AKI AHONEN

From Complex to Simple

Designing a Customer-Friendly Electronic Insurance Servicescape

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ACADEMIC DISSERTATION
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Tel. +358 3 3551 6055
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To Elina

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If someone would have said to me five years ago, after completing my Master's thesis, that the next five years I will be working at the university as a researcher and eventually defend my dissertation, I would have told him to go and talk to the Santa Claus. Well, I became a researcher and now I am writing the acknowledgements of my dissertation and preparing myself for the defense... you never know.

My journey towards a finished dissertation was very interesting and versatile containing work as a project manager, international conferences, writing of articles and other publications, lecturing, and much, much more. Working as a project manager in two eInsurance projects provided an excellent viewpoint on both service research and practical business within insurance field. In such a stimulating environment I had a great opportunity to employ my dissertation as well.

Along my journey I have been honored to work with an extensive network of professors, other academic colleagues as well as representatives of the business sector. Now it is time to express my sincere gratitude to the people and parties who have, one way or another, played a crucial role in my dissertation project.

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Now it is time for new adventures... you never know.

Tampere, November 2007

Aki Ahonen

ABSTRACT

The most fundamental purpose of this research is to develop a customer-friendly approach on designing electronic servicescape in the context of complex-natured services, such as insurance. In this regard, the main research question considers how a customer-friendly electronic insurance servicescape can be constructed. Further, two sub-research questions are set in order to be able to provide an answer to the main research question. The first sub-research question explores the structure of the electronic insurance servicescape, and the second sub-research question explores the characteristics indicating appealing insurance service experiences. A multidisciplinary approach indicating the managing of electronic services and embracing both service management and information systems (IS) research disciplines is followed in this study.

One of the most fundamental premises for the study refers to a notion that while customers are evaluating the content of a service, they are actually often evaluating the (physical) facilities of a service provider. Thus, the design of a service environment plays a crucial role in determining the service experience from customers' point of view. In this study the above described phenomenon is examined in electronic service context by suggesting that characteristics determining appealing service experiences are referring to Web site usability as well as customers' technology acceptance.

From methodological point of view, this study combines abductive logic and design research paradigm. This approach is found feasible since the study, in addition to academic ambitions, possesses a clear practical orientation on contributing to the development of electronic insurance services as well as electronic service environment. The study embraces mainly a qualitative approach. In this regard, focus group interviews are used as a method for collecting the primary empirical data. Further, Grounded Theory (GT) coding procedure is followed for analyzing the collected data.

The findings of this study indicate what kinds of elements constitute the electronic service environment in the context of complex services, such as insurance. In addition, characteristics on indicating appealing electronic insurance service experiences are identified. By integrating these findings a theoretical model for designing a customer-friendly electronic insurance servicescape is suggested. In general terms, the findings of the study argue a novel, more lively, visual, and enjoyable approach on designing electronic insurance services and the overall service environment to make them more customer-friendly. However, this does not have to mean that the trustworthy nature of insurance would suffer.

KEY WORDS: SERVICESCAPE, SERVICE DESIGN, ELECTRONIC SERVICES, INSURANCE, CUSTOMER-FRIENDLINESS

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1 INTRODUCTION

1.1 Describing the background of the study

The commercial utilization of the Internet began in the early 1990s. In the beginning the Web was considered as a sort of information channel, or "exhibition wall", in which every company should be present. In the next phase trading of goods was shifted into the electronic environment. This phenomenon was called *electronic commerce* – or *e-Commerce*. In addition to its role as an information channel, and an environment for trade, a search for Internet's new possibilities occurred after the millennium and the so called "hype" era of the Internet was over. Along with this development functional and more comprehensive business models and service concepts started to emerge on the Web (the era of e-Business and/or e-Services), of which many, such as *Amazon.com*, have been successful ever since.

Financial services, such as banking, insurance and investment services appeared on the Internet already at a particularly early phase. In Finland the first insurance companies opened their Web sites in 1996. Back then online buying was not yet possible but the main focus was on offering information as was the common tendency no matter what field of business was in question.

In comparison to many other services, offering insurance services as well as other financial services in electronic environment is more challenging. One of the most fundamental factors for this is related to the characteristics of the service. Financial services are generally defined as *complex services* characterized by abstract and complex nature and the fact that customers often might need assistance and expertise by the service personnel in order to make decisions, such as purchasing (Vroomen, Donkers, Verhoef, and Franses 2005). Their insight is supported by the earlier research on electronic insurance services (see e.g. Järvinen, Eriksson, Saastamoinen, and Lystimäki 2001). Therefore, operating with insurance in electronic environment, such as the Internet, might easily have been experienced as confusing by the customers who were used to dealing with an insurance service officer.

Despite these challenges, the Internet has, at least partially, been accepted as a service channel through which the simplest insurance matters, such as search for information, can be managed. The more complicated issues are still rather managed through the more

traditional service channels (e.g. visiting the office). Nevertheless, the attitudes of both private (i.e. consumers) and corporate customers towards electronic insurance services have become more positive (e.g. Ahonen and Salonen 2005).

Due to the conservative, serious, and matter-of-fact nature of insurance business in general, also the development of electronic insurance services has proceeded slower than in many other service fields. Thus, new fresher ideas for designing and developing electronic services and service environment have been somewhat discouraged by the long and traditional business practices, which are reflected by the kind of characteristics mentioned above.

In my study I take a different approach by raising a question: does it have to be like this? How about instead aiming at creating a picture which communicates to the customers that insurance matters do not necessarily have to be complex and unattractive? At least Finnish insurance companies have already utilized, for instance, entertaining attributes in their marketing activities. Why not approach the development of the electronic service environment from a new perspective? In fact, this thematic plays the main role in my dissertation.

1.2 The purpose of the study

Complex services, such as insurance, are more difficult for a customer to comprehend than, for example, getting a haircut. Further, electronic service environment brings its own additional challenges to the picture. For instance, in order to be able to use electronic services, customers are required certain pre-absorbed skills, such as ability to use a computer and the Internet. Regarding this, complex and confusing electronic service environment makes the actual service (e.g. insurance) even more complicated. Hence, in order to get customers engaged in operating with electronic services, it is of utmost importance for service providers to pay attention to the customer-friendliness of the service environment design. By this I mean that customers' insights are investigated and included in the design and development work of electronic insurance service environment.

From the scientific perspective this study generally refers to the service management discipline, in which service design is of a particular interest to the study. As Verma, Fitzsimmons, Heineke, and Davis (2002) state as the editors of the special issues of *Journal of Operations Management* service design is an extensively examined field of service research in general. However, *less attention is paid on investigating the design of service environment although it is suggested as a crucial element from the customers' point of view* (see e.g. Bitner 1992; Fitzsimmons and Fitzsimmons 1994; Fitzsimmons and Fitzsimmons 2006). In this

regard, Bitner (1992) has introduced "servicescape" to describe the determinants of physical service environment.

Furthermore, earlier research on designing service environment reveals that when customers are observing and/or evaluating the content of a service they often might pay their main attention to observing and evaluating the physical facilities of a service provider instead of the actual service (Turley and Fugate 1992). Thus, *it is justified to pay attention to investigating the design of service environment* in general.

Concerning an electronic service environment, such as the Internet, physical facilities cannot be observed and/or evaluated in the same way since they do not exist. Prior literature on information systems (IS), especially within the field of Web site usability has focused on identifying the essential features mainly affecting the effectiveness and efficiency of information systems (also including Web environment) through quantitative measurement (e.g. Nielsen 2000; Henneman 1999). Sharing a similar approach, distinct determinants for quality of electronic services have been found within the service research context (e.g. Parasuraman, Zeithaml, and Matlhotra 2005, Heinonen 2006; Fassnacht and Koese 2006). However, *less attention is paid to examining the overall electronic environment as an entity*.

In this study a multidisciplinary approach is chosen by combining the service management approach and IS research approach. These two streams of research are integrated as an entity reflecting the *managing of electronic services* (Figure 1).

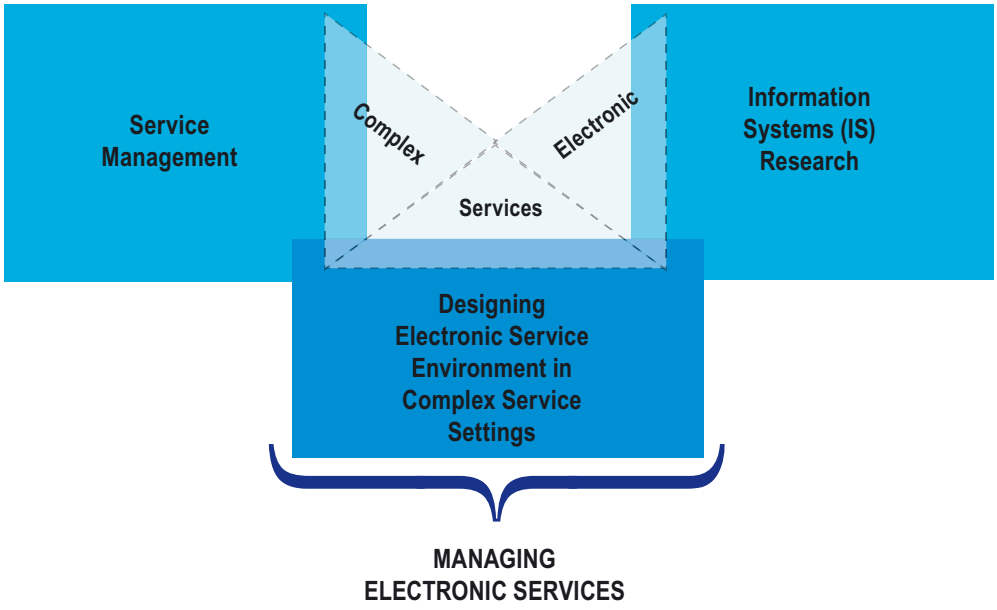

Figure 1. The focus of the study

As a starting point for this study it is suggested that since no "physical elements" (e.g. service personnel or other facilities) are available the "non-physical" elements that customers are observing and evaluating actually appear on the computer screen. This study suggests that the elements, which constitute the scene on the screen, are referring to usability-related attributes, to some extent, but in this study the approach is employed according to the service perspective.

In this regard, the insights suggested by earlier studies on servicescape (e.g. Bitner 1990; 1992) indicating the determinants of physical service environment, and self-service technologies (SSTs) discussing the nature of electronic service devices and/or channels based on self-service logic (e.g. Meuter, Ostrom, Roundtree, and Bitner 2000; Bitner, Ostrom, and Meuter 2002) are applied. Referring to the work of Turley and Fugate (1992), the above mentioned usability-related elements adjusted to service approach represent a tangible although "non-physical evidence" of the existence of a service for the customers in the electronic service environment.

The main objective of this study is to conceptualize and model the design of a customer-friendly electronic service environment for complex services, such as insurance. The main research question of the study is:

> *How can a customer-friendly electronic servicescape be theoretically constructed in complex service settings, such as insurance?*

In order to be able to provide an answer to the above presented question, the problem is approached by considering insurance services as an example of complex service. Thus, two sub-research questions are set for the study. These are:

1. *How can a structure of electronic servicescape be modeled in insurance service context?*
2. *What kinds of appealing service experiences reflect electronic insurance servicescape from customers' point of view?*

In the study a managerial ("service designer's") perspective is taken. However, the empirical research conducted during the study focuses on investigating the insights of the customers (consumers) into the electronic services and electronic service environment. Therefore a concept *customer-friendly* is expressed in the main research question indicating the orientation of this study. After all, customers are the ones to whom the designed electronic services and electronic service environment are targeted. As "customer-friendly" is an extensive concept, it is not even attempted to cover all the aspects of "customer-friendliness" throughout this study. Instead, *the study provides an approach to what "customer-friendliness" could mean in the context of complex electronic services, such as insurance*.

In order to characterize the electronic service environment it is essential to identify and conceptualize the crucial dimensions of it. The first sub-research question pays attention to this issue. From the conceptual point of view servicescape refers to the model introduced by Mary Jo Bitner (1992) to describe the determinants of physical service environment. In this study the concept and the model are refined and used as a guideline for *depicting the structure of electronic insurance servicescape*. This topic is especially discussed in chapters 3, 4, and 7.

