th	1h	FTFO/TO	1CDT + 1PB	2
	14 th	1h	FTFO/TO	CDT	5
	21 st	1h	TO	CDT	5
	22 nd	15 min	FTFO	1CDT + 1CU	2
	22 nd	30 min	FTFO	1CDT + 1CU	2
	22 nd	1h 30 min	FTFO	CDT	4
	28 th	1h	TO	CDT	5
	28 th	1h	TO	CDT	4
	30 th	1h	FTFO/TO	CDT	3
	4 th	1h	TO	CDT	5
OCT 2005	5 th	1h	FTFO	CDT	5
	5 th	15 min	FTFO	CDT	3
	5 th	1h	FTFO	CDT	2
	5 th	2h 30 min	FTFO	CDT	4
	12 th	1h	TO	CDT	5
	13 th	30 min	TO	1CDT + 4RG	5
	19 th	1h	TO	CDT	4
NOV 2005	2 nd	1h	TO	CDT	5
	9 th	1h	TO	CDT	5
	10 th	1h	FTFO/TO	1CDT + 2PB	3
	16 th	1h	TO	CDT	5
	24 th	1h	FTFO/TO	CDT	5
	30 th	1h	TO	CDT	4
DEC 2005	8 th	4h	TO	CDT	4
	14 th	3h 30 min	TO	CDT	4
	14 th	1h	TO	1CDT + 2PB	3
	16 th	1h	TO	1CDT + 4RG	5
	29 th	1h 30 min	FTFO/TO	CDT	4
JAN 2006	4 th	1h 30 min	TO	CDT	4
	11 th	5h 30 min	FTFO	CDT	4
	12 th	1h	FTFO/TO	1CDT + 2PB	3
	12 th	1h	FTFO/TO	1CDT + 1PB + 3TN	5
	18 th	1h	TO	CDT	3
	19 th	1h	TO	1CDT + 2PB	3

FEB 2006	25 th	1h 30 min	TO	CDT	3
	26 th	1h	TO	CDT	3
	1 st	30 min	TO	1CDT + 4RG	5
	1 st	30 min	TO	CDT	2
	21 st	1h	FTFO/TO	1CDT + 1CT	2

TYPE OF OBSERVATION:

FACE TO FACE

TELEPHONE

FACE-TO-FACE/TELEPHONE

FTFO 10+2

TO 32

FTFO/TO 12

TOTAL AMOUNT OF OBSERVATIONS:

54 MEETINGS + 2 USER TESTS

OBSERVED INFORMANTS:

CORE DEVELOPMENT TEAM

PROJECT BOARD

REFERENCE GROUP

CDT

PB

RG

CONSULTANT

TECHNICIAN

CUSTOMER

CT

TN

CU

APPENDIX 3 SIX DIFFERENT TYPES OF USE

In this appendix, examples of different types of use of customer information that emerged in the empirical data are presented. Each example is based on data collected with several methods and from several sources. As participant observation was the main method, the majority of the examples present detailed data collected in observed development meetings among the members of the core development team.

I collected the data in Swedish and wrote the logbook in Swedish. When I translated the developers' discussions and statements to English, I strove to convey the meaning as closely as possible. However, the translations are not verbatim as some expressions were untranslatable. Where I have considered it as relevant for clarity, I have included the original expression in brackets. First, examples of different types of customer information use are presented, followed by that of customer information non-use.

A4.1 Use of customer information

In the following text, examples representing different types of *use* of customer information are discussed. Examples of *immediate use* are presented first followed by an example of *almost postponed use*. A summary of the source of the customer information, its time and means of acquisition ends each example.

A4.1.1 Immediate use

Seven examples of the immediate use of customer information by the development project members are discussed below.

The photos

Customer information in some content on the old website emerged in discussions among the developers on several occasions. More specifically, the information concerned customers' positive evaluation of the photos on the old website illustrating, for example, nature in different seasons. This information was well known within the bank and it was nothing new that customers liked the photos. Throughout the development process and from different sources, it was suggested that this information needed to be used in the development. For example, during a face-to-face observation of one of the very first development meetings, Ms. Marketing Manager stated:

...and our photos we really have to consider them, because they are so appreciated by our customers! (Field note, 21.06.2005).

Another example was that of Mrs. Investment Advisor at one of the bank's branch offices:

We always get a lot of praise for our nice photos so we need to keep them (Branch office survey, p.17, 2005).

The same customer information was also formally acquired directly from the customer at an early stage of the development process. This is shown in a document on the focus group interviews that were conducted in the developers' pre-study:

Without exceptions they like the photos. Especially the bank's customers like the photos with nature that changes according to the season (Focus group interviews, Pre-study attachment 4, p. 8, 2004).

During an observation of a meeting the same piece of information emerged again. This time a developer received it from the front line manager Mrs. Call Centre:

Mrs Call Centre: The photo on the first page, the "choose your language page," has been truly popular

Mr. Marketing Mgr: Yes, the first page's photo will be seen a lesser number of times since the visitor will only see it the first time he/she visits us. However, the exact same photo will also be here when you login to the Internet bank [next to the login box] and our customers do visit the Internet bank a lot

Mrs. Call Centre: Ok, good because we have received a lot of positive feedback concerning these photos and they are really grateful [tacksamma] for them. (TO, 16.12.2005)

Eventually the information was used as updated photos were placed on several pages of the website. Since the photos were important to the developers and a central component of the website, a photo policy was developed to support the future web director in managing and updating the photos of the website after the launch. The source, time and means of the acquired customer information that was used in the development are summarised in Table 17.

Table 18 Immediate use of C.I in the development of content- the photos

IMMEDIATE USE OF CUSTOMER INFORMATION		
MEANS of CI acquisition	Infor	In development meetings
	Form	Focus group interviews Survey
TIME of CI acquisition	Pot	
	Curr	Within the time frame of the focal development process: Spring 2004, Summer 2005
	Pre	Prior to the focal development process: "has been truly popular" "we have received a lot of positive feedback"
SOURCE of CI	Imp	
	Spec	
	Exp	Customer indicated as the explicit source: "the bank's customers like" "because they are so appreciated by our customers!" "We always get a lot of praise"

CI: customer information. Source: Exp=explicit, Spec=speculation, Imp=implicit. Time: Pre=previously, Curr=currently, Pot=potentially. Means: Form=formally, Infor=informally

The information used came explicitly from the customer. It appeared to be known to the developers, which indicates that it had been acquired before the development process started. However, the information was also acquired during the time of the process. Because the development was incremental, much of the content, including the photos, on the old website was recycled and just given a "face-lift" (an expression by Mr. Director, FTFO/TO, 13.05.2005). The means of acquisition were both formal and informal.

The English pages

The bank's website is available in Swedish, Finnish and English. The content and structure in Swedish and Finnish are fairly identical. The content in English is limited.

The Internet bank, which is available only through login, is provided in Swedish and Finnish only. In the following discussion among the core development team, the language issue was discussed and information on how English-speaking customers think, feel and act were generated and eventually also used:

- Mr. Marketing Mgr: How have we thought there? I mean if we have the customer cap on?
- Mr. Technician: One cannot login in English [and the Internet bank does not exist in English], that's the thing, but there can be customers that still are able to use the Swedish or Finnish versions
- Mr. Project Leader: And with the customer cap on: most likely when foreigners are surfing on the pages it is to see what kind of bank we are, and then wouldn't it be reasonable that when they click on "the Internet bank" a page with a short presentation appears that tells the visitor how good our Internet bank is? By the way, how many foreign customers do we have...and usually don't they know the basic terminology in Finnish and Swedish anyway? I think the most important thing is that they get the picture that we are much better than many other foreign Internet banks
- Mr. Marketing Mgr: The only problem is that we don't have it in English [the Internet bank]
- Mr. Project Leader: But, do you think...I do believe that when the English speaker is online checking around they'll get a bit excited when they see all, or can read about all the services that we provide [on the Internet bank] and can even check out the Internet bank and I don't think that they necessarily may have a problem that it's in Finnish and Swedish only.
- Mr. Marketing Mgr: Yes, or the alternative is to say something entirely different and using this space for something else [instead of the main heading "the Internet bank" and the pages below that]. Ok, I push it a bit now, but what we say is: "use this although you don't know the language" and "you're responsible if you do something wrong," I mean the confidence for us
- Mr. Project Leader: Yes, surely that is a risk, but there I believe that the most important thing is that the customer advisor check with this person that: "are you comfortable with this?" but as mentioned before, those foreigners that are our target in Finland, most likely they know the basics, they know the terminology, they are not so stupid that they cannot learn that "tili" means, for example, "payments"
- Mr. Marketing Mgr: But is it those that are here that are our target for the English pages? or is it those that are outside Finland?
- Ms. Marketing Mgr: Both. (TO, 30.11.2005)

The speculative information about potential foreign customers was used in the development. Thus, on the new English pages the heading "the Internet bank" exists. Beneath "the Internet bank" some information about the services at "the Internet bank" is presented in English together with the information that these services are only provided in Swedish and Finnish. The immediate use of customer information in the development of the English pages is summarised in Table 18.

Table 19 Immediate use of C.I in the development of content - the English pages

IMMEDIATE USE OF CUSTOMER INFORMATION		
MEANS of CI acquisition	<i>Inform</i>	"Turning to oneself" Created in the discussion between the developers during development meetings.
	<i>Form</i>	
TIME of CI acquisition	<i>Pot</i>	
	<i>Curr</i>	Within the time frame of the focal development process: 30.11.2005
	<i>Pre</i>	
SOURCE of CI	<i>Imp</i>	
	<i>Spec</i>	The developer through speculation and negotiation: "how have we thought there? I mean if we have the customer cap on?" "...there can be customers that still are able to use the Swedish or Finnish versions" "...with the customer cap on: most likely when foreigners are surfing on the pages it is to see what kind of bank we are..." "...don't they know the basic terminology in Finnish and Swedish anyway?" "...I do believe that when the English speaker is online checking around they'll get a bit excited..." "...I don't think that they necessarily may have a problem that it's in Finnish and Swedish only." "...most likely they know the basics, they know the terminology, they are not so stupid that they cannot learn that "tili" means, for example, 'payments'"
	<i>Exp</i>	

CI: customer information. Source: Exp=explicit, Spec=speculation, Imp=implicit. Time: Pre=previously, Curr=currently, Pot=potentially. Means: Form=formally, Infor=informally

The customer information used was created in the discussions among the developers. It was, thus, "acquired" currently and informally. It is possible that the customer information was created in the discussion as a justification to provide the Internet bank to foreigners only in Swedish and Finnish. This is supported by a discussion I had with Mr. Project Leader five months earlier. The discussion concerned the different languages of the bank's website in general and how these should be dealt with in the development:

Ms. PhD Student: What about in English?

Mr. Project Leader: That's not of high priority. We'll have a minimum of information provided in English. There will be some about corporate governance and then some about the bank, like "the bank in a nut shell", but not much more

Ms. PhD Student: Why?

Mr. Project Leader: Because there is no rationale for it. We have only a few foreign customers and our main target is investors within the Finnish borders or within the Nordic ones so there is really no use for it. It's a typical 'nice to have-kind of thing,' but who is suppose to translate it all?! We have today already

enough problems with providing the website in *two* languages (DISC, 04.07.2005).

The phone number

During one of the first meetings the structure of the new website was discussed. The developers agreed that the phone number to the switchboard of the bank should be easy to find for the customer:

We have to see to it that the phone number to the switchboard is clearly visible! Many customers visit the website only to get that phone number (Field note, 21.06.05).

In a discussion with Mr. Project Leader, it appeared as if the information about the customer's behaviour were generally known not only inside, but also outside the bank:

Ms. PhD Student: During the workshop it was mentioned and agreed upon that the telephone number to the switchboard should be clearly visible to the customer?

Mr. Project Leader: If we think in general terms, the web is still a contact channel and very often you want to make a phone call to your bank and in discussions with our customers it has come up that our contact information is very difficult to find so there we need to improve. I could also answer your question by saying that you could pick up any book on web design and one of the very first commandments you'll read is: "make sure your contact information is clearly visible!" Thank you, good point! And there we [the bank] have managed to perform the trick [konsttricket] of *not* making this information clearly visible so we need to get better on that! (DISC, 23.06.2005)

In addition to the suggestion that the already known information about customer behaviour should be used in the development, Mr. Consultant informally suggests suitable positions for it during another observed meeting:

Mr Consultant: In addition to the first page, the bank's contact information should also be under "About us," because many customers go directly to "About us" when searching for the telephone number (Field note, 07.07.2005).

Three months later, in October, the information on customer behaviour of searching for the bank's switchboard number emerges again. Mr. Marketing Manager receives the explicit information informally in an e-mail from Mrs. Call Centre:

Hi Mr. Marketing Manager,
Will the phone number to the switchboard be clearly visible on the new website? According to the operators here [working at the call centre] they often have to act as the switchboard operators, which is not really optimal since they cannot transfer calls and cannot put the call on hold in order to look up the number the person wants to get in touch with etc. They wish, thus, that the phone number to the switchboard would be clearly visible on the new website (E-mail, 21.10.2005).

Hi Mrs Call centre,
My thought has been, all along, that the switchboard's phone number xxxx xxxx will be put in the lower frame [thus appearing on every page of the website]. I will tell Mr Technician that he puts it there (E-mail, 21.10.2005).

The phone number was put in the lower frame of the website and also, as suggested by Mr. Consultant, under "about us." The information that was subject to immediate use is summarised in Table 19.

Table 20 Immediate use of C.I in the development of structure- the phone number

IMMEDIATE USE OF CUSTOMER INFORMATION		
MEANS of CI acquisition	<i>Infor</i>	Unsolicited from Mr consultant during a meeting Unsolicited through e-mail from front line personnel
	<i>Form</i>	
TIME of CI acquisition	<i>Pot</i>	
	<i>Curr</i>	Within the time frame of the focal development process: 07.07.2005 21.10.2005
	<i>Pre</i>	Prior to the focal development process: "Many customers visit the website only to get that phone number" "...And there we [the bank] have managed to perform the stunt [konsttricket] of <i>not</i> making this information clearly visible so we need to get better on that!"
SOURCE of CI	<i>Imp</i>	Generally known: "If we think in general terms, the web is still a contact channel and very often you want to make a phone call to your bank..." "...you could pick up any book on web design and one of the first commandments you'll read is: make sure your contact information is clearly visible!"
	<i>Spec</i>	
	<i>Exp</i>	Customer indicated as the explicit source: "in discussions with our customers it has come up that our contact information is very difficult to find" "According to the operators here [working at the call centre] they often have to act as the switchboard operators, which is not really optimal"

CI: customer information. Source: Exp=explicit, Spec=speculation, Imp=implicit. Time: Pre=previously, Curr=currently, Pot=potentially. Means: Form=formally, Infor=informally

The information about the customers' preference came explicitly from the customer, but also appeared as a generally known 'fact'. It was previously acquired as it had emerged in discussions with customers earlier. However, it was also acquired currently during the development process informally from Mr. Consultant and from Mrs. Call Centre.

The private banking

During an observation of a meeting among the core development team, Mr. Project Leader, Mr. Marketing Manager, Ms. Marketing Manager and Mr. Technician, customer information emerged, the developers discussed the position of the content of "private banking" and were not satisfied with its position on the old website:

Mr. Project Leader: I talked to Mrs Private banking advisor and then I was interested in what we have on private banking today [on the old website] and went to check it out...

Mr. Marketing Mgr: Very little, and it is positioned below "our offices/the xx office," which is based on how *we* see it internally and *not* how customers see it. The position is more an organisational [structure] kind of thing rather than a service that a customer visiting the bank looks for and wonders if we provide it

Ms. Marketing Mgr: Yes

Mr. Project Leader: Exactly

Mr. Marketing Mgr: And then you [as a customer] cannot know that “of course! Private banking information is below “our offices/the xx office” because that’s where their [the bank’s] advisors on private banking are physically located!”

Ms. Marketing Mgr: That is a really good point and we shall remember to keep the customer glasses on when we develop the structure of the content that we are the customer and *not* employees (TO 30.08.2005).

In a meeting the following day the same issue came up in the discussion again:

Mr. Marketing Mgr: And now when we are here: “our services” [discussing and deciding what content should be included below the heading]. We had a discussion yesterday about private banking that today is below “our offices”, but if we would view it more as a *service* then it should be below “our services” because...

Mr. Project Leader: I agree that it is a service

Ms. Marketing Mgr: Yes, if we do *not* think from our perspective but from the customer’s, then it belongs there [below “our services”]

Mr. Marketing Mgr: Yes...because the customer that visits our website will wonder, “what kind of bank is this?! Do they at all provide such a service?!” so there we need to improve ourselves (TO 31.08.2005).

The developers tried to view the structure of the private banking information from the customer’s point of view. Whether or not their assumptions about how the customer thinks and behaves are correct, the website was developed accordingly. The customer information is summarised in Table 20.

Table 21 Immediate use of C.I in the development of structure- private banking

IMMEDIATE USE OF CUSTOMER INFORMATION		
MEANS of CI acquisition	Inform	“Turning to oneself” Created in discussion between the developers during development meetings
	Form	
TIME of CI acquisition	Pot	
	Curr	Within the time frame of the focal development process: 30.08.2005 31.08.2005
	Pre	
	Imp	
SOURCE of CI	Spec	Speculation and identification with the customer: “...which is based on how we see it internally and <i>not</i> how customers sees it...” “...and then you [as a customer] cannot know that “of course!...” “...we shall remember to keep the customer glasses on when we develop the structure of the content that we are the customer and <i>not</i> employees”. “...if we do not think from our perspective but from the customer’s...” “...because the customer that visits our website will wonder: “what kind of bank is this?! Do they at all provide such a service?!” so there we need to improve ourselves.”

	Exp	
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CI: customer information. Source: Exp=explicit, Spec=speculation, Imp=implicit. Time: Pre=previously, Curr=currently, Pot=potentially. Means: Form=formally, Infor=informally

The example illustrates immediate use of customer information that was created through speculations among the development team. A sense of trying to view the development from the customer's viewpoint characterises the developers' speculations. The information is far from being acquired according to a planned pre-determined structure. Instead, it is informally "acquired" and inter-subjectively produced in the discussions during the meetings, and as such, it was also classified as currently acquired.

The browsers

Information about customer behaviour emerged during an observation of a weekly development meeting with Mr. Project Leader, Mr. Technician, Mr. Marketing Manager, Ms. Marketing Manager and Mr. Technical Project Leader. The information concerned the customer's usage of browsers:

- Mr. Project Leader: Have we considered the browser conventions? Because I've realised that I have come to appreciate Firefox more and more, but at the same time *we do know* that it is just a limited group that uses Firefox. It is still the IE [Internet Explorer] that is *the* browser that is used. I mean so that we keep an eye on that the website works in IE?
- Mr. Technician: It's not so limited anymore, 10% of our visitors use Firefox
- Mr. Project Leader: And 80% Internet Explorer, or?
- Mr. Technician: Yes, something like that
- Mr. Project Leader: But, that's still minority versus majority. I just mean so that we keep an eye on that it works [the website] completely, because although we may not ourselves be so fond of IE the truth ["krassa sanningen"] is that the majority uses that browser
- Mr. Technician: Yes
- Mr. Project leader: So we do have that under control, then?
- Mr. Technician: Yes
- Mr. Project Leader: Ok, so you'll keep an eye on that? Good, because it is so easy to forget [that IE is the most common browser among users] when one starts to think of oneself as the typical user type (TO, 30.11.2005).

The above discussion indicates that the developers know what Internet browser the customers most frequently use and the approximate amount of customers that use which browser. This explicit customer information was used in the development in that the developers made sure that the underlying technology (i.e., the browser) most customers use supports the new website. Table 21 summarises the above customer information.

Table 22 Immediate use of C.I in the development of functionality- the browsers

IMMEDIATE USE OF CUSTOMER INFORMATION		
MEANS of CI acquisition	<i>Infor</i>	
	<i>Form</i>	The website's monitoring tool
TIME of CI acquisition	<i>Pot</i>	
	<i>Curr</i>	Customer behaviour automatically registered as soon as the visitor enters the bank's website
	<i>Pre</i>	Prior to the focal development process: "...we do know that it is just a limited group that uses Firefox"
SOURCE of CI	<i>Imp</i>	
	<i>Spec</i>	
	<i>Exp</i>	Customer indicated as the explicit source: "...10% of our visitors use Firefox" "...although we may not ourselves be so fond of IE the truth is that the majority uses that browser"

CI: customer information. Source: Exp=explicit, Spec=speculation, Imp=implicit. Time: Pre=previously, Curr=currently, Pot=potentially. Means: Form=formally, Infor=informally

The information about customer behaviour came explicitly from the customer. The discussion between Mr. Project Leader and Mr. Technician revealed that it was already known from before. However, the acquisition was also current since a monitoring "tool" acquires information about visitor behaviour continuously as soon as the visitor enters the bank's website. This website monitor collects the information in a structured and pre-determined form and the acquisition was therefore categorised as formal.