However, modeling the structure of the electronic servicescape does not tell much about how appealing the customers perceive the electronic servicescape to be. Through the second sub-research question customer-friendliness approach is incorporated in the scope of the study by examining *the characteristics indicating the creation of appealing electronic insurance service experiences*. Customer-friendliness approach is elaborated especially in chapters 5, and 8.

After answering to the sub-research questions the results are integrated, and thereby, the main research question answered. In this regard, *a theoretical model for designing a customer-friendly electronic insurance servicescape* is constructed.

1.3 Limitations of the study

Concerning the limitations of the study, the main focus is on service types referred to as *complex services*. Complex services are investigated in *insurance* context. Further, since non-life insurance services can be considered as the most advanced, as well as the most used, electronic insurance services, the research is limited to investigating *non-life insurance services*. Other lines of insurance, such as life and health insurance, are excluded from the study.

The above described insurance services are examined in *electronic environment*. However, in this study the electronic service environment refers to the *Internet* (i.e. *the Web*) only since electronic insurance services are not widely offered through the other electronic service channels, such as mobile environment, and/or digital TV. Therefore, the other electronic channels are excluded from the study.

From customer point of view, *consumers* are selected as target customers of the study since business-to-business (B2B) customers are more versatile in terms of their customer characteristics (e.g. field of business, size of a company, area of operations), which might cause their service needs to be more individual requiring personalized service. To my experience, most often used electronic insurance services within the B2B context refer to seasonal reporting about the business activities of a company from the insurance policy

point of view or claims reporting. Due to the versatile customer characteristics and service needs, other types of services, such as making oneself familiar with insurance by searching information or purchasing are mainly dealt in interaction with a physical service representative of insurance service provider. However, consumers' electronic service operations cover a more extensive variety of services, and since the main focus of this study is on investigating electronic, self-service natured services, consumers are preferred as a target customer segment.

Taking the service design perspective, since (structural) composition of the service environment is of a particular interest, this study possesses lenses of *service facility design*. In this regard, discussion on "servicescape" (e.g. Bitner 1992) plays a crucial role. Thus, other approaches on service design are excluded from this study as discussed in more detail in chapter 3.2.3. For the same reason, less attention is paid to other approaches on evaluating electronic services, such as service quality within the service research context and information quality within IS research context. However, the essential characteristics of both discussions are reflected to the approach of this study to some extent.

Where electronic services are concerned, this study includes discussion on usability, too. In this regard, prior literature referring to *Web site usability* research is discussed in this study. Further, *attributes that can be perceived as applicable for insurance context, are considered* and employed while other attributes are excluded from the scope of this study. This issue is discussed more thoroughly in chapter 4.2.

Finally, electronic service environment can be understood in different ways. For instance, Heinonen (2004a; 2006) includes spatial dimension (physical surroundings) in the electronic service environment. This study takes a different perspective since electronic service environment incorporates the scene on the computer screen. From conceptual point of view, *the electronic servicescape is referred to as virtual (i.e. electronic) service environment* from which the physical attributes, such as spatial dimension, are excluded. In this regard, *electronic servicescape and electronic service environment are discussed in parallel throughout the study*.

1.4 Research structure

As the structure of the study is comprehensively discussed in chapter 2.3, I shall only present a short overview on the focal topics discussed throughout the study. However, already in the beginning it is essential to note that the structure of this study can be considered as somewhat deviant from the logic traditionally discussed in methodology literature (e.g. Rudestam and Newton 1992; Glatthorn 1998). By this I am referring to the structure,

which contains introduction, theoretical discussion, methodology, empirical research and results, and conclusion. This issue is discussed more thoroughly above and in chapter 2.3.

From methodological perspective the *abductive* logic is followed by indicating the continuous theoretical and empirical dialogue throughout the study (see e.g. Alvesson and Sköldberg 1994; Kovács and Spens 2005). In addition, principles of design science paradigm (*design research methodology*) are followed to describe the research process throughout the study (see e.g. March and Smith 1995; Vaishnavi and Kuechler 2004; Arnott 2006). By combining these two approaches the study is structured in a certain way. This is shortly explained in the following paragraphs.

First, the essential methodological framework as well as the more-detailed structure for the study is introduced in chapter 2. The essential prior theories and earlier literature on services and service design are discussed in chapter 3. In addition, a conceptual refinement of essential constructs for the study is performed.

In chapter 4 the theoretical discussion is shifted to the electronic environment, and complemented with the Information Systems (IS) approach. In addition, empirical preliminary research on the usability of electronic insurance services is discussed. On the basis of the preliminary usability research, "traditional versus novel typology" on designing electronic insurance service environment is introduced. Finally, a preliminary framework for electronic insurance servicescape, is proposed in the end of chapter 4.

The fifth chapter continues with complementing the theoretical discussion onwards by considering the design of electronic (insurance) service environment from the customer-friendliness viewpoint. In this regard, discussion on service experiences from service management perspective and technology acceptance of customers from IS point of view are referred and combined. From empirical point of view, an electronic insurance service concept called "insurance cover evaluator", is introduced. By combining the discussion on prior theories with empirical evidence referring to "traditional versus novel typology" and "insurance cover evaluator", a preliminary framework (i.e. artifact) for designing a customer-friendly electronic insurance servicescape environment is suggested in the end of chapter 5.

The principles for evaluating the suggested framework through empirical research are introduced and discussed in chapter 6. Focus group interviews are utilized as a method for collecting the empirical data. Further, the principles of Grounded Theory (GT) coding procedure (e.g. Strauss and Corbin 1990) are followed as a fundamental logic of data analysis process.

The most crucial results of the empirical research are introduced and discussed in chapters 7 and 8. In addition, the development of new theory is depicted. The structure of electronic insurance servicescape is introduced and elaborated in chapter 7. The char-

acteristics indicating the creation of appealing electronic insurance service experiences are discussed in chapter 8. In addition, a theoretical model for designing a customer-friendly electronic insurance servicescape is introduced and discussed in the end of chapter 8. Finally, the study is assessed and research implications discussed through concluding remarks in chapter 9.

2 COMBINING ABDUCTION AND DESIGN SCIENCE IN SERVICE RESEARCH

In this chapter the methodological framework of the study is introduced and discussed. According to the earlier literature on research methodology (e.g. Rudestam and Newton 1992; Glatthorn 1998), the structure of a research report often follows the logic: *introduction, theory, methodology, empirical research and results, discussion and/or conclusion*. My study differs from this formula since the methodological choices made are basically forming a framework, which carries my study as a whole from its very beginning to the end.

From methodological point of view I am combining a research logic referred to as *abduction* or *abductive logic* with a research methodology called as *design science* or *design research*. Both concepts are discussed in more detail in the following sub-chapters. On the basis of these discussions a framework depicting methodological orientation of the study as well as its structure is constructed and introduced in chapter 2.3.

For the sake of clarity it is essential to make a distinction between two concepts before moving on: research approach and research process. Following the insights presented by Kovács and Spens (2005, 133) *research approach* refers to the way of conscious scientific reasoning while *research process* refers to the description of sequential and systematic steps conducted to follow the principles and essential logic of a chosen research approach. In this research the *abductive logic* is referred to as a *research approach*. *Design science* methodology, in turn, is discussed from the perspective of describing the *research process*. In the following sub-chapters abductive logic and design science methodology are discussed in more detail.

2.1 Abductive logic as a research approach

Scientific research especially within the fields of social sciences as well as business studies (e.g. marketing, management, organizations) has been traditionally conducted by following either *deductive* or *inductive* logic. *Deductive* approach moves from general laws and

theories to a specific case (Richardson and Kramer 2006, 499). On the contrary, *inductive* approach suggests and generates new constructs, theoretical models, and theories derived through a single case to be generalized (Andreewsky and Bourcier 2000, 838).

On the other hand, deductive approach is criticized for relying too strongly on already existing theories and testing them but not creating new theories (e.g. Arlbjørn and Halldórsson 2002). Inductive approach, oppositely leaning on empirical (field) work, can be criticized since it, especially its pure forms such as Grounded Theory approach (see e.g. Glaser and Strauss 1967; Strauss and Corbin 1990), is somewhat ignoring the existing theories while generating new theories. Moreover, earlier literature on research methodologies argues that most great advances are neither generated by following pure deductive nor pure inductive logic (e.g. Kirkeby 1994; Taylor, Fisher, and Dufresne 2002).

In this regard, a third research approach combining the principles of the deductive and inductive approaches called as *abductive*[1] approach has been suggested (see e.g. Kirkeby 1994; Alvesson and Sköldberg 1994; Holmlund 1997; Järvelin 2001; Heinonen 2004b; Antikainen 2007). Following the definitions presented, the abductive approach aims at developing new knowledge by considering earlier research and theories as a backbone for research but formulating the research framework along with investigating empirical phenomena as the research goes forward (e.g. Danermark 2001; Kovács and Spens 2005). Dubois and Gadde (2002, 554–555) have suggested *systematic combining* approach to be utilized especially in the context of case studies. However, as they are also noting themselves, systematic combining approach basically means the same as abductive logic.

Comparison of the progress of the research processes between the deductive, inductive, and abductive research approaches reveals the essential differences in their nature. A framework for investigating the abductive approach introduced by Kovács and Spens (2005, 139) illustrates the essential nature and progression of the abductive research process (Figure 2). Whereas the deductive approach starts with scanning theories established through earlier literature the inductive approach moves directly into observing empirical phenomena by necessarily not having any knowledge about the earlier literature (e.g. Kirkeby 1994; Andreewsky and Bourcier 2000).

In this sense, the abductive logic can be considered to be more referring to the logic of the inductive approach since it is suggested that the research conducted according to the abductive logic starts with a "real-life observation" (Alvesson and Sköldberg 1994, 45). However, an analytical framework for empirical observation is often based on prior theoretical knowledge discovered through earlier literature, and thereby, empirical phenomena are usually not approached without any knowledge and preconceptions on prior theories

[1] Term *abduction* is first established in the scientific context by American philosopher Charles Sanders Peirce in 1890s. Recent studies often perceive the work by Peirce as the originator for the development of abductive approach (e.g. Kirkeby 1994; Dubois and Gadde 2002; Kovács and Spens 2005)

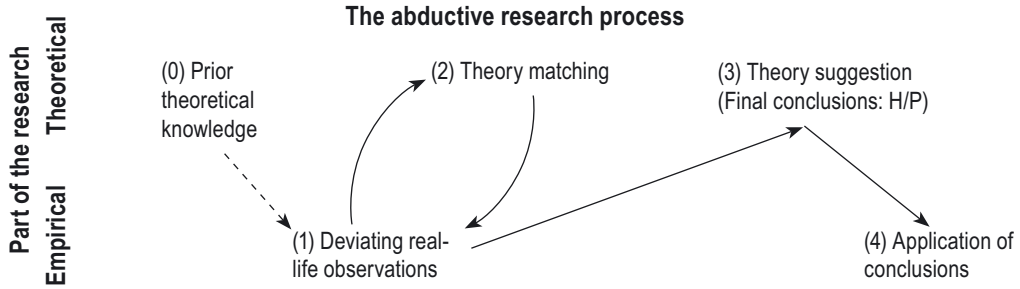

Figure 2. The abductive research process (Kovács and Spens 2005, 139)

(Kovács and Spens 2005, 139). This insight is also supported by Dubois and Gadde (2002, 558). In their article on 'systematic combining' they are referring to the work of Miles and Huberman (1994) who distinguish between two types of analytical frameworks: *tight and pre-structured and loose and emergent*. The *former* framework indicates the *deductive* approach by emphasizing tight linkage to the existing theories whereas the *latter* framework refers to the *inductive* approach. However, Dubois and Gadde (2002, 558) argue that neither of the above presented analytical frameworks is suitable for the abductive approach as such. Rather, they suggest a *tight and evolving* framework which, on one hand, emphasizes the researchers' relationship between prior theories (tight), and on the other hand, the evolving nature of the framework on the basis of empirical observations over time (evolving). "Tight and evolving" type analytical framework is found approriate for the purposes of this study.