The cookie

During a discussion with Mr. Project Leader, I asked about the development of the website's very first page, the "choose your language"- page. Some information about customer behaviour that seemed to be generally known and implicit came up in the discussion:

Mr. Project Leader: Today [on the old website] you always get to this first page where you choose a language and we want to skip that page by sending a cookie so that the next time you visit us you'll arrive at the start page immediately in the language that you chose the first time. In this way we do not have to ask the customer every time, we'll remember it

Ms. PhD Student: Yes, but why?

Mr. Project Leader: Öhh....why?...well, the customer can always change the language when he/she is on the website, but in this way you will get where you wanted [to the bank's start page] with a lesser amount of clicks

Ms. PhD Student: So it will be a lesser amount of clicks for the customer?

Mr. Project Leader: Yes, and the universal web rule by Jacob Nielsen [a web design guru according to Mr. Project Leader] says that you should *always* strive to *reduce* the number of clicks for the customer or the visitor (DISC, 04.07.2005).

As the discussion reveals, the development seems to be based on the information that customers prefer to reach their goals on the Internet with as few clicks as possible. This information is implicit and taken for granted, which also is indicated by the difficulty Mr. Project Leader had to answer my question. The customer information that was immediately used is briefly summarised in Table 22.

Table 23 Immediate use of C.I in the development of functionality - cookie

IMMEDIATE USE OF CUSTOMER INFORMATION		
MEANS of CI acquisition	Inform	Through experience Through literature Through common knowledge
	Form	
TIME of CI acquisition	Pot	
	Curr	
	Pre	Prior to the focal development process
SOURCE of CI	Imp	Generally known, taken for granted: “...we want to skip that page by sending a cookie so that the next time you visit us you'll arrive at the start page immediately in the language that you chose the first time. In this way we do not have to ask the customer every time, we'll remember it [implying that the customer would be bothered if asked to choose the language each time]” “...in this way you will get where you wanted [to the bank's start page] with a lesser amount of clicks” “the universal web rule by Jacob Nielsen [a web design guru according to Mr Project leader] says that you should <i>always</i> strive to <i>reduce</i> the number of clicks for the customer or the visitor”
	Spec	
	Exp	

CI: customer information. Source: Exp=explicit, Spec=speculation, Imp=implicit. Time: Pre=previously, Curr=currently, Pot=potentially. Means: Form=formally, Infor=informally

The information that was used was generally known and implicit. It was known prior to the development process and had been acquired informally through literature, experience and common knowledge.

A4.1.2 Almost postponed use

One example of the almost postponed use of customer information is discussed below.

The loan calculator

Customer information concerning some content on the website reappeared throughout the development process, from spring 2004 to one month prior to the launch in March 2006. More specifically, the information concerned the customer's perception of the loan calculator available on the old website. The loan calculator is an interactive feature where the visitor, after he/she has filled in all the requested items⁵², receives a suggestion of a credit and an estimation of the monthly payment. The old calculator was perceived difficult to understand by the customer. This customer information was formally acquired explicitly from customers in focus group interviews:

Why does the calculator suggest an instalment that is lower than the instalment one would like to pay? The respondents had stated a monthly payment of 1 000€. However, the loan calculator suggested 400€. The respondents did not understand the reason for this; was this due to the length of the loan or due to the fact that the loan was divided into three different types of loans? Most of the respondents preferred to decide the amount of the fixed interest loan themselves... Why is the loan a combination of three different types of loans with only one interest rate? The loan calculator contains several aspects that the potential customer perceives difficult to comprehend. The respondents stated that they have not experienced that other banks' calculators would divide the loan into three different types. A problem was also the lack of information about these different types..." (Focus group interviews, The pre study, attachment 4, p.10, 2004).

About one and a half years later in August 2005, the information emerged again, however, this time it was formally acquired from personnel at the branch offices. Six out of seven branch offices mentioned the loan calculator as one of the biggest weaknesses with the old website and that it was in desperate need of an improvement:

Our financial advisors would like the loan calculator to be developed, today the customer has to go to other banks to check how big his/her loan with us would be" (Branch office Y).

The customer says that "-yes I got an estimate and offer from you, but I had to visit the competitive bank W's website to estimate the figures for myself", i.e. other banks' loan calculators are much easier than ours' which is way too complicated...we direct the customers away from us to other banks!(Branch office X).'

The loan calculator is unclear and insufficient! We have received much feedback from the customers that they do not get anything understandable out of the loan calculator. People are interested in knowing "-how much would it cost me if I would take a loan of say 20 000€ with a payback time of 10 years?", but with today's calculator this information is impossible to get (Branch office Z) (The branch office survey document, p.9-10, 2005).

At the end of August 2005, during an observation of a core development team meeting, the customer information emerged again. Despite the explicit customer information acquired formally from both customers and front line personnel, the discussion reveals that it was not of high priority:

Mr. Marketing Mgr: We have to inform the rest of the organisation that this development process should be viewed as *phase number one*

Ms. Marketing Mgr: Yes

Mr. Project Leader: That: "we are well aware of and understand that the expectations are high, but this is now phase one and in order for the new web pages not to be launched in ten years [exaggerating] this [development process] will be very tight"...When Ms PhD student collected the comments from the branch offices it became clear, for example, that the loan calculator is in a really big need of a change, but the way I've seen it this is delimited from

⁵² These items were: "credit amount," "the household's monthly net income," "amount of monthly payment," and "type of security." In addition, the visitor had to answer questions about his/her "sensitivity to changes of the interest rate" and about his/her "flexibility concerning number of years to pay back the loan."

this project ...I think it is extremely important to internally communicate that the development does not *end* with this project, rather this is just the very beginning [“startskottet”] that has to be there before we can continue with the development of both tinsel [“julgransglitter”] and other hygiene factors that did not qualify for this first round (TO, 30.08.2005).

The reason for not using the customer information and develop the old calculator appears to be lack of time. The anxiety, about the rest of the organisations’ opinions, was shown on several occasions in several meetings throughout the development process and most likely the anxiety is the main reason for the recurrence of this particular piece of customer information.

One week later in a discussion during a project board meeting, the non-use of the customer information is made official. Mr. Project Leader is going through and reads out loud from a second version of the project plan document:

Mr. Project Leader: Ok, moving on to “Delimitations.” We have two main delimitations in phase one: “1. We do not develop any new interactive applications,” and “2. We do not make any renovations of existent, old applications on the website, except those mentioned in the definition document” (TO, 07.09.2005).

The statement “we do not make any renovations of...old applications” refers to the old loan calculator. After the meeting, I asked why the delimitations were made:

Mr. Project Leader: Yes, in order to keep the development project to the timetable, we have to focus on those parts that are the aim and goal

Ms. PhD Student: Ok, the thinking is that this is *phase one* and that this will be launched in the middle of December, but why don’t you make a bigger development in which these things are included and then launch the new website later?

Mr. Project Leader: That’s totally due to internal political reasons; the demand for the new open web pages is so big

Mr. Dir Bus. Devel: I believe you’re thinking of the loan application, which is the number one on the branch offices’ top list when it comes to things they want to be developed. I’ve now checked with the bank’s top management group [“ledningsgrupp”] by talking to my boss and he stated that the [old] loan application is based on the bank’s credit strategy, which has been formulated according to the wants of the branch offices, and the strategy states that we *should* differ from the other banks and that has also been the view put forth by the branch offices. Thus, the view *now* put forth is something new

Ms. PhD Student: Ok, because I heard this view already last year when I did some interviews at the branches, but it’s interesting to know the background

Mr Dir Bus. Devel: Aha! Because when we did the follow up after the development of the old loan calculator they answered: “yes,” but then when an independent person comes in and asks the truth comes out, I guess we should have more...

Mr. Project Leader: ...but that’s not really how it is, I mean when we asked the question after its development and launch, *then* the branch offices were satisfied, but after that, gradually, during about one year there has come feedback from the *customers* that they do not understand it, and that’s what makes me wonder: “during that development did we ever ask them [the customers] about their opinions?”...No, I don’t think so, so perhaps we ought to be a bit self-critical there

Mr Dir Bus. Devel: Ok, I guess I must have missed that then [the customer information], did it come through the web, or?

- Mr. Project Leader: No, but as far as I understand the majority of the branch offices says that the customers say that they do not understand the calculator and that they turn to, for example, competitive bank X to make the estimate and I am not totally sure that we actually tested its usability [acquired customer information on it] *before* we launched it, back then
- Ms. PhD Student: Ok, and the reason is that there is a great internal demand for a new website so it's urgent and that's why the launch is in December?
- Mr. Project Leader: Yes, exactly
- Mr. Dir Bus. Devel: yes, like Mr Project leader said it's politics, but then it's actually also a business strategy (TO, 07.09.2005).

Two reasons to not use the customer information were revealed in the discussion. One of these is the bank's credit strategy and the other reason seems to be what Mr. Project Leader refers to as "internal political reasons." This means that the internal demand from branch offices for a new website is so strong that it is more important at this point to launch it as fast as possible and, subsequently, to exclude those features that are believed to make the development project take longer and delay the launch. However, towards the end of the discussion, Mr. Director of Business Development pinpoints that the loan calculator *could* still be developed and launched at the same time as the new website, under the condition that it is developed in a parallel project. With this statement "the door is still kept open" and the destiny of the customer information is still not decided.

Moving forward about three months to the end of November the development of the loan application is discussed again:

- Mr. Tech. Proj. Lead: You asked about the loan calculator?
- Mr. Project Leader: Yes, exactly
- Mr. Tech. Proj. Lead: I have checked around and asked [among the computer engineers] if one could use the one that we've developed for company X, but there is too much underlying logic built in and connected to that application. Thus, in order to get what you wanted one has to strip it and peel off a lot of things, it cannot just be "shipped in" as it is.
- Mr. Project Leader: Yes
- Mr. Tech. Proj. Lead: So I guess I doubt that we would be able to make it on time...
- Mr. Project Leader: Ok...yes, this is the background; Mrs. Sales Director, among others, at the branch offices won't let go of this loan application, they're on top of us and we are now checking what we've developed for company X and have so far found out that that one is really advanced, but I'm now, in phase one, actually just interested in the first few initial steps where the user enters the amount he/she is interested in and receives a decision, nothing advanced and we have now checked this with the computer engineers to see if it is possible to pull this off parallel with the project and have it ready and ship it in on the new web pages by the time they're launched
- Mr. Marketing Mgr: Isn't this [the same thing] as we discussed earlier this fall?
- Mr. Project Leader: Yes, yes
- Mr. Marketing Mgr: And then Mr. Director of Business Development said that it's on his table [his responsibility]?
- Mr. Project Leader: Yes, and I have talked with him and he has just given me a green light to check it out further with the computer engineers (TO, 30.11.2005).

The loan calculator and its potential to be developed according to customer information were subject to further consideration. The reason why the piece of customer information was still not settled appeared once again to be the anxiety about the branch offices' reaction if nothing was done with the feature. Therefore, and as a last resort, some effort appeared to be put on an alternative route to develop the calculator parallel with the project.