After reviewing earlier theories deductive approach moves on to draw theoretical conclusions in a form of research hypotheses and/or research propositions to be (usually quantitatively) tested in empirical setting. Finally, hypotheses and/or propositions testing the existing theories are either accepted or rejected, and thereby, earlier theories refined or confirmed (see e.g. Dubois and Gadde 2002, 559; Kovács and Spens 2005, 137). Concerning inductive approach, after entering into the empirical field the data is collected usually through qualitative methods (e.g. interviews), and on the basis of the empirical field work constructs, models, and theories are generated. Grounded theory approach originally developed by Glaser and Strauss (1967) can be considered as an example of pure inductive approach on conducting research.

Abductive approach moves on by considering which parts of the prior theories are matching to the empirical observations (i.e. reality), and which are not. This process is defined as *theory matching* (e.g. Dubois and Gadde 2002, 556; Kovács and Spens 2005, 139). Following the insights of Kirkeby (1994, 147), the construction of theoretical framework

complemented by the empirical observations continues throughout the research process and ends up at suggesting new theories and/or theoretical constructs *which is also peculiar to this study*. Theoretical suggestions might be made in a form of hypotheses or propositions, which are then applied to an empirical setting (Alvesson and Sköldberg 1994; Andreewsky and Bourcier 2000).

Abductive approach is suggested to offer a greater extent of creativity or intuition in research than deductive and inductive approaches (e.g. Kirkeby 1994). More precisely, abductive approach is not so tightly stuck on the previous existing theories as deductive approach, but on the other hand, nor is it restricted to empirical observations only as is inductive approach. Thus, it has been argued that following the abductive approach, and thereby going back and forth between theoretic models and empirical world by continuously evolving the framework for the study, leads to new insights about existing phenomena by examining these from a new perspective (Kovács and Spens 2005, 138). Supported by the notions above, *abductive logic is preferred* in this study since I find it to be the most appropriate approach to investigating and developing new theory on designing (as well as developing) electronic service environment in complex service context.

From research methods' point of view, deductive approach is usually based on quantitative measuring of the empirical phenomena. Taking the *philosophy of science* perspective, *deductive approach* can be categorized under *positivistic paradigm* (e.g. Sale, Lohfeld, and Brazil 2002, 44). *Ontologically*, this means that there is only one truth which can be measured through empirical indicators (e.g. research hypotheses or propositions) which are derived from prior theories. From *epistemological* point of view reality is perceived as objective, which can be measured without being influenced by researcher (ibid.). Studies reflecting the positivistic paradigm aim to measure and analyze "causal relationships between variables within a value-free framework" (Denzin and Lincoln 1994, 4), in order to generalize the research findings.

In contrast, *inductive* research approach is often associated with *qualitative methods*, which are usually, but not in all cases, based on *interpretivism* (Altheide and Johnson 1994; Kuzel and Like 1991; Secker, Wimbush, Watson, and Milburn 1995) and/or *constructivism* (Guba and Lincoln 1994) *paradigms* of research. From *ontological* point of view there is not only one truth but multiple realities, which are socially constructed (e.g. Berger and Luckmann 1966). *Epistemologically*, the investigator and the investigated phenomenon (i.e. the object of the study) interact with each other, and thereby, the research findings are created through this interaction (Denzin and Lincoln 1994). The research results are not meant to be generalized in terms of representing the insights of large populations. Instead, small, purposeful, and in some cases, contextual samples are used in order to be able to produce in-depth information about a specific phenomenon under investigation (e.g. Guba and Lincoln 1994).

My opinion is that positioning the abductive approach under the scientific paradigms established by the earlier literature (e.g. Sale et al. 2002; Peter and Olson 1983) is not as unambiguous as in cases of deductive and inductive approaches. I argue that at least it strongly depends on the methodological choices one has to make during the research process. Metaphorically speaking, I am not referring to *choosing the tools* for conducting the (empirical) research (i.e. methods for data collection and data processing) but I am referring to the ways according to which the chosen *tools are used*. Switching back to terms of literature on methodologies and philosophy of science, *categorizing the abductive logic depends on what is the key objective of a study*. Research conducted according to the inductive logic cannot be positioned under the positivistic paradigm of science due to the contradictions between the research objectives and the characteristics of the paradigm. Nor can deductive (quantitative) theory testing be positioned under the constructivist paradigm.

Regarding the above said, I argue that the abductive logic allows greater (and more creative) variety of options for researchers to construct a methodological approach for their study since it is not so clearly restricted to one specific scientific paradigm. Thus, the researchers, depending on the objective of the study, have more options for choosing and deciding the methodological orientation of the study, and thereby, categorize the study under the scientific paradigms.

From the perspective of scientific paradigms my study associates with the characteristics, which Guba and Lincoln (1994, 109) categorize under *postpositivism*. Following the principles reflected by the postpositivistic paradigm the reality is *real* but in addition to the *objective truth* as the world is *ontologically* seen by the *positivists*, social phenomena are (socially) construed through our minds (see e.g. Miles and Huberman 1994, 4). *Epistemologically*, the findings are taken as *probably true* and the relationship between a researcher and the investigated phenomenon is not purely objective but rather dualistic allowing the interplay to some extent. Moreover, unlike the positivistic paradigm the qualitative methods may also be used (e.g. Guba and Lincoln 1994; Antikainen 2007). Referring to what is discussed above the *postpositivistic paradigm is preferred in this study*.

2.2 Describing the research process through design science methodology

One of the fundamental objectives of academic research is the development of knowledge on the basis of arguments and empirical proof that is considered as *valid* by the audience it is targeted to (e.g. Huff 2000). However, van Aken (2005, 19) suggests that, for instance, in the context of business studies in which practical implementation could be considered

important in order to develop business activities, *relevance* can be considered as a criterion for research as well. Relevance refers to the *knowledge that is multidisciplinary and aiming at solving complex and relevant field problems* (ibid, 20). In this sense, Susman and Evered (1978) already almost 30 years ago raised their concern on research methods and techniques within the field of organization and management becoming more sophisticated, and thereby, less useful for the practical purposes (p. 582). Similar insights have been stated within the context of IS research (Benbasat and Zmud 1999; Arnott 2006). Agreeing with the above presented, my opinion is that the objective of science and research is not referring to producing academic (and mono-disciplinary) knowledge only, but more applied knowledge is needed in the scientific context, too.

Business studies, as well as social sciences can be considered as *behavioral sciences* (e.g. Miles and Huberman 1994; Guba and Lincoln 1994) or *explanatory sciences* (van Aken 2005), to some extent. According to Hevner, March, Park, and Ram (2004) behavioral sciences are seeking to "develop and verify theories that explain or predict human or organizational behavior" (p. 75). However, moving on the direction of relevance, as it is defined above, *design science* paradigm has been suggested as a felicitous approach on producing more applied and practically-oriented (scientific) information (van Aken 2005, 20).

According to Hevner et al. (2004) design science refers to "creating and evaluating information technology (IT) *artefacts* that are intended to solve identified organizational problems" (p. 77). Design science approach has extensively been employed within the information systems (IS) research context (see e.g. March and Smith 1995), and also in other fields, such as architecture, engineering, and urban science, which can be considered to have technical orientation at least to some extent, but which may not necessarily be thought as science per se (March and Smith 1995, 253). However, more recently it is suggested to be suitable also to the other contexts, such as business and management studies (e.g. Hevner et al. 2004; van Aken 2005) as well as innovation research (e.g. Järvinen 2007).

From the perspective of research process and research activities March and Smith (1995, 258) suggest two fundamental *research activities* as characterizing the nature of design science paradigm: *build* and *evaluate*. "Building" refers to an artefact being constructed to "perform a specific task" by asking 'does it really work'. "Evaluating", in turn, refers to determining how well does the developed artefact work (ibid).

From research process point of view, Vaishnavi and Kuechler (2004) have introduced a model illustrating the general methodology of *design research* through five phases which comprise: *awareness of the problem, suggestion, development, evaluation,* and *conclusion* (Figure 3)[2]. The work of March and Smith as well as the framework introduced by Vaish-

[2] Also other frameworks for depicting the design science process have been suggested (cf. Gregg, Kulkarni, and Vinze 2001; Hevner et al. 2004). However, the framework of Vaishnavi and Kuechler is preferred since it is perceived to fit well in the context of the study.

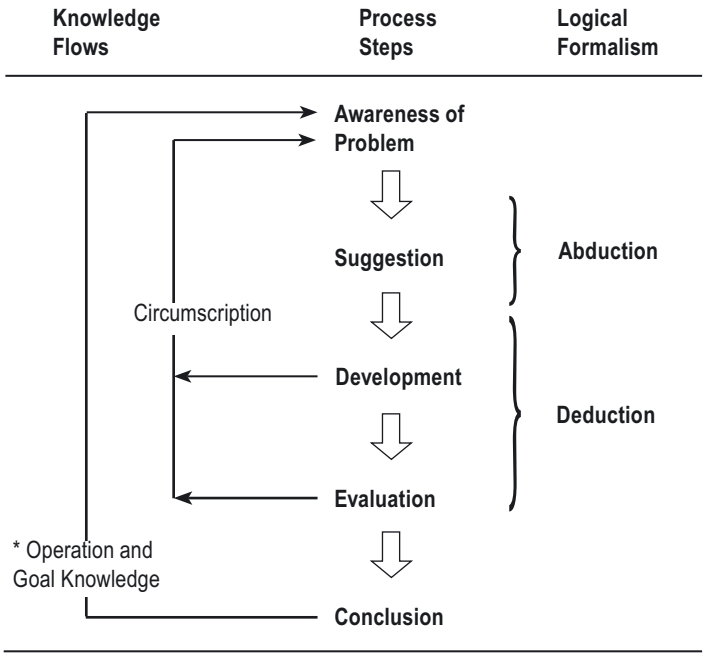

Figure 3. The general methodology of design research (Vaishnavi and Kuechler 2004)

navi and Kuechler have been acknowledged and employed also by other researchers (e.g. Arnott 2006; Hevner et al. 2004; Järvinen 2007).

The first phase of the design research process is defined as *awareness of the problem,* or *problem recognition* as it is called by Arnott (2006, 57–58). It refers to conceptualizing the aspects that are defining the problem to be approached through the research and development work. As design science paradigm has also been called as "improvement research" the ideas for improvement (i.e. tentative and/or design of the artefact to be developed) are abductively constructed in the second phase of the design research process (*suggestion*) by reflecting both theoretical and empirical aspects (Vaishnavi and Kuechler 2007; see also Järvinen 2007, 49). In the third phase (*development*) the developed (IT) artefact is introduced. Although 'IT' is mentioned even when defining design science as a construct the developed *artefact* can, however, also be something else but a concrete IT solution. As March and Smith (1995, 253) argue, four types of artefacts can be identified: *constructs, models, methods,* and *instantiations*. Constructs define the terms through which the developed artefact is conceptualized. Models bind the constructs together and describe the relationships between them. Methods indicate the steps used to perform distinct tasks

during the research (and development) process. Instantiations refer to concretizing the developed artefact in practice (ibid, 256–258).

The developed artefact is evaluated in phase four (*evaluation*). Evaluation can actually be conducted in many different ways, allowing both quantitative and qualitative methods. Hevner et al. (2004, 86–87) have suggested five methods for evaluation. These are: *observational, analytical, experimental, testing,* and *descriptive*. In this study *analytical, experimental* and *descriptive* methods are used. This topic is discussed more in detail in chapters 5.3 and 6.1.

In the final phase of the design research process (i.e. conclusion) the (research) results derived through the evaluation phase are discussed. In addition, suggestions for practical implementation are made which is actually one essential procedure of design science paradigm (e.g. Arnott 2006, 58; see also Hevner et al. 2004, 90).

Although technological development (i.e. IT development) has had a remarkable and somewhat dominant role in the discussions on the design science methodology, it is also discussed in less technological contexts, such as, knowledge and information (e.g. Delone and McLean 2003; Järvinen 2007), and management and organization studies (e.g. van Aken 2004). Agreeing with the idea that design science methodology can be employed in other contexts than IS research as well, the design science methodology and abductive approach are combined to be applied to the service research context. On the basis of the discussion above the *methodological framework* as well as the overall structure of the study are introduced and discussed in the following sub-chapter.

2.3 Linking methodological framework to the structure of the study

In this study I investigate a *novel approach on designing the electronic service environment in the context of complex services, such as insurance*. However, such phenomenon has not (at least not yet) appeared in the insurance business context. Hence, the attributes concretely illustrating the *novel approach on designing electronic insurance service environment* had to be constructed through a comprehensive study, which includes both extensive scanning of the prior literature and empirical observations on the field of electronic insurance services. Moreover, since the focus of this study is on constructing and developing "something new" (i.e. the artifact), which does not exist in reality yet, *design research approach was, therefore, found feasible to be followed*.

Following abductive logic by going back and forth between earlier theoretical discussion and empirical research, and on the other hand, adding design science approach by

reflecting a concrete development work of electronic insurance service concept through a research and development project entity called "eInsurance" provide a favorable methodological basis for the study. More precisely, abductive logic allows creative combining of earlier theories and empirical observations.

Concerning the design science approach, it does not only describe the methodological choices made for conducting the (empirical) research. By this I am referring to data collection and data analysis methods, which are typically, or at least very often, discussed in academic dissertations on management and marketing. Instead, *I am considering design science approach as a holistic framework for the study*. In my opinion, the design research framework by Vaishnavi and Kuecher (2004) well encapsulates and also gives a structure for the study as a whole as well as provides guidelines for conducting the different phases of the research work introduced in this report.

Hence, the methodological framework for the study is constructed by combining the design science approach with abductive logic as is depicted in Figure 4. Moreover, the constructed framework creates a fundamental structure to the entire study as is also indicated in Figure 4.

After introduction and the discussion on methodological approach presented in this chapter, I move on to discussing insurance as a service (chapter 3.1), and principles of service design (chapter 3.2) by referring to the extant literature on services and service management in chapter 3. As Figure 4 indicates I enter into the methodological framework of the study in chapter 3, and shall follow it throughout the study.

In the first phase of design research framework (*awareness of problem*) essential theoretical constructs and prior theoretical discussion in general are identified from service research point of view in order to be able to outline the preliminary field of research in which the study is theoretically positioned. In this regard, services, especially complex services, are the main focus of theoretical discussion. Thus, they form a fundamental conceptual basis for the study.

In the second phase of the design research process (*suggestion*) the development ideas to be examined and evaluated are employed by applying the earlier conceptual and theoretical discussion as well as empirical observations. In chapter 4 the theoretical discussion moves on to the electronic environment, especially to the field of information systems (IS) research. From the service point of view, general characteristics of electronic services are discussed, and based on that, the essential nature of electronic insurance services characterized (chapter 4.1).

Further, earlier literature on Web site usability is explored in chapter 4.2. On the basis of the earlier literature, two pilot studies on usability of electronic insurance services were conducted and they are discussed in chapters 4.3.1 and 4.3.2. The gained results of the pilot studies were applied, and on that basis, a "traditional versus novel typology" on

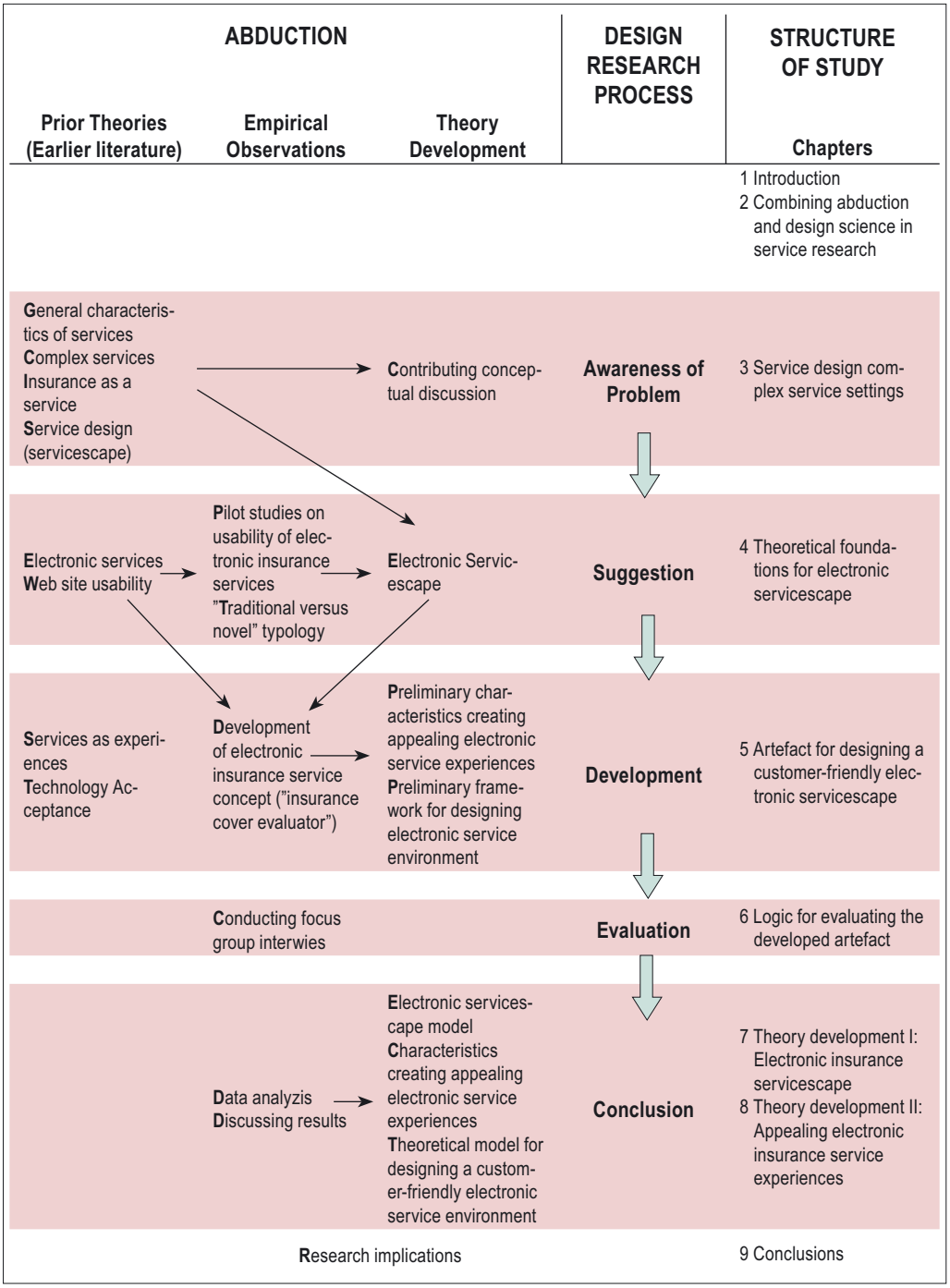

Figure 4. Methodological framework and the structure of the study

designing electronic insurance service environment is introduced in chapter 4.4. On the basis of presented theoretical discussion complemented with empirical observations, the chapter is concluded by introducing a preliminary framework for characterizing *electronic insurance servicescape* suggested (chapter 4.5).

However, depicting the structure of the electronic servicescape is only one part of designing the electronic service environment in the scope of this study. In this regard, the *suggestion* phase of the design research process is continued also in chapter 5, but it is merged with the third phase (*development*). Chapter 5 introduces a view on customer-friendliness in designing electronic insurance service environment.

From service point of view, discussion on service experiences in chapter 5.1 provides a feasible approach to be employed in this study. From the perspective of IS research, technology acceptance approach, as well as technology-readiness (TR) approach, which reflect customers' intentions and attitudes to use electronic services, are suggested to being associated with service experience approach in indicating the creation of appealing electronic insurance service experiences (chapter 5.2). Customer-friendliness is also approached from empirical point of view in chapter 5.3 in which an electronic insurance service concept for consumers called "insurance cover evaluator" is introduced. The overall theoretical discussion complemented with empirical observations is encapsulated in chapter 5.4 when preliminary framework (i.e. the developed artifact) for designing a customer-friendly electronic insurance servicescape is introduced. In this context, the empirical observations refer to "traditional versus novel typology" discussed in chapter 4.4 and the "insurance cover evaluator" service concept (chapter 5.3).

After introducing the 'artefact' it had to be evaluated. In the fourth phase of the design research process (*evaluation*) methods and procedures for collecting and analyzing the evaluation data are discussed (chapter 6). Since I was dealing with a non-existing phenomenon, which had to be communicated to the research (i.e. evaluation) participants by describing, illustrating, and to some extent, explaining the essential nature of it, *qualitative methods were preferred in this study in collecting the empirical data*. More precisely, interview technique was found an appropriate method for data collection. However, since insurance matters are perceived as complex and even confusing by customers, and the investigated phenomenon (the developed artefact) was also more or less abstract, focus group interview technique was perceived as being more effective method for collecting empirical data on the developed artefact than individual interviews.

Next, the essential evaluation results (i.e. empirical research results) are presented and discussed in chapters 7 and 8. These chapters refer to the final phase of the design research process, which is determined as *conclusion*. However, "conclusion" in this context does not mean that the entire study is concluded. Instead, the discussion on the essential empirical research results is completed, and in that sense, concluded. As a result a structure of elec-

tronic servicescape is depicted in chapter 7.4. Further, the characteristics for creating appealing electronic service experiences are proposed in chapters 8.1 and 8.2. Integrating the gained results, a theoretical model for designing a customer-friendly electronic insurance servicescape is introduced in chapter 8.3. The discussion on empirical results is concluded by providing guidelines for applying the research results in practice (chapter 8.4).

Finally, the entire research is concluded in chapter 9 by discussing the implications of the study. By this I am referring to theoretical (chapter 9.2), methodological (chapter 9.3), as well as practical (chapter 9.4) implications. In fact, suggesting practical implications is one essential part of design science approach emphasizing the *relevance approach* of academic research (e.g. March and Smith 1995; van Aken 2005; Arnott 2006). In addition, the quality of the study is assessed from the perspectives of its execution and results gained in chapter 9.1. The study is ended with insights into future research directions in chapter 9.5.

3 SERVICE DESIGN IN COMPLEX SERVICE SETTINGS

Services. Electronic *services*. Complex *services*. Insurance *services*. *Service* design. Electronic *service* environment. *Service* experiences. These concepts can be considered as the key words of this academic dissertation. As noticeable (and also highlighted with italics), term "service" is involved in all the keywords. In the forepart of this report (chapters 3, 4, and 5) the essential discussion on prior literature and theories referring to *services* to some extent is presented.

The essential objective of this chapter is to introduce the essential elements of this study from the service design point of view. For the sake of clarity the objective of this chapter is highlighted with help of the methodological framework introduced in chapter 2.3 (Figure 5). The same logic is followed also in other chapters throughout the study.

First, the essential nature of insurance as a service is discussed in chapter 3.1. However, in the beginning I consider it particularly relevant to shortly characterize the conceptual nature of service in general. It gives a basis for the further discussion on the scope of this study from the service point of view. Therefore, the chapter starts with a short general review on service characteristics (chapter 3.1.1). In order to approach the essential focus of the study, a discussion on complex services is presented in chapter 3.1.2, followed by a discussion on the general characteristics of insurance as a service in chapter 3.1.3.

The second essential part of this chapter is related to service design that is generally discussed in chapter 3.2.1. Different approaches on service design are introduced in chapter 3.2.2. A special attention is paid to service facility design since it is of a particular interest in this study. Thus, the essentials of service facility design (e.g. discussion on servicescape) are discussed in chapter 3.2.3.