In one of the very last meetings before the launch, the story about the loan calculator comes to an end:

- Mr. Technician: What's the latest on the loan calculator? Are we leaving it as it is?
- Mr. Project Leader: Yes, what will most likely happen is that there will come a decision to develop it *after* the launch, but it will not be included or launched now
- Mr. Technician: ...but, we do have one that we could put there [on the new web pages]. I've had Mr Technician 2 to check it out for another project I have a link to it...
- Mr. Project Leader: Where do you have it now? Please go and get it. If this story ends with the fact that we can throw it on the web in five minutes, then that is really amusing!
- Mr. Technician: It's a bit strange how it all happened back then, I was also part of that development [refers to the development of the old calculator]
- Ms. Marketing Mgr: Yes, I tested it and I did not like it...
- Mr. Project Leader: Yeah, but did we have user tests with customers? No, and that's why it failed. It's an excellent school example of how *not* to do it and now we are made the scapegoat for this. If we back then would have had user tests with the customers we would directly have got their feedback
- Ms. Marketing Mgr: But what about the internal users in the bank!
- Mr. Marketing Mgr: The users in the bank gave their reaction
- Mr. Project Leader: Yes, of course that is...but nothing to do about that now
- Mr. Technician: because, actually, we *did* have user tests but we did not listen to the *real* user, that's the thing
- Mr. Marketing Mgr: Ok, but let us leave that now, that's history
- Mr. Project Leader: Yes, but we need to keep these things in mind for the future, that's what's important
- Mr. Technician: [after checking out the link] yes, this we can use
- Ms. Marketing Mgr: Nice! very nice! ["nice! very nice!"]
- Mr. Technician: Just have to make some test calculations, but other than that
- Mr. Project Leader: in that case, if Mr. Technician feels that he actually can get it nicely in on the web
- Mr. Technician: Me or Mr. Technician 3 can manage this in less than five minutes!
- Mr. Project Leader: If so, than those are the most well invested minutes in this entire project, ever!
- Ms. PhD Student: Can I just ask Mr. Technician, from where did you get it?

- Mr. Technician: I'm working in another development project where we possibly will use it and then it just hit me that we, in this project, have this old horrible calculator
- Mr. Project Leader: Ok, good! Mr. Technician will look into this and put it in on the web if it works alright.....unbelievable!!!
- Mr. Technician: But what is really good with this is that had we not realised this now we would most likely had put someone to develop a new one, which would have been totally unnecessary!
- Mr. Project Leader: Indeed (FTFO, 11.01.2006).

The discussion shows that to everyone's surprise, and perhaps also relief, the calculator was going to be developed. This means that in the end the customer information was used.

Interestingly, although a clear majority of the branch offices supported the customer's view and thereby reinforced the notion that the customer information should be used, the choices made in the development, until the very end, did not favour the customer. The mechanisms that instead generated the use were the unexpected and coincidental circumstances. Table 23 summarises the customer information that was almost postponed.

Table 24 Almost postponed use of C.I in the development of content – the loan calculator

ALMOST POSTPONED USE OF CUSTOMER INFORMATION		
MEANS of CI acquisition	<i>Inform</i>	Unsolicited from front line personnel
	<i>Form</i>	The focus group interviews The branch office survey
TIME of CI acquisition	<i>Pot</i>	
	<i>Curr</i>	Within the time frame of the focal development process: February - May 2004, and from the middle of the focal development process and forward
	<i>Pre</i>	
SOURCE of CI	<i>Imp</i>	
	<i>Spec</i>	
	<i>Exp</i>	Customer indicated as the explicit source: "The respondents did not understand the reason to this... The loan calculator contains several aspects that the potential customer perceives difficult to comprehend. The respondents stated that they have not experienced that other banks' calculators would divide the loan into three different types. A problem was also the lack of information about these different types..." "The loan calculator is unclear and insufficient! We have received much feedback from the customers that they do not get anything understandable out of the loan calculator." "...gradually, during about one year there has come feedback from the customers that they do not understand it."

CI: customer information. Source: Exp=explicit, Spec=speculation, Imp=implicit. Time: Pre=previously, Curr=currently, Pot=potentially. Means: Form=formally, Infor=informally

The customer was clearly the explicit source of the information and it appeared as “new” to the developers in the sense that it had not been acquired prior to the focal development process. It was acquired throughout the development process, both formally and informally from the frontline personnel and formally through focus group interviews with customers. Interestingly, I never observed the developers refer to the information acquired formally in focus groups. Indeed, the development team appeared anxious only about the reactions from the branch offices *if* the customer information was not used. Additionally, the example illustrates the interdependence between the development project and the rest of the organisation. This interdependence and how it affects the use of customer information in the development process has to my knowledge not been the focus of much attention in prior research on development.

A4.2 Non-use of customer information

In the following text, examples that represent different types of *non-use* of customer information are presented. Examples of the *postponed use* are presented first. Thereafter, examples of the *almost use* followed by that of the *potential use*. Examples of *immediate non-use* end the presentation. A summary of the source of the customer information, its time and means of acquisition ends each example.

A4.2.1 Postponed use

Two examples of the postponed use of customer information are discussed below.

The postcards

In a meeting about the new structure and content of the new website information about customer behaviour emerged. The customer information concerned the “electronic postcards” on the old website. The idea with the postcards was that the customer could choose a picture, add a greeting and electronically send this to someone. The discussion concerned whether or not to use the electronic postcards on the new website:

- | | |
|---------------------|--|
| Ms. Marketing Mgr: | What about the postcards? |
| Mr. Project Leader: | They feel rather passé so I would suggest that they’d be dumped, or? |
| Ms. Marketing Mgr: | But I was thinking of relevant issues such as how did they do in the statistics? Does the visitor use them? I’ve forgotten, but I think that... |
| Mr. Project Leader: | I have a hard time imagine that they would represent a killer application, or? |
| Ms. Marketing Mgr: | I was thinking that this could be a thing that already exists and that could be viewed as fun |
| Mr. Project Leader: | Without disregarding this feature, I still have to say that it is not unique, similar features exist here and there on the Internet, and I do not understand its purpose? It’s a cute thing, but I don’t feel... |
| Ms. Marketing Mgr: | Exactly! It’s a cute thing and it already exists on the old website, thus it does not need to be developed from scratch |
| Mr. Technician: | Well, it still needs to be developed onto something |
| Ms. Marketing Mgr: | Ok, well then it’s a different thing... |
| Mr. Project Leader: | My suggestion is that we let it stay as history |
| Mr. Technician: | I think we should keep the idea because the statistics show that this is something that visitors use, so let’s keep the idea and eventually in the future develop it further |

Mr. Project Leader: Yes, I agree with you because it belongs to the line of thinking of attracting new customers by offering a fun thing

Ms. Marketing Mgr: Yes that sounds good so that it does not disappear all together (FTFO, 22.09.2005).

Although the developers knew that the postcards on the old website had been used by the customer, they decided to not include this feature in the development of the new one. However, since the developers liked the underlying idea of the postcards, and agreed that it will need to be further developed in the future, the use of customer information could be viewed as postponed. In Table 24 the postponed use of customer information is summarised.

Table 25 Postponed use of C.I in the development of content – the postcards

POSTPONED USE OF CUSTOMER INFORMATION		
MEANS of CI acquisition	Inform	
	Form	The website's monitoring tool
TIME of CI acquisition	Pot	
	Curr	
	Pre	Prior to the focal development process
SOURCE of CI	Imp	
	Spec	
	Exp	Customer indicated as the explicit source: "...because the statistics shows that this is something that visitors use"

CI: customer information. Source: Exp=explicit, Spec=speculation, Imp=implicit. Time: Pre=previously, Curr=currently, Pot=potentially. Means: Form=formally, Infor=informally

The example illustrates postponed use of explicit customer information that was acquired previously in a formal way. It was clear that Mr. Project Leader was not very fond of the postcards and, apparently, he seemed to think that customers would share his view. It is also clear that the reason for postponing the use was that the postcards were viewed as a feature that could attract new customers. Considering prior research, where acquisition and use takes place within the time frame of a development process, the above example stretches the time frame of acquisition and use considerably. In the above example, the acquisition of the customer information had taken place before the focal development even started and the use was intended to take place sometime in future development, that is, after the focal service was launched.

Myths about us

During an observation of a meeting between Mr. Project Leader and Mr. Consultant, customer information emerged:

Mr Consultant presents some drawings of the website's structure and content that he has prepared for the meeting. Under the heading labelled "About us," the following idea of content is presented:

Myths about us
 Myth No 2: *"the bank only provides service in Swedish"*
 What do you think?
Yes No Sometimes

The myths represent customers' perception of the bank and are known to the bank. The visitor is suppose to click on one of the underlined answers and will then be presented the truth from the bank's point of view, as a way to confront the myths. Mr. Project Leader likes the idea very much. However, since the content would be interactive the conclusion made during the meeting is that the customer information will be used in future development of the website and not in the current one (Field note, 07.07.2005).

An explanation for the postponed use of the information is that already early on in the development process it was decided that all interactive content would be delimited during the project. The reason is that interactive content meant more working hours, which meant more costs, which meant that the cost estimate for the development project would be exceeded.

About two months later during a discussion among the core development team, the same piece of customer information emerges again:

- Mr. Project Leader: I'm thinking about these "five myths and five truths about us"...ehum...are there *five* myths about us? This is something that Mr. Consultant suggested as an idea, but now [looking at the sitemap] it has suddenly become more than an idea ["five myths about us" is stated on the sitemap]
- Ms. Marketing Mgr: Well, we also discussed it a lot in that meeting in Helsinki in June, and Mrs. Consultant also stated several of these things one believes about the bank, and then we were: "these things we could easily kill"[ta kål på], for example this that "we can only speak Swedish," and there were several of these *nice things* [ironically] that are really unnecessary that people think about us and, yes, I still like the idea
- Mr. Project Leader: I like the idea too, but I just had some difficulties with coming up with *five* of them...
- Ms. Marketing Mgr: Well, there could be three...
- Mr. Project Leader: Yes, what comes to my mind is the language issue and that "*one can only get mortgage from us*" and "*we are the rich peoples' bank*"...eh...well I guess that is three. Still, we have to give this some more thought, but let us keep the myths in our minds as a potential feature on the new site. (TO 31.08.2005)

Although the developers liked the idea of using the information about what customers think about the bank, it was postponed for future development. The example is summarised below in Table 25.