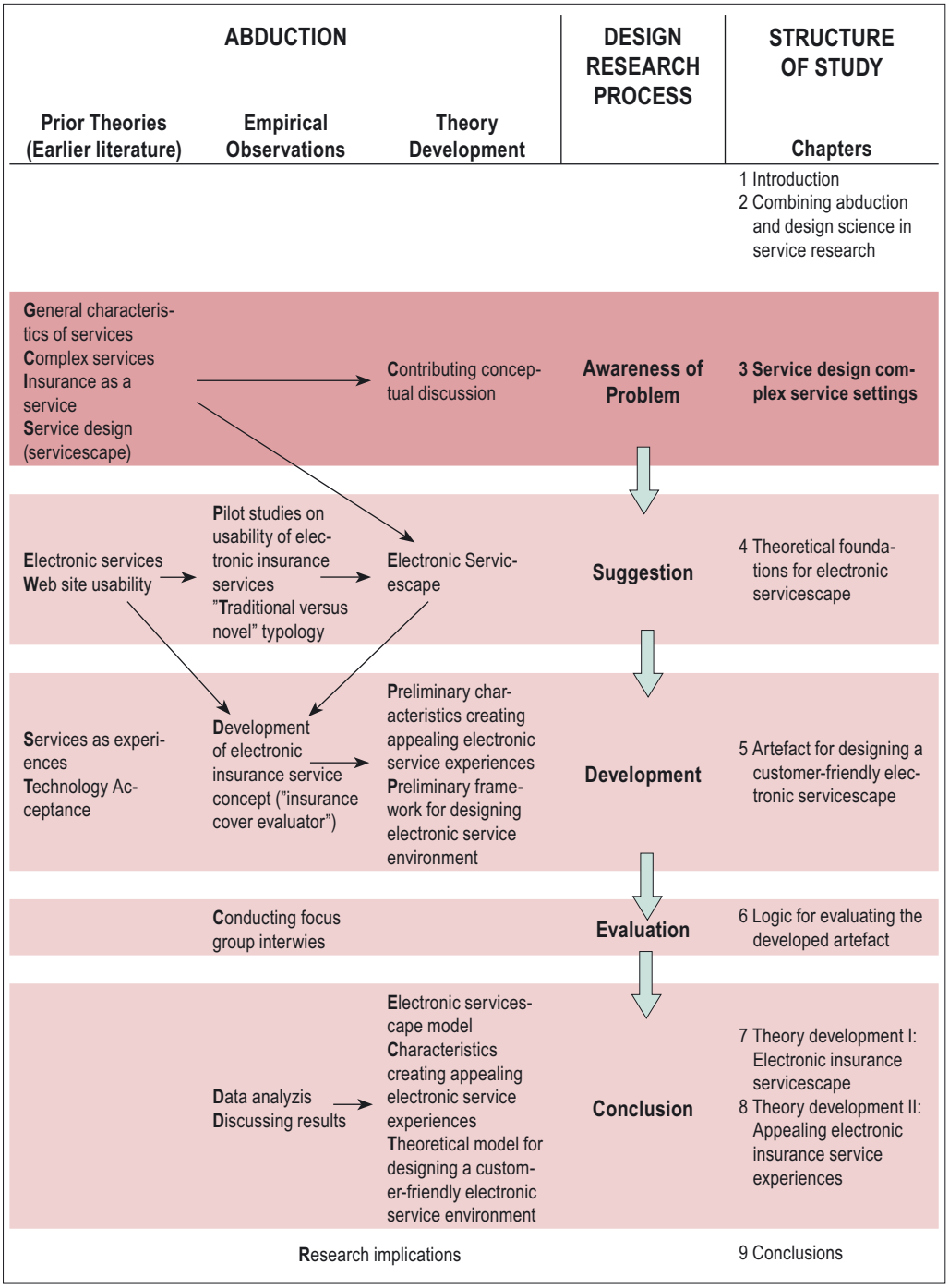

Figure 5. Objective of chapter 3

3.1 Insurance as a complex service

3.1.1 What are services in general?

Versatile academic discussion on services has been continuing already 50 years. Various definitions of services have been suggested over the years by service researchers. Christian Grönroos, one of the most distinguished representatives of Nordic school of services[1], has defined service as "an activity or series of activities of more or less intangible nature that normally, but not necessarily, take place in interactions between customers and service employees and/or physical resources or goods and/or systems of service provider, which are provided as solutions to customer problems" (1991 b, 27). Further, North American professor Christopher Lovelock, who can also be considered as one of the pioneers in service marketing and management, has provided a following definition of service: "A service is an act or performance offered by one party to another. Although the process may be tied to a physical product, the performance is essentially intangible and does not normally result in ownership of any of the factors of production" (e.g. Lovelock 2001, 3). These definitions provide a general basis for the conceptual discussion on services in this study.

In this regard, Edvardsson, Gustafsson, and Roos (2005) have stated in their recent study on service portraits in service research that "on a general level the service definition is a perspective. On lower abstraction level a general service definition does not exist. It has to be determined at a specific time, in a specific company, for a specific service, from a specific perspective" (p. 119). While I agree with Edvardsson, Gustafsson, and Roos, I argue that one has to have something to start with because otherwise discussion may be complicated and somewhat fuzzy. Therefore, my opinion is that such *general service definitions presented above, even though recently criticized by distinguished service researchers* (see also Lovelock and Gummesson 2004), *form foundations for service discussions on lower and more specific abstraction levels*. Thus, general service definitions are referred to as constructing the prerequisites for the discussion in this study.

Service characteristics

Earlier academic research has attempted to encapsulate the essential general characteristics of services. A great number of different characteristics for services have appeared in the extant service literature. Since the main focus of this study is not on characterizing services in general, there is no use for presenting an extensive review on service character-

[1] For more extensive discussion on the Nordic School of services see e.g. Grönroos (1991 a)

istics. Instead, I shall introduce one of the most cited and acknowledged frameworks for characterizing services.

According to the pioneering work by Zeithaml, Parasuraman, and Berry (1985), IHIP[2] (***I**ntangibility, **H**eterogeneity, **I**nseparability*, and ***P**erishability*) framework was created to characterize the essential nature of services as well as the difference between services and goods. Based on extensive literature review the four suggested features of the IHIP framework were the most cited service characteristics. The work of Zeithaml, Parasuraman, and Berry was later supported by Edgett and Parkinson (1993) who conducted an even more extensive literature review indicating similar results.

Intangibility refers to the fact that although service might include tangible elements, such as a car while renting a car, the service act (or performance) itself (car rental) is intangible, and cannot be touched, tasted, or smelled (Lovelock 2002, 10). *Heterogeneity* refers to the fact that services performances are seldom, if never, alike for different customers (Grönroos 1991 b, 29). *Inseparability*, or *simultaneity* (Sasser, Olsen, and Wyckoff 1978), refers to the fact that services are typically created and consumed simultaneously (e.g. Edvardsson, Johnson, Gustafsson, and Strandvik 2000, 920). The last of the four characteristics, *perishability*, indicates that services cannot be stored to any physical location in order to be used at some other time in the future (Fitzsimmons and Fitzsimmons 2006, 24).

At a higher and a more holistic level recent studies on service marketing and management have discussed *service-dominant logic* as a new tendency replacing the former "goods-dominant logic" according to which firms produce goods for customers to be consumed (e.g. Vargo and Lusch 2004; Lusch, Vargo, and O'Brien 2007). Service-dominant logic refers to "an ideology according to which services, as well as the value of service (service provision), is co-created in collaboration with service provider and a customer" (Vargo et al. 2007, 6–7). It emphasizes 'value-in-use' principle according to which the value of a service is "determined by the user in the 'consumption' process" (Lusch et al. 2007, 11). Further, Vargo and Lusch (2004, 10) suggest that all economies are service economies.

In line with the above mentioned, Edvardsson et al. (2005, 118), referring to IHIP framework, state that goods versus services comparisons are not relevant anymore in the contemporary discussion on services. In addition, the distinguished service researchers Lovelock and Gummesson (2004) have presented vigorous critique towards the IHIP framework by questioning its generalizability. I certainly agree with these notions as well as share the ideology of service-dominant logic as a new tendency in service discussion from a holistic viewpoint. However, I still argue that at the lower abstraction level discussing the service characteristics through the lenses of IHIP framework should not be forgot-

[2] As Lovelock and Gummesson (2004, 23) note Zeithaml, Parasuraman, and Berry were not the inventors of the IHIP framework but they ratified it for more extensive discussion on the chatacteristics of services.

ten. Instead, similarly as general definitions, IHIP framework pinpoints certain features that are peculiar while discussing services in general.

On the other hand, Lovelock and Gummesson (2004) as well as Edvardsson et al. (2005) admit that the IHIP framework may be applicable to characterize services but the characteristics cannot be generalized to concern all the services in all situations. For instance, Lovelock and Gummesson (2004) state that *intangibility characterizes particularly well the essential nature of electronic services* (p. 27).

Moreover, IHIP ideology is not considered from the perspective of differentiating services from goods in this study. Instead, as the focus of this study is on improving conceptual as well as theoretical understanding on service design from *structural point of view* in a context (i.e. insurance), which is somewhat complex and abstract for customers, I argue that IHIP framework facilitates the discussion on describing the context of the study. It also facilitates us to get a more comprehensive and comprehensible view on the investigated phenomenon. Thus, *IHIP framework is referred to as providing theoretical prerequisites for further discussion on insurance as a service, electronic services, and eventually, electronic insurance services from structural service design point of view throughout the study*.

Classifications of different service types

One reason for versatile gamut of service definitions and characterizations is undoubtedly the fact that the gamut of different kinds of services is also very extensive. This is also discussed by Lovelock and Gummesson (2004) as well as Edvardsson et al. (2005). In this regard, various classifications for categorizing different service types have been suggested in the literature. Lovelock (1983, 11) has introduced an extensive review on service classifications found in the literature. This list is later supplemented by Grönroos (1991b, 32–34). Although most of the classifications summarized by Lovelock, and later by Grönroos, are more than twenty years old they still create a basis for service categorization even nowadays.

Since the main focus of the study is not on examining how different types of services are classified, I will not go into detailed discussion about the classifications. Instead, summarize the essentials of the classifications, few common tendencies are discussed. Most of the classifications by different researchers and authors (Chase 1978; Kotler 1980; Lovelock 1983; Schmenner 1986; Vandermerwe and Chadwick 1989) emphasize at least the following features:

- The role of customer in service performance
- The role of service provider in service performance
- The degree of interaction between customer and service provider

In addition, it has been suggested that services can be classified according to the extent of technology involved in the service performance (e.g. Thomas 1978; Kotler 1980). More recently, along with the rise of electronic services the interest in investigating the role of technology in classifying different kinds of services has increased (e.g. Grönroos 2000; Järvinen, Lehtinen, and Vuorinen 2003).

In the scope of this study few distinct classifications are perceived useful. From customers' point of view Chase (1978) has presented a simple classification in which different kinds of services are categorized according to the extent of *customer contact* required in service performance. Services are divided to either *high contact* or *low contact* services. Further, following similar ideology but taking the service provider's point of view, Grönroos (2000, 49) has later suggested that services can be classified as either *high-touch* or *high-tech* services according to the extent whether the service performance is produced through personal contact or through a technological device (e.g. computer). In addition, Grönroos proposes that services can be classified according to the *extent they are offered and whether they are used discretely or continuously*.

One additional and particularly relevant characterization, or classification, for the scope of this study can be found from the extant service literature, namely *complex services*, indicating *the extent of how difficult or easy a service is for the customer to comprehend*. As insurance services are the focus of this study, term complex service is found feasible in terms of classifying and characterizing insurance as a service in a more general abstraction level. The essential conceptual nature of complex services is discussed in the next sub-chapter (3.1.2). Continuing the discussion on classifying and characterizing services onwards, the characteristics of insurance are elaborated in chapter 3.1.3.

3.1.2 Complex services

Due to their characteristics, some services are especially difficult to comprehend for customers. These kinds of services are normally reflected by, for instance, high levels of intangibility, heterogeneity, and infrequency of use (Johnson, Nader, and Fornell 1996, 165–166). In addition, these types of services have been argued difficult to evaluate by customers due to their abstract and complex nature (Hoffman, Howe, and Hardigree 1991; Andreassen and Lindestad 1998). These kinds of services are referred to as *complex services* in the literature (see e.g. Hoffman et al. 1991; Johnson et al. 1996; Andreassen and Lindestad 1998). Although complex services are mentioned in the literature a specific definition for the concept was somewhat difficult to find. None of the above mentioned researchers has concretely defined complex service as a construct.

However, in their study on complex services in the Internet surroundings, Vroomen, Donkers, Verhoef, and Franses (2005, 38) have defined complex services as "*services that consist of many attribute values per attribute, which are often tailor-made, infrequently purchased, more difficult to comprehend, and require in general assistance during the decision-making process*". In my opinion, this definition well encapsulates also the insights of other researchers by addressing the established characteristics of complex services. Therefore, a similar logic is followed also in this study while discussing the essential nature of insurance service throughout the report.

In order to take more detailed view on the above presented definition of complex services, I shall interpret its content piece-by-piece in the following. First of all, "many attribute values", for instance, refers to the complex and possibly abstract nature of a service. "Tailor-made" refers to heterogeneity of service, in other words, a service performance may, and most likely will, vary for different customers. "Infrequently purchased" refers to the fact that complex services are usually purchased and consumed only occasionally. This might also be one reason for customers' difficulties to evaluate the content of the service and/or service performance. "More difficult to comprehend" refers to the complex and abstract nature, but also to the intangible nature of the service. As Bateson (1979) has suggested, intangibility can be considered at least from two different perspectives: *physical* and *mental intangibility*. These two dimensions of intangibility are also supported by other researchers (e.g. Lovelock and Gummesson 2004).

In case of complex services as well as electronic services (elaborated in chapter 4.1) both perspectives are actually particularly relevant and useful. *Physical intangibility* means that *services cannot be physically touched, smelled, seen, felt, or tasted by a customer*. If service is *mentally intangible* then *customer cannot comprehend it even cognitively* (Bateson 1979, 138–139). In comparison, services that are not considered as complex services, such as mail order, usually only indicate physical intangibility (Johnson et al. 1996, 166).

Concerning the different fields of business, earlier research has suggested that certain branches can be perceived as dealing with complex services. For example, *financial services*, especially *insurance* (Hoffman et al. 1991) and banking to some extent (e.g. Johnson et al. 1996; Vroomen et al. 2005), are considered as complex services due to their service characteristics, such as, complexity, abstract nature (i.e. high level of physical and mental intangibility), heterogeneity, and infrequency of use. Further, Andreassen and Lindestad (1998, 15) define *package tour industry* as complex service due to its high monetary cost, infrequent consumption, and the service quality attributes that are difficult for customers to evaluate. As can be perceived, branches that are considered complex services are determined particularly by similar characteristics.

Although "complex services" as a construct is used in the service literature as one way to classify services, a direct counterpoint to the concept is difficult to find. As far as I am

concerned, the extant service literature generally has not been discussing, for instance, the term "simple services" which can be considered a direct counterpoint to the term "complex services".

However, for the sake of clarity it is essential to make a distinction between *complex services* and services that can be considered as *simple services* in the context of this study. Although I have not found a definition of *simple services* these types of services can be characterized and identified by considering service characteristics similarly as other researchers have characterized complex services. In this regard, the definition of Vroomen et al. (2005) is followed.

First of all, simple services are intangible but not in an equal sense to complex services. However, the intangibility is more physical than mental, and thereby, the nature of service is not as complex and abstract as it is in case of complex services. *Second*, simple services are usually more homogenous. *Third*, simple services are more frequently purchased than complex services. Along with the higher purchasing frequency the use of service becomes more like routine, and thereby, customers do not necessarily experience the service so complex and abstract.

Good example about "simple services" is visiting a hamburger restaurant (e.g. McDonalds). There the content or the service (ordering and receiving the selected hamburger meal) is easy for the customer to grasp. In addition, the service is also more homogenous than in case of complex service since the staff is behaving according to the instructed patterns to serve customers. Hence, different customers are treated in a similar, more or less homogenous, way. Further, some banking services can also be defined as "simple services". For instance, simply performing a cash withdrawal or paying bills easily becomes routine-task for customers because the frequency of use is normally high. In addition, it is easy for the customer to comprehend the essential content of the service since the core function is transferring money from one party to another, nothing more.

In order to make a distinction between complex and simple services the latter construct can be defined by following the definition of Vroomen et al. (2005), and on the other hand, on the basis of characterizations presented above. Thus, I suggest that "*simple services*" *can be defined as services that are more or less homogenous, frequently used, and easy to comprehend*. However, "simple services" are not examined in this study but the main focus is on investigating services characterized as "complex services", especially in the context of (non-life) insurance services. The "simple services" are only defined in order to clearly emphasize the focus of the research, and establish how they are distinguished from complex services. Continuing the discussion on complex services, I shall take a closer look at the nature of insurance (as a service) as an example of complex services in the next sub-chapter.

3.1.3 Nature of insurance

As it has already been established, insurance as a service can be defined as complex service. *In the context of this study, term "insurance" refers to the non-life insurance only*. Insurance as a business is strictly bound to laws and regulation. In that sense, insurance is defined as "a contract with which the other party (insurer; i.e. service provider), against premium paid by the other party (insured; i.e. customer), is committed to compensate the occurred loss connected to the risk that is specified in insurance policy, to insured or sufferer (Vakuutussanasto 1996, 137).

Taking the service point of view, Järvinen (1998, 14) provides a more service-related definition of insurance by suggesting that insurance is "a service with special terms and conditions agreed in an insurance policy". Järvinen's definition describes insurance from contentual point of view: insurance consists of many terms, regulations, and conditions determined in an insurance policy.

In order to interpret the above presented two different approaches on defining the nature of insurance, following arguments can be presented. *First*, the essential nature of insurance as a service is to provide a customer with a collection of terms and conditions in a form of insurance policy which is agreed between the customer and service provider. *Second*, the main purpose of the purchased insurance is to offer cover against financial losses if the risk determined in the policy will be realized. *And third*, while purchasing insurance a customer, on the other hand, buys a feeling of security. For instance, if the customer purchases home insurance and his house burns down the occurred (financial) loss is compensated to him. However, at this point it is essential to address that one of the basic principles of insurance is that the compensation is equal to the occurred loss, nothing more but nothing less either. The above presented arguments are supported by Gidhagen (2002) suggesting that the nature of insurance services can be determined through the delivery of feeling of security, and (in the event of a loss) the damage adjustment and claim settlement.

Although earlier research states that all of the service characteristics are not met in insurance context (e.g. Järvinen and Järvelin 2001), I suggest that in order to get a more thorough view on the essential nature of insurance, it can be reflected through the IHIP framework (see chapter 3.1.1). As insurance can be characterized as complex service, this point of view is also included in the discussion on the characteristics of insurance presented in the following paragraphs.

Both high *physical and mental intangibility are characterizing insurance*. In addition to intangibility, Edvardsson and Olsson (1996, 144) have proposed that insurance can be characterized as *lasting service* since the service outcome is not temporary in its nature as it is, for instance, in case of a haircut. Concerning intangibility, insurance can be character-

ized as complex and abstract service due to its high level of intangibility in both physical and mental sense. By this I am referring to the facts that the only concrete physical item reminding a customer about insurance typically is just a piece of paper (i.e. policy documents), and this piece of paper is often full of written terms and conditions describing the content of the purchased service, which might be particularly challenging for the customers to comprehend.

Further, *insurance policies*, even though somewhat standardized in terms of juridical regulations and conditions for private customers (i.e. consumers), still are *heterogeneous*. By this I am referring to the fact that although insurance cover is more or less standardized for consumers, the content of insurance cover is ultimately specified through the needs of a certain customer, and his life situation. In case of home insurance, for instance, the property and the value of the building always have to be determined case-by-case, even though the general content of the service product (home insurance policy) would be somewhat standardized. At least this is the case in the Finnish insurance context.

In terms of *inseparability* (*or simultaneity*) customer has an active role in producing and consuming insurance service. Using home insurance again as an example, customer first delivers detailed background information about the building and its contents (property) he wishes to insure to an insurance company in order to enable the completion of insurance policy. If the risk(s) identified in the policy document is realized customer actively participates in the consumption process of insurance service by reporting the claim to insurance company. In this regard, *customer's active participation is one of the characteristics of insurance as a service but inseparability is not*. As the above described example establishes, service is not necessarily, if ever, produced and consumed at the same time. According to the principles of insurance, it would not, in fact, even be possible, since insurance is purchased for covering the customer against possible risk(s) which might, but will necessarily not, emerge in the future. Thus, *inseparability is not applicable characteristic to insurance services*. Instead, insurance can be characterized as *separable service* that refers to the situations in which service production and consumption does not have to happen at the same time (e.g. Lovelock and Gummesson 2004, 29).

As to *perishability*, many aspects can be taken up. In order to consider the pure meaning of perishability, it refers to the fact that services cannot be stored as discussed in chapter 3.1.1. In that sense the argument holds true also in the context of insurance services. However, as Lovelock and Gummesson (2004, 30) point out, some information-based services[3] can, for instance, be recorded to be consumed again in the future in replayable media. As insurance can be considered as information-based service since it basically is information transfer between a customer and a service provider, it can be argued that

[3] Information (-based) services are defined as "*that aspect of service in which information is the primary value exchanged between two parties* (*e.g. buyer and seller)* (Rust and Lemon 2001, 86)

insurance as a service is also perishable to some extent. For instance, the possibility to get compensation if damage occurs is not limited. Instead, when the insurance premium is paid by the customer, he is legitimated to receive compensation as many times as the damage occurs during the insurance period. In other words, *under the above described conditions insurance service can be inventoried to be used again in the future if needed*.

Outside the IHIP framework earlier research has discussed *lack of ownership* as a characteristic of service (e.g. Zeithaml and Bitner 2006). Referring to the notion of Järvinen and Järvelin (2002) that lack of ownership is not found as a characteristic of insurance service I argue that the *ownership aspect* is essential to be shortly discussed also here. In their article Järvinen and Järvelin state that, against premium paid by a customer he is authorized to require claims settlements if the identified risk(s) occur (p. 134). The settlements are paid from the reserves of insurance company. Hence, Järvinen and Järvelin propose that customers "own" their part of the financial reserves of insurance company. Further, the fact that insurance is purchased against future financial loss and to acquire a feeling of security supports the statement about the ownership. Following the logic of ownership and adapting it to the insurance context the customer purchases the right of enjoying the feeling of security in becoming financially compensated if the risk(s) identified in insurance policy emerges in the future. In this regard, it can be argued that *insurance services include ownership to some extent*.

Finally, *low frequency of use* is one of the crucial characteristics of insurance. For instance, some banking services, such as paying bills, are often used weekly, or in some cases even daily, whereas insurance services might usually not be used weekly, monthly, or even yearly. Therefore, using insurance services will not become routine among the customers but the frequency of use remains low, and the abstract and complex nature of insurance might be even more confusing for the customers. On the other hand, it certainly serves customers' interests that he does not have to be in contact with an insurance service provider since it might often mean that something negative (i.e. damages) has happened.

To conclude the discussion on the essential characteristics of insurance as a service, it can be generally stated that complexity and abstract nature appropriately reflect the essential nature of insurance. From the IHIP framework point of view, the extent of intangibility, both physical and mental, can be considered high. Insurance service, although homogenous to some extent, is usually more heterogeneous. As to inseparability (i.e. simultaneity), insurance can rather be perceived as separable service since the production and consumption of a service typically do not occur at the same time. Further, insurance can be perceived as information-based service which, in some cases, can be recorded to be consumed again in the future. Combined with the fact that service is typically not produced and consumed at the same time, insurance service, especially electronic insurance service, can be perceived as perishable service to some extent.

All in all, based on the discussion above it can be argued that the nature of service itself makes offering and designing insurance services particularly challenging. This is the case especially in the context of electronic services. This view is discussed more thoroughly in chapter 4.1.5 while characterizing electronic insurance services. In the next sub-chapter the general nature of service design, especially topics referring to the design of service environment, is discussed.

3.2 Service design

It has been noted that earlier research on services has paid only little attention on planning and determining how service should be produced and delivered to a customer (Martin and Horne 1993, 50). Conceptually the above described planning process is determined as service design, service development, or new service development (NSD). A neglect of service design research has been considered even extraordinary since it has been perceived as crucial factor of service quality (Gummesson 1993, 146; Zeithaml, Parasuraman, and Berry 1990, 157). More recently, the topic has raised particularly extensive interest especially among researchers within the field of service management and marketing, and operations management (Verma, Fitzsimmons, Heineke, and Davis 2002, 117).