Table 26 Postponed use of C.I in the development of content – myths about us

POSTPONED USE OF CUSTOMER INFORMATION		
MEANS of CI acquisition	Inform	In development meetings
	Form	
TIME of CI acquisition	Pot	
	Curr	Within the time frame of the focal development process: June, 2005 07.07.2005
	Pre	Prior to the focal development process
SOURCE of CI	Imp	Generally known, no particular source: “...for example this that <i>we can only speak Swedish</i> ” “...several of these things one believes about the bank” “ <i>one can only get mortgage from us</i> ” “ <i>we are the rich peoples’ bank</i> ”
	Spec	
	Exp	

CI: customer information. Source: Exp=explicit, Spec=speculation, Imp=implicit. Time: Pre=previously, Curr=currently, Pot=potentially. Means: Form=formally, Infor=informally

Apparently, the information about the customers’ view represents rumours on the market, thus there is no clear source and it was classified as implicit. The information was known by the developers prior to the development process, most likely from experience of working at the bank. However, in development meetings the consultants reminded them about it and suggested that the information should be used. It was therefore also classified as currently acquired

A4.2.2 Almost use

Two examples of the almost use of customer information are discussed below.

The currency converter

Customer information concerning content was formally acquired in focus group interviews. More specifically, the information concerned the customer’s positive view on a currency converter, that is, an interactive feature that converts currencies:

From the focus groups it became clear that a currency converter is truly an appreciated feature and is one of the reasons why one visits the website of a bank. We have a currency converter, already developed, on the Internet bank [the part of the website available by login only]. This should be recycled [“återvinnas”] and be available on both parts of the bank’s website [i.e., the Internet bank *and* the open part] (The pre study document, p. 23, 2004).

Since the currency converter already existed on the Internet bank, it appeared a simple task to put it on the website. Later in the document, some more text on the currency converter is identified:

...The idea is that we provide a very simple feature for free to anyone. A small but concrete feature to make the visitor return. The potential to get the visitor to also visit other parts of the website would, in this way, increase. People from the focus groups also suggested that we have a currency converter easily available. An ideal scenario would be that a visitor states that it was because of the currency converter, found through Google, that he/she became acquainted with the bank and became interested and in the end also became our customer (naturally, a *good* customer)... It does not necessarily have to be a currency converter, it could as well be a weather report, but since we are a bank, a currency converter seems more suitable (The pre study document, p. 42, 2004).

The piece of customer information coincides with the bank's interest and aim of acquiring new customers. Thus, the potential for the information to be used seems, at this point, high.

About one year later during a discussion with Mr. Project Leader about the integration between the Internet bank and the "open" part of the website, the currency converter turns up again:

Mr. Project Leader: To have everything in *phase 1* is a clear risk since this will prolong the time of the development and the launch. The problem is that different content features demand different kinds of technical solutions, for example, the currency converter demands its own solution and it's not just to 'plug and play,' so last week I started to discuss this with Mr. Director of Business Development and we agreed that perhaps we just simply have to delimit phase 1 [i.e., its content]... and prioritise...so number one is to make the publication process on the website more effective, and then as a rather distant second is the currency converter where you can, for example, convert Swedish crowns to euros and the other way around

Ms. PhD Student: And that one is on...?

Mr. Project Leader: That one is on the Internet bank, yes

Ms. PhD Student: And it should also be on the "open" part of the website?

Mr. Project Leader: Yes, there have been some wishes, every now and then there have come some suggestions from customers that it would be nice to have it there, it's not a blockbuster ["kioskvältare"], but, nevertheless, it's a nice feature to have there so, IF we realise that the effort [in the sense of work hours] is reasonable then it will be there...but we really need to start prioritising (DISC, 09.05.2005).

Apparently, information about the customer's positive view had also been received informally from the customer. Nevertheless, it seemed as if the potential use of the customer information decreased, and depended on the amount of working hours it would take to develop it. One week later during an observation of a meeting, the effort in terms of how many working hours the currency converter would take to develop came up:

Mr. Project Leader: Ok, we've agreed during last week that we'll slim down the development project. We slim it down in the sense that the Internet bank and the open part of the website will in *phase 1*, so to say, talk less to each other [than originally was the plan]. After discussing this with Mr. Marketing Manager and Mr. Technical Project Leader, we came to the agreement that priority no. 1 is to make the publishing process more effective. The second priority was, and it came as a rather distant second, but still as an appreciated feature, we *know* that the currency converter is something that one asks for on the website, and then we agreed that we would have the estimated amount of working hours [for developing the converter] so that we could tick them off today, and I don't feel that we have that estimation yet...

- Mr. Dir. Bus. Devel.: But, do you feel that you haven't done your job properly Mr. Project Leader? Is that what I am supposed to understand?
- Mr. Project Leader: No, I cannot make that estimation, unfortunately, that is clearly a task for the technicians and a role for the technicians to take on
- Mr. Dir. Bus. Devel.: When can we get this [the estimation of hours] confirmed?...why can't we get the amount of hours together? What is the problem?
- Mr. Project Leader: Yes...what is the opinion from Mr. Technical Project Leader on this? When do we know this, because from my point of view this feels very important (FTFO/TO 13.05.2005).

The discussion that followed centred on different application servers and their pros and cons. The currency converter or the estimation of hours it would take to develop it was never brought up during the meeting.

Finally, during an observation of a project team meeting the story of the currency converter and the potential use of the piece of customer information comes to an end:

- Mr. Technician: And the currency converter, we have decided that we will...?
- Mr. Project Leader: Is it a showstopper?
- Mr. Mr. Technician: No
- Mr. Project Leader: Not exactly, we must keep on thinking [for example]: Can we launch the pages without "become a customer"? No, we cannot launch the website without a possibility for the potential customer to contact us so, in other words, that is a showstopper [showstopper] or of high priority. Login to the Internet bank? Definitely a showstopper, i.e. high priority (FTFO 05.10.2005).

"Showstopper" is a term that frequently emerged in the development discussions during the fall when the *planned* launch⁵³ was approaching and the developers felt that time was running out. The meaning of the term is that only the most necessary parts of the website should be developed, that is, only the parts that "kept the show running." Hence if an aspect or a feature was considered by the developers to be a showstopper, it definitely needed to be included in the development or the new website would be a failure, or in other words, "the show would stop running." The dialogue reveals that the currency converter was not considered a "showstopper" and would therefore not be developed, at least not in phase one. Thus, the information about customers' wishes and wants of this feature was trapped due to time limits. Table26, summarises the almost used customer information.

⁵³ The launch was frequently planned to take place at one date but was then postponed to another; in February 2005 it was stated that the development process would take 6 months. In May 2005 the launch was postponed to September or beginning of October, 2005. By the end of May 2005, the launch was approximated to December 2005. Later, the launch was postponed to January 2006 and again later, it was decided that the launch would be internally launched on the 8th of February and on the market on the 22nd. The new website was finally launched internally on the 9th and externally on the 23rd of February 2006.

Table 27 Almost use of C.I in the development of content – the currency converter

ALMOST USE OF CUSTOMER INFORMATION		
MEANS of CI acquisition	<i>Infor</i>	In discussions with customers
	<i>Form</i>	Focus group interviews
TIME of CI acquisition	<i>Pot</i>	
	<i>Curr</i>	Within the time frame of the focal development process: February – May 2004
	<i>Pre</i>	Prior to the focal development process
SOURCE of CI	<i>Imp</i>	
	<i>Spec</i>	
	<i>Exp</i>	Customer indicated as the explicit source: "From the focus groups it became clear that a currency converter is truly an appreciated feature and is one of the reasons why one visits the website of a bank" "...People from the focus groups also suggested..." "...there have been some wishes, every now and then there have come some suggestions from customers..." "...we <i>know</i> that the currency converter is something that one asks for..."

CI: customer information. Source: Exp=explicit, Spec=speculation, Imp=implicit. Time: Pre=previously, Curr=currently, Pot=potentially. Means: Form=formally, Infor=informally

The customer information came explicitly from the customer. It was formally acquired from the customer within the time frame of the focal development as well as informally acquired from the customer prior to the process. Although the developers knew that the currency converter was positively perceived by customers and, additionally, that the developers really wanted to use this customer information, it still was not used, apparently due to lack of time.

The login

Most customers visit the website only to login to the Internet bank and are not interested in surfing around on the website:

Ms. PhD Student: You said that most customers go directly to the Internet bank and skip the rest of the bank's website, but how do you know that?

Mr. Project Leader: Well, we see the flow of visitors every day, per week and per hour [referring to the monitoring tool of the website] going to the Internet bank and we also see the small amount of visitors on the website [the open part] (DISC, 16.02.2006).

Similar information and how it should be used in the development was also formally acquired in the branch office survey (The branch office survey document, p. 11-12, 2005):

If you are a customer you do not read the website and, thus, you do not get the information available there. The login to the Internet bank should be exploited [by the bank] to inform our customers about our news etc. The login-page could be much flashier!" (Branch office Z)

The website needs to be more sales oriented. Today it's too passive, for example, when the customer is on his way to the Internet bank he does not get exposed to the offerings on [the open part of] the website (Branch office Y).

The customer should always have to go via the start page in order to login to the Internet bank. Today the customer does not see the news we produce, thus, if the customer would have to go via the start page [to login] he would find our news more easily (Branch office X).

The plan was to use the information about customer behaviour in the development in the sense that the login to the Internet bank would be positioned on the very first page of the website, that is, the start page. One reason for this was that the customer who is about to login to the Internet bank, should - if not getting exposed to all the information on the website - at least be exposed to the bank's news and ads on the particular page where he/she logged in to the Internet bank. The customer information appeared destined to be used for several months. However, due to an unexpected fraud phenomenon taking place within the financial service industry, the customer information was eventually *not* used. During a discussion with Mr. Project Leader, I asked why the original plan was changed:

Mr. Project Leader: Since the media is writing a lot about phishing⁵⁴ nowadays, we are convinced that the awareness of security among our customers has increased and since the start page is not a 100 percent secured page, we decided to not have the login box there. Just the fact that people can *start* to think that: "Maybe this is an insecure login?" or "Oh, the lock is not visible, that does not feel secure!" was enough for us to rethink the development and move the login box to a page of its own.

Ms. PhD Student: So it had to do with your concern about your image?

Mr. Project Leader: Yes, or both; the customers would feel insecure and also journalists that are watching us and it could easily be interpreted as if we do not possess the right technical competence and do not have a clue about these things and that would be really dangerous for us (DISC, 24.11.2005).

The discussion reveals that the original plan to position the login to the Internet bank was changed due to security reasons. The change was discussed several times and perceived as very unfortunate by the developers and the rest of the bank. Table 27 summarises the almost used information.

⁵⁴ The deceiver tries to get the customers' internet codes by posing as their bank asking for the codes in e-mails.

Table 28 Almost use of C.I in the development of structure – the login

ALMOST USE OF CUSTOMER INFORMATION		
MEANS of CI acquisition	<i>Inform</i>	
	<i>Form</i>	The branch office survey The website's monitoring tool
TIME of CI acquisition	<i>Pot</i>	
	<i>Curr</i>	Within the time frame of the focal development process: August, 2005 Customer behaviour registered and continuously recorded as soon as the visitor enters the bank's website
	<i>Pre</i>	Prior to the focal development process
SOURCE of CI	<i>Imp</i>	
	<i>Spec</i>	
	<i>Exp</i>	Customer indicated as the explicit source: "...we see the flow of visitors every day...going into the Internet bank and we also see the small amount of visitors on the website [the open part]".

CI: customer information. Source: Exp=explicit, Spec=speculation, Imp=implicit. Time: Pre=previously, Curr=currently, Pot=potentially. Means: Form=formally, Infor=informally

The information that was almost used in the development was explicit. The information was formally acquired from frontline personnel in branch offices and directly from customer behaviour on the website. The information was acquired during the process, but was also available before the start of it. The developers and the branch offices wanted the website to be developed according to the information about the customer and this was for a substantial amount of time also the plan. The reason was that the developers and the branches wanted the customer to be exposed to the bank's news, for example, promotion of financial products, and thus, potential sales. However, due to unexpected events in the environment the plan was changed and the information was not used. Similar to the event of the loan calculator (see xx), the above illustrates how unexpected as well as external factors can influence the use of customer information in the development process.

A4.2.3 Potential use

Two examples of the potential use of customer information are discussed below.

The considered survey

During my first face-to-face observation of a development meeting in March 2005, Mr. Project Leader states that customer information will be obtained through a survey and used during the development project. One stated reason to acquire and use customer information is that the customer can, then, be referred to when the rest of the organisation put forth their opinions on how the website should or should not be developed:

The website has always been an issue of much discussion and in this way when *they* start [referring to assumed reactions from colleagues at the bank] we can refer to the customer (Field note, 23.03.2005).

About three months later, in June, the potential customer information emerges again in the first meeting between Mr. Project Leader and the project board. Mr. Director of Business Development is sceptical towards the idea put forth by Mr. Project Leader to acquire customer information. Primarily three reasons for the scepticism are revealed. First, customer information had already been acquired in the current development project through focus group interviews and the results from them are viewed as not convincing. Second, customers are perceived as not being able to provide information on future developments because they have nothing to relate to, and third, a perceived risk that the information can be acquired from a “wrong” customer segment in the sense that this will not be representative to the bank’s customers. After several attempts of explaining Mr. Project Leader’s idea, in order to persuade Mr. Director of Business Development of the potential value of acquiring customer information, the decision to do so is left for the future:

- Mr. Project Leader: I would like to present an idea that popped up this spring during the first session that we had on the content; considering that we [the bank] have discussed a lot about asking customers and involve them and we know that a lot of feedback has come to the contact centre over the years, I have an idea that we’ll work out a segment that will receive a survey where they are invited to give feedback on previews [of the new website]. I could imagine a group of perhaps 25-30 people that would participate, i.e. they would put forth their comments, give feedback and we would have a continuous dialogue with them concerning the development of the website. I think it is rather easy to administrate that dialogue and I also think that we can receive really valuable input from them
- Mr. Dir. Bus. Devel: Just have to ask: haven’t focus groups about the website already been performed?
- Mr. Project Leader: Yes, they took place, from this spring counting, about one year ago and from those we did get some input
- Mr. Dir. Bus. Devel: The memory I have is that we received rather little [customer information] from them
- Mr. Project Leader: Yes, and I think that’s due to the nature of the focus group format, which means that what we did was to show the existing website and ask questions such as: *What do you think is missing?*, *What do you think should be included?* I mean that is really difficult to answer. It is much easier for them to put forth their comments and thinking if they first get to see a suggestion, like “this feels fun” and so on, since it is very much based on feelings. This suggestion should *not* be confused with the usability tests that Mr. Technician will make where people are invited to click on the pages once they are more completely developed
- Mr. Dir. Bus. Devel: Personally I think it is extremely difficult to get anything that way, because it is about future and people have difficulties to know what to refer to. The risk is that you only get a certain type of people to provide feedback and that that type is not significant for our customer segment. However, if you believe that this is the way you want to work so fine
- Mr. Tech. Proj Lead: But, in this case you would have suggestions ready, right? And pose questions like: *what do you think about this?* etc.
- Mr. Project Leader: Yes, that is the idea, but we would start out with a bigger group and ask *are you interested?* And then x number will say: *yes, I want to participate* and then, ok

- Mr. Dir. Bus. Devel: We avoided that [to acquire customer information] when we developed the new Internet bank, although we did discuss it then. The reasoning went; if you five or ten years ago in comparison to today, which then was the year of 2000, would ask people *if you had a telephone in your pocket, what functions should be included?* They would reply: *why on earth would I have a telephone in my pocket!?*
- Mr. Project Leader: Yes, I see your point, but in this case they are asked to express their thinking on the graphics and colours of the new website
- Mr. Dir. Bus. Devel: But I think you should discuss this with the rest of the project members and with the one who is responsible for that part [graphics and colours] and take it from there (TO, 30.06.2005).

About three months later, during a telephone observation of a weekly development review meeting, the potential customer information emerges. Mr. Technician gives a short presentation on the user tests that he intends to perform the following day, which reminds Mr. Project Leader of the potential customer information:

- Mr. Project Leader: Then we still have this idea about the survey where we would invite some people to participate and give their comments. I have not progressed any further with that thought, but somehow it feels like it is worth keeping alive. Does Mr. Technician have any thoughts on this survey?
- Mr. Technician: Actually, yesterday I saw how “the purple bank” is doing it, they are developing their Internet bank and the visitor gets this extra page and...
- Mr. Marketing Mgr.: Now?
- Mr. Technician: Yes, and the visitor gets to view this extra start page that “this is happening this fall”, but perhaps that is overkill
- Mr. Project Leader: But that concern their Internet bank [and not their open part of the website], right?
- Mr. Technician: Yes, that is a bigger thing, of course, and “the pink bank” has also done it in a similar way, but, of course, we don’t have the possibility to do any of that at all, I mean they must have surpassed the amount that our development project will cost
- Mr. Project Leader: Yes, the question is if we are going to do this or not [to send a survey as an invitation to people to participate and provide feedback]. I still like the idea, no question about that, but I suggest that Mr. Technician and I discuss this to see what is possible to do, and then we’ll, perhaps later, have to drop the idea (TO, 21.09.2005).

Based on Mr. Project Leader’s original idea (about six months ago), the potential customer information still existed. No progress had been made on the matter and it appeared, as Mr. Technician revealed, that limited financial resources might be one possible reason to not acquire the information.

One week later the potential use of potential customer information comes to an end. Mr. Project Leader goes through the action points that were divided among the developers during the last meeting:

- Mr. Project Leader: The survey has not been excluded; we are working on it or the thought is still there, we have not made it concrete yet, me and Mr. Technician, so I leave that point for now, I guess until next week. I think that we should put down an effort with Mr. Technician, and talk this through, do we need it? And if so, *when* should it be performed? So next week we will make a decision on whether we’ll perform it or not
- Mr. Technician: Yes

- Mr. Project Leader: [writing a note] “survey to be decided upon next week”
- Mr. Technician: Spontaneously I feel that we do not need it
- Mr. Project Leader: I am kind of also starting to
- Mr. Technician: Because everything indicates that people like the appearance, etc. and it is not possible to get out more from them than that [at this stage of the development, since the content is not interactive yet]
- Mr. Project Leader: No and we’d rather burn [“bränner”] that amount of time on your bigger usability tests, but let’s keep it in mind for awhile longer [“men vi kan suga på karamellen ännu ett tag”]
- Mr. Technician: I think that we can decide now
- Mr. Project Leader: Ok! Indeed, no survey and if anyone has anything against this please speak up now! Ok, good!
- Mr. Technician: Well, at least I feel that my calendar is getting really full
- Mr. Project Leader: I agree, yes! The issue has been cleared [“saken är biff”], no survey, decision taken, Perfect! This is great! (TO, 28.09.2005).

At least two reasons as to why the acquisition of customer information would not take place transpired in the discussion. First, Mr. Technician felt that no dramatic objections had been put forth towards the website. Second, he also felt that he was running out of time and Mr. Project leader agreed that the time would be better used on the bigger usability tests that Mr. Technician was suppose to perform once the interactivity of the website had been developed. Thus, the customer information was never acquired and the use of it, subsequently, stayed in a potential kind of mode. The potential customer information is summarised in Table 28.

Table 29 Potential use of potential C.I in the development – the considered survey

POTENTIAL USE OF CUSTOMER INFORMATION		
MEANS of CI acquisition	Inform	
	Form	Potential survey
TIME of CI acquisition	Pot	
	Curr	Potentially within the time frame of the focal development process:
	Pre	
SOURCE of CI	Imp	
	Spec	

	Exp	Customer indicated as the potential explicit source: “...we'll work out a segment that will receive a survey where they are invited to give feedback on previews [of the website]. I could imagine a group of perhaps 25-30 people that would participate, i.e. they would put forth their comments, give feedback and we would have a continuous dialogue with them concerning the development of the website. I think it is rather easy to administrate that dialogue and I also think that we can receive really valuable input from them.
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CI= customer information. Source: Exp=explicit, Spec=speculation, Imp=implicit. Time: Pre=previously, Curr=currently, Pot=potentially. Means: Form=formally, Infor=informally

The information was considered to be formally acquired directly from the explicit source of the customer and within the time frame of the focal development process, but the considerations and intentions were never realised.

One stated reason to acquire customer information was to use the customer as a reason to refer to when people outside the development team, still within the bank, would give their views on the development. Hence, to acquire and use customer information was a potential solution for managing the internal reactions. Reasons to *not* acquire the information were also identified. These were bad experience from focus group interviews regarding the usability of the information acquired, perceived risk of asking a non-representative segment, the perception that the customer is not able to provide information on future development, and lack of financial resources and time.

The bigger usability test

The bigger usability test illustrates yet another example of potential use of potential customer information. The usability test was called “bigger” because at an earlier stage in the development process a smaller usability test had been performed mainly for the reason to check the logic of the navigation. The plan was that once the development of the website would be more complete, a new test including a bigger number of users would take place. In the discussions on the intended usability test several interesting aspects were revealed.

In the meeting minutes from a development meeting the plan to acquire customer information in a bigger usability test was stated:

1. Review of action points: The decision was made to not proceed with the survey for the website. Instead Mr. Technician will burn his gunpowder [“krut”] on the bigger usability test in the end of October, beginning of November (Protocol 28.09.2005).