Theoretical discussion on service design, service development, and NSD often goes in parallel with each other. In addition, service innovation is discussed to be referring to the same phenomenon as the three above mentioned constructs to some extent. However, these four concepts are not precisely alike as is established in the following theoretical discussion, through which the relationship and the conceptual distinctions between the concepts are described (chapter 3.2.1). In addition, the different approaches on service design are discussed (chapter 3.2.2), of which special attention is paid on designing service environment (chapter 3.2.2) since it forms a theoretical core of this study from the service design point of view.

3.2.1 Distinguishing between service design, and service development

Service design as a construct has been somewhat vaguely used in the literature. Some researchers use term service design whereas some researchers talk about service development, or NSD, or service innovation although they might refer to the same topic. In this regard, I use the opportunity to contribute to this discussion by attempting to distinguish between these four concepts.

As to *service design*, it, according to ISO 9004-2 standard (1991, 9), refers to "specification of service and its delivery" (see also Fitzsimmons and Fitzsimmons 2006, 81). On the other hand, service design is defined to cover the whole development of service process from idea generation to concrete specification (e.g. Zeithaml et al. 1990; Martin and Horne 1993; Zeithaml and Bitner 2006). However, more acknowledged is the insight that service design is narrower construct than service development. In fact, there is somewhat general agreement of determining *service design as part of service development (or NSD) process* (e.g. Sceuing and Johnson 1989; Johnson, Menor, Roth, and Chase, 2000; Edvardsson, Gustafson, Johnson, and Sandén 2000). Johnson et al. (2000, 5) distinguish between service design and NSD by noting that service design determines a detailed structure, infrastructure, and integration content of a service operations strategy (e.g. Roth and Jackson, 1995; Roth and van der Velde, 1992), whereas NSD refers to "the overall process of developing new service offerings".

In this regard, *service development, as well as NSD, are perceived to cover the whole development process of (new) service(s)* (e.g. Cooper, Easingwood, Edgett, Kleinschmidt, and Storey 1994; Sundbo 1998). Further, earlier studies have proposed that as an end result of service development process a service provider, instead of offering services *per se*, offers its customers *prerequisites for a service* through which the actual service is realized for the customers in a form of the phases of service process as well as resources involved in the process (e.g. Edvardsson and Olsson 1996, 148-148; Edvardsson et al. 2000, 920). *This insight is followed also in this study since the characteristics of service environment, and thereby prerequisites for a service in turn, are of the particular interest*.

In the extant literature on NSD researchers have identified some common characteristics of the phenomenon. As already mentioned, *NSD* is seen to include service design. Further, earlier research agrees about the process-based nature of NSD (e.g. Scheuing and Johnson 1989; Tax and Stuart 1997, Johne and Storey 1998). In addition, it has been suggested that NSD process is cyclical. Johnson et al. (2000, 18) have suggested an NSD model that describes the holistic, process-based (cyclical) nature of NSD with the emphasis on (tangible) product design from the operations management perspective. However, the model of Johnson et al. (2000) is also generally acknowledged and referred in service management literature (see e.g. Tax and Stuart 1997, Menor et al. 2002; Fitzsimmons and Fitzsimmons 2006), too. Menor, Tatikonda, and Sampson (2002, 141) have slightly adapted the model of Johnson et al. to be conceptually better suited to service context (Figure 6).

The difference between service design and NSD (and service development) has already been established. Next, one could ask: "*what is the difference between service development and NSD*"? Actually, this is not an easy question. I have read many, and again many, articles concerning the topic, and I have come to a conclusion that, depending on a researcher, *ser-*

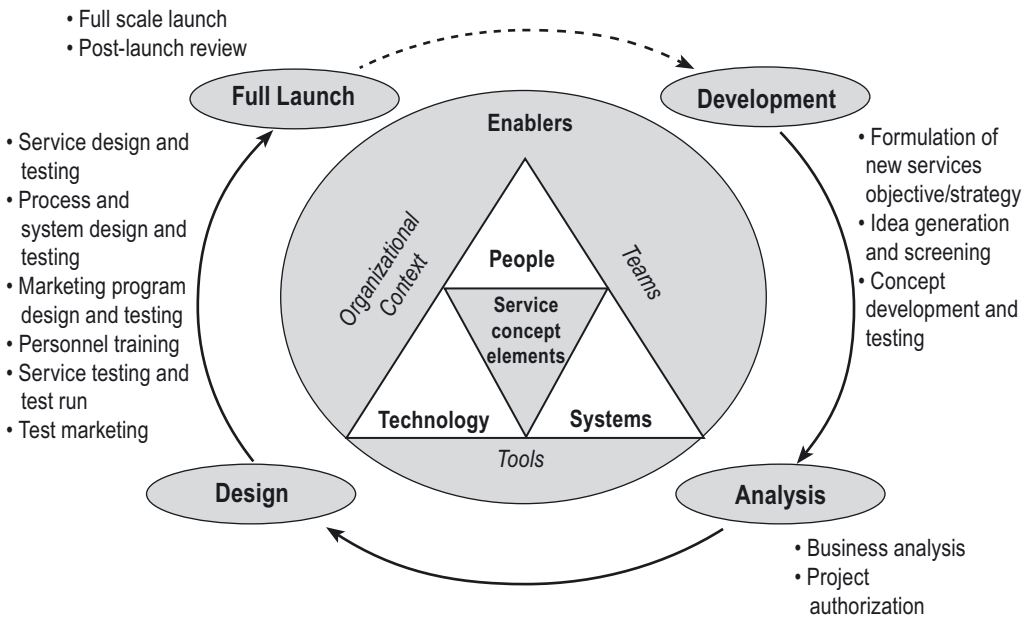

Figure 6. NSD process cycle (Menor et al. 2002, 141)

vice development and NSD, more or less, mean the same thing. For instance, recent research by Lidén and Sandén (2004) on service guarantees and service development, although using a construct "service development", still refers to models and studies by researchers who use the construct "NSD" in their own reports (e.g. Scheuing and Johnson 1989; Martin and Horne 1993; Johne and Storey 1998).

Futher, as Lovelock (1984, 44), although referring to the field of (service) marketing, has pointed out already more than twenty years ago, the word "new" is one of the most overused terms. However, as it has been suggested in the recent literature on service design, NSD is the most recent of the terms describing how (new) services are designed either from customer's or service provider's view point (Goldstein, Johnston, Duffy, and Rao 2002, 122), and therefore, particularly extensively used. In this regard, I shall suggest that from a conceptual point of view *service development and NSD are indicating the same phenomenon, and thereby, could be used interchangeably*.

In order to consider the outcome of NSD process, earlier research has suggested classification models for new services. Lovelock (1984), following the insights of Heany (1983) within the field of product development research, has originally introduced a classification model for new services. It posits on distinguishing developed new services into different levels according to their extent of change (Table 1). This model is widely acknowledged and cited in service literature (see e.g. Zeithaml and Bitner 1996; Menor et al. 2002; Fitzsimmons and Fitzsimmons 2006).

Table 1. Classification of new services (adapted from Menor et al. 2002, 138)

New service category	Description
Radical innovation	
Major innovation	New services for the markets as yet undefined; usually driven by information and computer-based technologies
Start-up business	New services in a market that is already served by existing services
New services for the market presently served	New service offerings to existing customers of an organization (although the services may be avaliable from other competitors)
Incremental innovations	
Service line extensions	Augmentations of the existing service line such as adding new menu items, new routes, and new courses
Service improvements	Changes in features of services that currently are being offered
Style changes	Modest forms of visible changes that have an impact on customer perceptions, emotions, and attitudes, with style changes that do not change the service fundamentally, only its appearance

All in all, referring to the discussion above, I have got an impression that *service development and NSD* as constructs more or less *refer to creating something totally new*. Thus, I suggest that service development and NSD are more referring to *radical innovations* than *incremental innovations* discussed in the Table 1. However, it is essential to be noted that improving (i.e. developing) the characteristics of service does not always have to be conducted through creating something totally new. As Berry and Lampo (2000, 265) point out, *service firms can also be innovative by redesigning the existing service (and its characteristics)*. In this regard, I suggest that the levels of innovation characterized as "*incremental innovations*" can, on the other hand, be considered as *outcomes of service redesign*. In this study, the insights of Berry and Lampo are preferred since they are more appropriate for the purposes of the study (i.e. investigating the design of a customer-friendly electronic service environment in the context of complex services, such as insurance).

As the discussion above indicates, term *service innovation* is also often mentioned in the context of service design and service development (see e.g. Sundbo, 1997; Sundbo, 2001; Barras, 1986; Gallouj and Weinstein, 1997). Similarly as in case of other related constructs, it is essential to determine what is meant by "service innovation", and thereby, make a distinction to the other constructs in question. Menor et al. (2002, 139) state that when comparing service development to service innovation as a construct, the former refers more to operative and tactical side of service development whereas service innovation describes long-term strategic view on offering new services. Since the focus of this study

is not on strategic management the long-term approach is not considered here. Thus, the term s*ervice innovation is not discussed in this study*.

3.2.2 Approaches on service design

Similarly as NSD has been suggested to consist of distinct parts (or phases), service design is approached from different angles as well. For instance, Ramaswamy (1996) has proposed a model for indicating the components of *service quality*, which contains two main approaches: *service design* and *service delivery*. In the model, "service design", referring to "the elements that are planned into the service" (p. 13), is suggested to contain four elements: *service product design, service facility design, service operations process design*, and *customer service process design*. Service product design refers to physical attributes related to a service (e.g. a meal served in a restaurant). Service facility design, in turn, refers to physical layout of the facilities of the environment in which the service is offered (e.g. restaurant interior). As to service as a process, service operations process design refers to the activities needed to deliver the service to the customer(s) (e.g. cooking the meal, and serving it to a customer). Taking the customer service perspective, customer service process design refers to the interaction between the customers and service personnel (p. 14–15)

Fitzsimmons & Fitzsimmons (2006, 81), sharing more or less similar logic as Ramaswamy, suggest that service design elements can be distinguished into two categories: *structural* and *managerial*, both incorporating four elements. The insights of Fitzsimmons and Fitzsimmons are depicted in Table 2.

Table 2. Elements of service design

		Description
Structural:	*Delivery system*	Front and back office, automation, customer participation
	Facility design	Size, aesthetics, layout
	Location	Customer demographics, single or multiple sites, competition, site characteristics
	Capacity planning	Managing queues, number of servers, accomodating average or peak demand
Managerial:	*Service encounter*	Service culture, motivation, selection and training, employee empowerment
	(Service) Quality	Measurement, monitoring, methods, expectations versus perceptions, service guarantee
	Managing capacity and demand	Strategies for altering demand and controlling supply, queue management
	Information	Competitive resource, data collection

As Table 2 indicates, *structural elements* comprise: *delivery system* (e.g. front and back office, customer participation); *facility design* (e.g. aesthetics, layout); *location* (e.g. customer demographics, competition, site characteristics); and *capacity planning* (e.g. managing queues). *Managerial elements*, in turn, contain *service encounter* (the actual situation in which customer interacts and communicates with a service and/or service employee); (service) *quality* (e.g. expectations versus experiences, service guarantee); *managing capacity and demand* (e.g. strategies for altering demand); and *information* (data collection).

Edvardsson et al. (2000, 120–122) distinguish three parts in service design: service concept design (which customer needs are met by the service, and how), service system design (different parts that support the service process: customers, physical and technical resources, company's organization including service culture and employees), and service process design (the chain of activities that realize the service). In this regard, Edvardsson et al. (2000) have proposed that service concept[4] should be determined before the actual design work (building up the needed resources and structures) begins (see also Shostack 1984).

Goldstein et al. (2002, 124) suggest that service concept provides companies with means to concretize their service offering. However, "the concretization" usually is made by conceptually determining and identifying the "ingredients" of the service (e.g. what is offered, and how, how a customer experiences the delivered service, and what are the benefits of the service for the customer) (e.g. Clark, Johnston, and Shulver 2000; Edvardsson et al. 2000).

Nevertheless, concretization does not mean that customer would be able to fully grasp the idea and the content of a service offering. In this regard, Bitner has proposed that *a company's service offering can be illustrated for the customers through service facility design* (Bitner 1992). More precisely, service facilities (i.e. service environment) provide customers with physical, and somewhat tangible, evidence about the service to be observed and evaluated (e.g. Zeithaml and Bitner 2006, 27). Hence, it can be stated that service concept design and service facility design are, on the other hand, closely associating with each other. This insight is supported by Fitzsimmons and Fitzsimmons (2006) who state that the physical (service) environment influences both customer and employee behavior and should be designed in a way that is congruent with the service concept (p. 224).