During an observation of a project board meeting, the potential customer information emerges:

- Mr. Dir. Bus. Devel: Will there be a customer test conducted?
- Mr. Project Leader: Yes, within two weeks Mr. Technician will first conduct a mini-test and then later in October he will conduct a bigger test and it will be with both customers and non-customers
- Mr. Dir. Bus. Devel: Because if the customer tests show that you need to reconsider [issues already developed] then you have to go back in time, rewind the development process
- Mr. Project Leader: Exactly, and when he conduct those tests in October he will have plenty of time to adjust the website in November [before the planned launch takes place in mid December]
- Mr. Dir. Bus. Devel: Perhaps I am being a bit silly now, but have you in the estimation of hours taken into account possible hours for making adjustments [i.e., for using customer information]?

Mr. Project Leader: Yes, but there mustn't be any big adjustments, what can be acknowledged and changed are labels, etc. and then, that is on my table and not Mr. Technician's (TO, 07.09.2005).

Apparently, Mr. Director of Business Development was concerned about the planned acquisition of customer information, especially if the information would suggest major changes in the development. The reason for his concern was that major changes would add additional hours to an already stretched limit of estimated working hours for the development project. This financial aspect of the development project was one of the responsibilities of the project board, thus, to be concerned was also part of his role as representative of the project board. Mr. Project Leader ensures that the information that would be acquired from the customers most likely would be in line with the development of the website and only information suggesting small changes would be used.

About one week later in an e-mail from Mr. Technician, sent to the rest of the development team, some ideas of how the planned bigger usability test would be conducted were revealed:

Hi!

Later, and based on input from the development team I would like to work out the details of the bigger usability test, preferably during a meeting especially arranged for this purpose. We could then decide on about 10-15 tasks that the users are suppose to perform and then we'll measure how well they performed the tasks (E-mail, 15.09.2005).

During a telephone observation, about one week later the potential customer information emerges again:

Mr. Technician: I am a bit worried that I won't manage the bigger test, because I realised that it takes a tremendous amount of time to prepare everything and if I would have five persons, that's one hour per person and then a whole day goes and most likely it will take several days for those tests

Mr. Project Leader: That will probably be the most well invested hours put down [on this project]

Mr. Technician: Yes, yes, absolutely, but still, I am just worried that I won't be able to manage because I have so much other stuff to do (TO, 28.09.2005).

At this point, the acquisition of customer information appeared to be far from being realised than ever. However, about one month later it appeared in a "to-do list," written by Mr. Technician, of tasks that he planned to perform:

...We should have user tests when approximately 70% - 90% of the website in Swedish has been completely developed. This will probable take two to three days for me, if I don't have to acquire the test persons it might take a half-day less (E-Mail 20.10.2005).

In mid December, the acquisition and use of customer information had still not taken place. During a reference group meeting the progress of the new website since the last meeting was reviewed:

Mr. Marketing Mgr: During the last time we met I said that we were going to conduct a bigger usability test, we still have not conducted any, but we're aiming at it in the beginning of January because then we will have more of the "real thing" to show, so we don't have to conduct the tests on the prototype (TO, 16.12.2005).

In addition to the lack of time, another reason for postponing the acquisition and potential use was the preference to show customers as completely developed a new

website as possible. This preference, in turn, was built on the idea that too much dummy content would result in the acquisition of irrelevant and non-usable customer information. About one month later, in a project board meeting, the potential customer information emerged again and also how much of the information that potentially could be used in the very last stages of development was revealed:

Mr. Project Leader: ...and the user test that we originally had planned for next week, but as we realised that that will be a bit too tight, our suggestion is that they will be conducted the week after that

Mr. Dir. Bus. Devel: What is the purpose of the user tests?

Mr. Project Leader: If you remember we had a few user tests at a rather early stage and received some guiding feedback then, this round of user tests is to check and also deepening the tests a bit, ask a bit more difficult questions, but still as concrete as: “*where do you find that and that content?*” to primarily check the perceived logic of the navigation

Mr. Dir. Bus. Devel: The reason why I ask is that what are the *consequences* of the tests?

Mr. Project Leader: ...well, if all the test users’ comments point in the same direction and especially if they have to do with the navigation; that something is perceived as non logical; has been positioned under the wrong heading or is named strangely, then we will make revisions [use the information]... it’s on *that* level, no bigger changes will take place

Mr. Dir. Bus. Devel: Ok, then go for it (FTFO/To, 12.01.2006).

In contrast to much of the literature in product and service development that suggests that customer information should be acquired in early stages in the development process, the developers in this project considered to acquire and use customer information at a very late stage in the process. However, the potential customer information would not be used unconditionally. Reservations were made that only if the majority of the test persons provided similar information, and only if this concerned smaller issues that would be easily changed, would the information be used.

One week later, the project board and Mr. Project Leader meet again and the potential use of potential customer information is again brought up:

Mr. Project Leader: ...and as I said the last time [we met] concerning changes? Yes, we can still perform minor changes [based on the potential customer information] if it concerns some text or if a link is unclear, but it is also much food for the journey [“färdkost”] for the marketing department to use in future phases of development [of the website]

Mr. Dir. Bus. Devel: Then it is extremely important to decide *who* will transfer that [customer information] if it is for future needs?

Mr. Project Leader: Yes, exactly. I see it as something rather logical, first we perform the tests and see what will come up, what results will there be? Will there be such aspects that we can take care of on the fly? Ok, and what should be put on the waiting list or what was unclear and needs to be taken care of, and then that needs to be recorded and delivered to the receiver of the new website [i.e. the marketing department] that “these pieces have been identified as unclear” or “here are some question marks”, but that [the use of such information] is outside this phase of the development project (TO 19.01.2006).

In addition to the repeated condition that only the customer information that would suggest small changes would be used in the development, another aspect can be noted. This suggests that potential customer information may not only be potentially used for the current development project, but also for future development projects as Mr.

Project Leader suggests that information that would result in bigger changes ought to be put on a “waiting list” and be used in future development of the website. Interestingly, since the information has not been acquired and the use of it cannot be postponed (or put on a “waiting list”), this means that the developers, in fact, are discussing a case of potentially *postponed* use of potential customer information.

Finally, during a telephone observation of a meeting between Mr. Project Leader and Mr. Marketing Manager, the potential use of potential customer information comes to an end:

- Mr. Project Leader: Something that is gnawing away on my never-ending list of bad consciousness [“gnager på min hela-tiden-dåligt-samvete-lista”] is the user test and the way I see it we have two alternatives, 1. to conduct a full scale user test [i.e., the bigger usability test] and then we need to take time away from Mr. Technician, because he needs to conduct it, 2. with less effort conduct a survey through e-mail that is sent to a number of people externally, which is far from the full scale test, but still we’ll receive a round of feedback from people outside the building
- Mr. Marketing Mgr: And why are we going to do it? Are we doing it because of doing it, or are we doing it to actually receive customer feedback in order to still make changes accordingly [i.e., to use customer information]?
- Mr. Project Leader: More the second, it is a small paradox, but the fact that we have received such positive feedback internally makes me a bit nervous, it cannot be that perfect
- Mr. Marketing Mgr: No, but I think it is perceived as perfect in comparison to the old one. First of all the structure and navigation have been improved a lot and it is more lively, but all in all, it is probably not at all that perfect, the perfection is in the comparison, thus, depending on *who* we ask
- Mr. Project Leader: Yes, I agree, because those internally compare it to the existing one [i.e., the old website], but if we send it to X number of people outside they will see it for what it is
- Mr. Marketing Mgr: And that would be really interesting because they might have a totally different view than we have (TO, 01.02.2006).

Although acknowledging the late state in the development process, Mr. Project Leader appeared uncomfortable without acquiring any information from external sources. Nevertheless, a bigger usability test was never performed and the information and use stayed both in a potential kind of mode. In Table 29 the example is summarised.

Table 30 Potential use of potential C.I in the development – the bigger usability test

POTENTIAL USE OF CUSTOMER INFORMATION		
MEANS of CI acquisition	Inform	
	Form	Potential usability test
TIME of CI acquisition	Pot	
	Curr	Potentially within the time frame of the focal development process: Late state

SOURCE of CI	Pre	
	Imp	
	Spec	
	Exp	Customer indicated as the potential explicit source: “We could then decide on about 10-15 tasks that the users are suppose to perform and then we’ll measure how well they performed the tasks” “...this round of user tests is to check and also deepening the tests a bit, ask a bit more difficult questions, but still as concrete as: “ <i>where do you find that and that content?</i> ” to primarily check the perceived logic of the navigation”

CI: customer information. Source: Exp=explicit, Spec=speculation, Imp=implicit. Time: Pre=previously, Curr=currently, Pot=potentially. Means: Form=formally, Infor=informally

As in the previous example, the customer information was only planned to be formally acquired from the explicit source of the customer within the time frame of the development process. Thus, both the acquisition as well as the use stayed in a potential mode.

A4.2.4 Immediate non-use

Four examples of the immediate non-use of customer information are discussed below.

The testimonials

On the old website small stories about customers’ experiences with the bank and its services were available. Customers produced these stories, and since they illustrated the customers’ positive perceptions, they were viewed as a good means that would strengthen the bank’s image and attract new customers. Among the developers, these stories were called *testimonials*. Here is one example:

06.05.2004 09:31:45

Your online bank system is splendid and especially the “foreign payments”-function is very clear and as easy as it can get. In particular I like the possibility to copy previous payments. This is really value for money.

The testimonials are customer information per se and have been used on the old website as content. On one of the first development meetings where the content of the new website was discussed, the developers all agreed that the idea of letting customers tell their stories about the bank would be used on the new website as well (FTFO, 21.06.2005). However, in the focus group interviews already conducted in spring 2004, customer information was formally acquired that was more negative towards the testimonials, at least in their current form:

The respondents stated that the published customer feedback is only positive in nature and is therefore meaningless and not trustworthy. “The bank may have made the stories up by themselves” (Focus group interviews, The pre study, attachment 5, p. 10, 2004).

Thus, the following was concluded:

Customers should be able to give feedback that is available for others to read on the website. The response by the bank should also be made available. Everything is not always positive in a relationship and it is therefore very important that issues that the bank needs to improve also are published on the site (The pre study, p. 24, 2004).

Nevertheless, all the testimonials on the new website are all very positive and no negative incident has to date been published. However, the customer information may be used in the future as Mr. Project Leader reveals in a discussion, “to also publish criticism by the customer is something that hopefully will be done in the future” (DISC, 24.11.2005). Table 30, summarises the example.

Table 31 Immediate non- use of C.I in the development of content – the testimonials

IMMEDIATE NON-USE OF CUSTOMER INFORMATION		
MEANS of CI acquisition	Inform	
	Form	Focus group interviews
TIME of CI acquisition	Pot	
	Curr	Within the time frame of the focal development process: February – May 2004
	Pre	
SOURCE of CI	Imp	
	Spec	
	Exp	Customer indicated as the explicit source: “The respondents stated that...” “The bank may have made the stories up by themselves”

CI: customer information. Source: Exp=explicit, Spec=speculation, Imp=implicit. Time: Pre=previously, Curr=currently, Pot=potentially. Means: Form=formally, Infor=informally

In the above example the explicit customer information was formally acquired directly from the customer within the time frame of the focal development. The reason that the developers did not use the information is difficult to trace. One plausible reason could be perceived insecurity about how testimonials about customers’ negative bank experiences would affect the bank’s image.

The credit cards

During an observation of customer usability tests of a prototype of the new website, the following customer information emerged:

Customer X: I believe that credit cards are so important that they deserve their own heading. I guess I would eventually find them where they are now below [the heading] “daily banking services”, but still it would be more logical if they had their own heading (FTFO, 22.09.2005).

One week later in a development meeting, the heading “daily banking services” emerged in the discussion. The developers were not satisfied with the heading and surfed on the Internet to check out how other banks have labelled the particular heading on credit cards, accounts and payments. After some time they concluded that it would be replaced by “cards and payments,” which was the same heading as another bank had chosen for this type of information (TO, 28.08.2005). Interestingly the

customer information that recently had been formally acquired in the usability test about the same issue was not brought up. Thus, in this case competitor information was used instead of customer information. However, both types of information coincided. This means that from the particular customer's perspective the bank appears customer-oriented although the change was not based on customer information. Below the example is briefly summarised.

Table 32 Immediate non- use of C.I in the development of structure – the credit cards

IMMEDIATE NON-USE OF CUSTOMER INFORMATION		
MEANS of CI acquisition	Inform	
	Form	Usability tests
TIME of CI acquisition	Pot	
	Curr	Within the time frame of the focal development process: 22.09.2009
	Pre	
SOURCE of CI	Imp	
	Spec	
	Exp	Customer is indicated as the explicit source: "I believe..."

CI: customer information. Source: Exp=explicit, Spec=speculation, Imp=implicit. Time: Pre=previously, Curr=currently, Pot=potentially. Means: Form=formally, Infor=informally

The explicit customer information that had been formally acquired was neglected and not used. In comparison to the previous example on testimonials (A4.2.4), the information was in this case acquired very close to when the issue it concerned was developed. The amount of time that had elapsed between acquisition of the information and its non-use was short (about a week). However, this did not seem to make a difference since the information still was not used.

The bookmark

Information about customer behaviour emerged in a development discussion among Mr. Project Leader, Mr. Director of Business Development and Mr. Technical Project Leader. The discussion concerned the website's underlying technology of bookmarks (a bookmark is a saved link or an address to a particular part of a website). The frequent behaviour of customers to bookmark the first page of the Internet bank needed to be taken into account in the development:

Mr. Dir. Bus. Devel: Today one can bookmark *the Internet bank*, right?

Mr. Project Leader: Yes

Mr. Dir. Bus. Devel.: Can't one do that anymore after the development?

- Mr. Project Leader: Yes, you will be able to bookmark the login page of the Internet bank in the same way as you do today
- Mr. Dir. Bus. Devel.: Ok, but the bookmark [saved address link] that the customer has today for the login page, will that still be valid for the new login page?
- Mr. Tech. Proj. Lead: The suggestion here [from the technicians] is that a redirect page will pop up for the customer saying: “update you bookmark”, and here the question is for how long this redirect page should exist because it cannot exist forever, one, three or six months?
- Mr. Dir. Bus. Devel.: Spontaneously this does not feel good and it feels more difficult than I thought it would, just have to ask: why can’t we keep the old bookmark?
- Mr. Tech. Proj. Lead: Well, the way that I have got this explained to me, it’s because of technical reasons that they [the bookmarks] have to be named differently
- Mr. Dir. Bus. Devel.: ...Ok, but this is really to make it troublesome for the customers! We’ll make the customers feel insecure and this may result in that they do not dare to login, or they have to call the bank and check first, and really this is to make it troublesome for the customers, especially considering that we earlier have explicitly encouraged them to bookmark that page...do you know how many customers that have their [login page] bookmarked?
- Mr. Tech. Proj. Lead: Probably quite a large amount
- Mr. Dir. Bus. Devel.: Then we must find a solution to this because it isn’t quite right to tell 80 % of our customers that they are wrong [their behaviour of bookmarking the login page]
- Mr. Project Leader: But if they use the old bookmark and we have a redirect that is connected to the new login page, i.e., the bookmark is old but one is still rather painlessly transferred to the new login page, isn’t that...?
- Mr. Tech. Proj. Lead: Yes, they do not have to type anything and they will automatically be transferred, but the thing is that they have to, once they are at the *new* login page, bookmark *that* one, because we cannot keep the redirect-page there forever
- Mr. Dir. Bus. Devel.: Honestly, I do not think this is a good solution...and I think you better look into this more carefully, because the whole idea with the Internet bank, which also, of course, should be reflected on its login page, is to make life easier for the customer, never *more difficult* and the one I am thinking of now is Sven Svensson’s [a colleague’s] dad, 81 years old, who’s using our Internet bank and is happy and satisfied with the way it works today and Sven has bookmarked the login page for his dad, and I can imagine that to him [the dad] this new solution together with the expected behaviour [of bookmarking the new page] will not be a natural thing for him to do. And we have many [customers] like Sven Svensson’s dad and *those* are the ones that we have to consider here, because we have got this group to use the Internet bank, and they have big confidence in us, which we need to keep, so please Mr. Project Leader and Mr. Technical Project Leader put some effort in on this and consider how this bookmark issue could be solved and try to keep Sven Svensson’s dad in you thoughts while working on it (FTFO/TO 12.01.2006).

This example ended with the “redirect solution” that had been worked out by the technicians. The idea that customers possibly will perceive the development of the bookmark as problematic appears as speculations. Whether or not this customer information is correct is of less relevance. The customer information that was created in discussion was not used. Table 32 summarises the customer information in the example.

Table 33 Immediate non- use of C.I in the development of structure – the bookmark

<i>IMMEDIATE NON-USE OF CUSTOMER INFORMATION</i>		
<i>MEANS of CI acquisition</i>	<i>Inform</i>	Created in discussion
	<i>Form</i>	
<i>TIME of CI acquisition</i>	<i>Pot</i>	
	<i>Curr</i>	Within the time frame of the focal development process, about 1 month before launch: 12.01.2006
	<i>Pre</i>	
<i>SOURCE of CI</i>	<i>Imp</i>	
	<i>Spec</i>	The developer through speculation: “but this is really to make it troublesome for the customers! We'll make the customers feel insecure and this may result in that they do not dare to login, or they have to call the bank and check first...” “...the one I am thinking of now is Sven Svensson's [a colleague's] dad, 81 years old, who's using our Internet bank and is happy and satisfied with the way it works today and Sven has bookmarked the login page for his dad, and I can imagine that to him [the dad] this new solution together with the expected behaviour [of bookmarking the new page] will not be a natural thing for him to do.”
	<i>Exp</i>	

CI: customer information. Source: Exp=explicit, Spec=speculation, Imp=implicit. Time: Pre=previously, Curr=currently, Pot=potentially. Means: Form=formally, Infor=informally

The above illustrated an example of immediate non-use of customer information that was informally generated during a development meeting. In comparison to the previously described examples of speculative customer information, the information was not used in the development. Although Mr. Director of Business Development wanted it to be used, it was not. The reason appeared to be technical limitations.

Google

Customer information on functionality emerged during a telephone observation of a meeting between Mr. Marketing Manager, (representing the core development team) and the reference group (representing the rest of the organisation). Mr Marketing Manager informs the reference group that usability tests with customers had been performed mainly for the purpose of testing the perceived logic of the navigation of the website:

Mrs. Sales Director: Yes, speaking about navigation or the ability to find things on our website. I just had lunch with Mr. Investment Advisor and he claimed that many users use Google, but if the customer type for example “funds” in the search box, we [the bank] do not appear as one of the option on the list of search results at all

Mr. Marketing Mgr: Yes, this has to do with the search engine position and we are not good on that, we have keywords for search but we do not position ourselves in an optimal way and that has to do with the technical solution we have...

Mrs. Sales Director: But will you take this into consideration *now* when developing the new website?

Mr. Marketing Mgr: This is one of those aspects that has been recognised as something that we are not so good at and it is really good that it is mentioned here because this does not only concern Google but other search engines as well, so the user test that has been done so far concerned the navigation to check whether we are on the right track so to speak, when the website has been developed a bit further we will have more tests (TO 13.10.2005).

The information about customers' "Google - behaviour" on the Internet and that the bank today is not represented among the "hits" when customers search for financial services was observed. Mrs. Sales Director and, as she mentions, Mr. Investment Advisor would like the website to be developed in a way that corresponds to this general customer behaviour. Thus, a request was made from sales that information about customer behaviour should be used in the development. Mr. Marketing Manager, who represented the developers, acknowledged the information, but did not promise to remedy the problem.

About one week later, Mr. Marketing Manager goes through the main points that had come up during the reference group meeting for the core development team:

Mr. Marketing Mgr: Mrs. Sales Director mentioned the search engine problems that we have, for example if one search for "funds" the bank does not, for obvious reasons, appear on the result list (TO 19.10.2005).

The "obvious reasons" behind the problem of not appearing on search engines' result list was not questioned by any of the participants at the meeting. Rather, it seemed as if they were aware of this problem and that the information was nothing new. The issue was not further discussed and the information on customer behaviour was not used in the development. The non-used information is summarised in Table 33.

Table 34 Immediate non- use of C.I in the development of structure – the google

IMMEDIATE NON-USE OF CUSTOMER INFORMATION		
MEANS of CI acquisition	Inform	Through experience Received in a development meeting
	Form	
TIME of CI acquisition	Pot	
	Curr	Within the time frame of the focal development process 13.10.2005
	Pre	Prior to the focal development process
SOURCE of CI	Imp	Generally known, no particular source: "yes, this has to do with the search engine position and we are not good on that..." "this is one of those aspects that has been recognised as something that we are not so good at..." "the search engine problems that we have, for example if one search for "funds" the bank does not, for obvious reasons, appear on the result list"

	<i>Spec</i>	
	<i>Exp</i>	

CI: customer information. Source: Exp=explicit, Spec=speculation, Imp=implicit. Time: Pre=previously, Curr=currently, Pot=potentially. Means: Form=formally, Infor=informally

The customer information was currently received during a meeting with the reference group. The information was already known among the developers and was therefore categorised as also previously acquired. That people use Google is generally known and appeared as implicit information. One plausible reason that the information was not used is that it is rather costly for companies to appear at the top of Google's search results list.

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