Some researchers, mainly representing the service marketing approach, have taken a particularly strong sequential and processual view on service design (see e.g. Zeithaml and Bitner 2006; Lovelock 2001; Lovelock and Wright 2002). They suggest a method called *service blueprinting* as a feasible tool for designing and illustrating how the service is delivered to the customers. Lovelock and Wright (2002) define service blueprinting as "a visual

[4] See also related discussion on *service marketing concept*: Lovelock (2001)

map of the sequence of activities required for service delivery that specifies front-stage and backstage elements and the linkages between them" (p. 153).

All in all, earlier literature emphasizes the role of service facility design as one of the fundamental elements of service design as a whole since it provides a customer with "physical cues" about a service (see e.g. Bitner 1992; Ramaswamy 1996; Fizsimmons and Fizsimmons 2006). Since the main focus of this study is on investigating the characteristics of the design of electronic service environment in the context of complex services, such as insurance from structural point of view, special attention is, therefore, paid to *service facility design* (e.g. servicescape) from service design point of view. In the next sub-chapter service facility design is conceptually determined and discussed more thoroughly.

3.2.3 Service facility design and servicescape

Consider yourself having a dinner in a restaurant. Food is delicious, which can be determined as the core service of a restaurant (offering delicious food to the customers). However, there are also other things that can have influence on how appealing or unappealing the customer perceives the service experience. These other factors, more or less, support the core service of a firm. According to earlier research, physical surroundings can have an affect on how positively or negatively the customer perceives the service (e.g. Baker 1987; Bitner 1986; Bitner 1990). From service marketing approach physical facilities are seen to affect service quality and service experience (Zeithaml & Bitner 1996, 517).

Service facility design has become generally accepted construct describing the designing of physical service environment (e.g. Baker, Berry, and Parasuraman, 1988, Turley and Fugate 1992, Zeithaml and Bitner 2006, Tax and Stuart 1997; Fitzsimmons and Fitzsimmons 2006). In service management literature service facility design has been defined as "the design of the physical layout of the facilities where the service is delivered" (Ramaswamy 1996, 14–15). However, when compared to other elements of service design, such as service process design or service operations design, *service facility design has remained somewhat sparsely researched field of service design*. Despite this, service facility design is perceived as one of the crucial elements affecting customers' level of willingness and motivation to use a certain service. Fitzsimmons & Fitzsimmons (1994, 108) suggest that service facility design represents the supporting facility component of service concept.

Due to the somewhat intangible nature, it might be difficult to the customers to understand the complete content of a service. Earlier research has stated that people often evaluate services, or at least part(s) of it, on the basis of what they see (Baker et al. 1988, 33). Service facilities are often the only *physical and tangible evidence* that the customers see in encountering a service (Zeithaml and Bitner 2006, 26–27). In this regard, it has been proposed that *in some situations customer may perceive service facilities as "the actual*

service" (Turley and Fugate 1992, 38). Hence, physical facilities are perceived as crucial elements when customers evaluate the overall content of a service (Shostack 1984; Zeithaml and Bitner 2006). *From service design point of view, the above mentioned insight of Turley and Fugate (1992) is actually one of the most crucial theoretical insights of this study*. This argument is discussed more extensively in electronic service context (chapter 4).

At this point, it has to be noted that physical facilities should be generally designed in a way that they are appropriate to their natural environment (Zeithaml and Bitner 1996, 521). For instance, insurance company should not resemble advertising agency but instead create trust in its customers because creating trust can be considered as one key characteristic of insurance business. In comparison, however, it is not one of the crucial elements of advertising business.

As to exploring the approaches on designing service facilities Turley and Fugate (1992, 40) have introduced a model in which five perspectives of service facility design are distinguished. These comprise: 1) the operational perspective, 2) the locational perspective, 3) the atmospheric perspective, 4) the customer use perspective, and 5) the contact personnel perspective (Figure 7).

Operational perspective refers to managerial and strategic considerations in both production and delivery of service. *Locational perspective* is particularly important especially when customer must go to a specific place in order to be able to use a service. *Atmospheric and image* perspective indicates the factors influencing customers' physiological or emo-

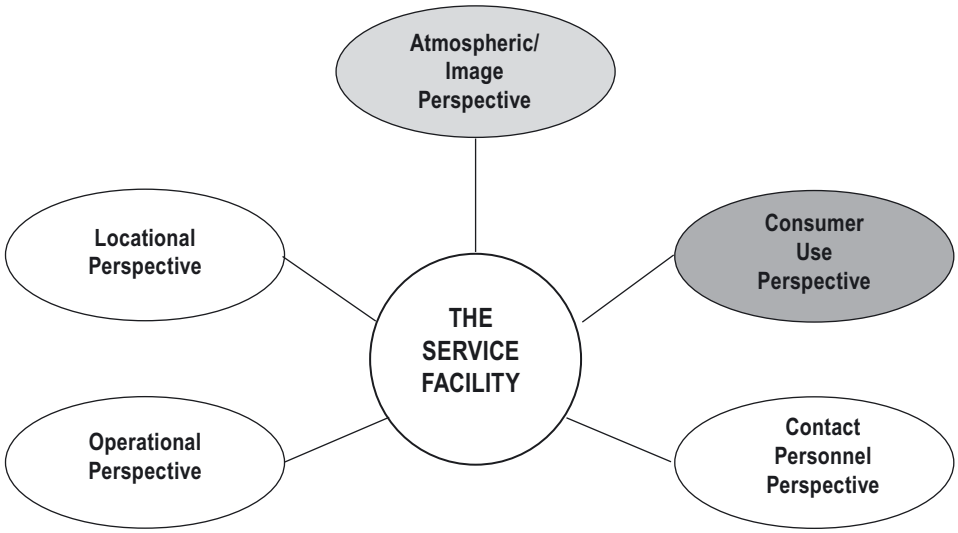

Figure 7. Perspectives associated with the service facility (adapted from Turley and Fugate 1992, 40)

tional responses. *Consumer use perspective* refers to user friendliness and customer-oriented design principles, and *contact personnel perspective*, on the other hand, emphasizes the employee perspective in service facility design.

The above presented model depicting the approaches on service facility design is found usable also for the purposes of this study. However, all the approaches are not covered in the study. First of all, employee approach is not considered in this research. Therefore, contact personnel perspective is excluded from the focus of the study. Second, operational perspective is also not considered in this study because the main focus, as already pointed out earlier, is on structural features of service design. And third, because this study concentrates on researching electronic service environment, locational perspective is excluded.

Instead, *atmospheric/image perspective, and consumer use perspective are followed in this study*. In order to illustrate the importance of these two approaches in the context of this study they are indicated with grey color in Figure 7. However, since *the main attention is paid to consumer use perspective* it is indicated with dark grey color while atmospheric/image approach is indicated with light grey color.

In order to characterize the crucial elements of service facilities Bitner (1992) has found three (structural) dimensions for determining the physical service surroundings. She has defined this conceptual framework as '*servicescape*' which refers to the "service environment in which the service is experienced by a customer, and/or in which the customer and the service provider interact" (p. 65). The three determinants of the servicescape are: 1) ambient conditions; 2) spatial layout and functionality; and 3) signs, symbols, and artefacts. As is pointed out, *servicescape plays an essential role in making the service more tangible for the customers* (Bitner 2000; Lovelock and Gummesson 2004).

According to Bitner (1992, 66) **ambient conditions** include background characteristics of the environment such as temperature, lightning, noise, music, and scent. In general, ambient conditions can be defined as those supporting characteristics of service environment that affect the five senses (Bitner 1992, 66).

Service environments are usually created for a certain purpose. For example, a restaurant is established to fulfill customers' needs to have delicious food in appealing surroundings. A Bank is established to serve customers in financial matters. In order to ensure that a service is experienced as positive as possible by a customer, **spatial layout and functionality** of service environment are seen particularly important. Spatial layout refers to the "ways in which machinery, equipment, and furnishing are arranged, the size and shape of those items, and the spatial relationships between them". Functionality, in turn, refers to the "ability of the same items to facilitate performance and accomplishment of goals" (Bitner 1992, 66). The significance of spatial layout and functionality is even emphasized in complex service environment. This is definitely the case in insurance service context. Similarly, in self-service surroundings, such as the Internet, where customers have to rely

on their own knowledge and competences to perform the needed service operations, spatial layout and functionality are really important elements of service design.

Many items can have symbolic meanings in service environment. **Signs, symbols, and artefacts** as the third dimension of servicescape represent more abstract features of physical facilities. Signs can be used in various purposes in service surroundings. For instance, in enhancing a company's brand image (name labels etc.), instructing customers (e.g. entrances, exits), and setting behavioral rules (no smoking etc.) signs are often used. Similarly, colors or size may also have symbolic meanings. For example, the size of an office may tell something about employee's status within an organization. Differentiating workers by dressing people performing a certain job with a certain color clothes (white collar versus blue collar people) is one generally used example in many contexts. In hospital environment doctors, for example, are separated from nurses with jackets of different colors.

All the discussion above can be considered to be more or less referring to the explicit physical element of the service environment. In this regard, Fitzsimmons and Fitzsimmons (2006, 228) point out that service facility design also has impact on the implicit elements of service, for instance, on criteria such as privacy and security, atmosphere, and sense of well-being perceived by a customer. However, *the main focus of this study is on investigating the explicit elements of the service environment*.

In order to determine the perspective of this study on designing the service environment (i.e. service facility design), the phenomenon is mainly approached through the *lenses of servicescape* suggested by Bitner (1992). In the context of this study the servicescape logic is applied to electronic service environment in a way established through chapter 4 resulting in introducing a preliminary theoretical framework for characterizing the structure of *electronic insurance servicescape*.

Further, service concept is suggested to form a starting point for service design. However, assuming that service concept is discovered feasible and functional, my opinion is that service facility design is the most important element in providing customers with visible cues about the content of the service concept. In this regard, I argue that *service concept design, more or less, represents a concretizing phenomenon of a firm's service offerings to service providers but the service concept is concretized for customers in visual form through the servicescape*. Therefore, service facility design can be considered as one of the most crucial elements of service design from the customer's point of view.

In this regard, this chapter provided a theoretical justification for the question: "why should service facility design be investigated"? In the next chapter the service discussion presented in this chapter is adapted to the electronic environment.

4 THEORETICAL FOUNDATIONS FOR ELECTRONIC SERVICESCAPE

The construct *servicescape* originally introduced by Bitner (1992) describes the characteristics (ambient conditions; spatial layout and functionality; signs, symbols, and artefacts) that are essential in designing the physical service environment. In my opinion, this approach may be employed in electronic service environment as well. However, in order to be able to utilize the approach it has to be adapted to the electronic service environment.

Applying the servicescape to the electronic service environment is the key objective of chapter 4. In this regard, few new crucial concepts (*electronic services* and *Web site usability*) are introduced. The theoretical discussion is complemented with empirical observations on usability of electronic insurance services, and on this basis the preliminary characteristics of electronic insurance servicescape are discussed (Figure 8).

Chapter 4 starts with a general discussion on the characteristics of electronic services (chapter 4.1). In order to refine the servicescape into being suitable for the electronic service environment, feasible insights can be discovered from the field of information systems (IS) research, especially usability research. The earlier discussion on the usability research, especially Web site usability research, is elaborated in chapter 4.2.

Adapting the earlier theoretical discussion on Web site usability to the insurance context, two pilot studies for evaluating the usability of electronic insurance services from multinational perspective were conducted. Based on the results of the pilot studies, usability attributes essential to electronic insurance service context are suggested. These two pilot studies are introduced and discussed in chapter 4.3. Furthermore, basing on the results of the pilot studies a "traditional versus novel typology" on designing electronic insurance service environment is introduced and discussed in chapter 4.4 in order to describe the prevailing practical tendencies within insurance sector. Finally, integrating the servicescape model by Bitner, and the results of the pilot studies *a preliminary framework for characterizing the electronic insurance servicescape* is introduced in chapter 4.5.

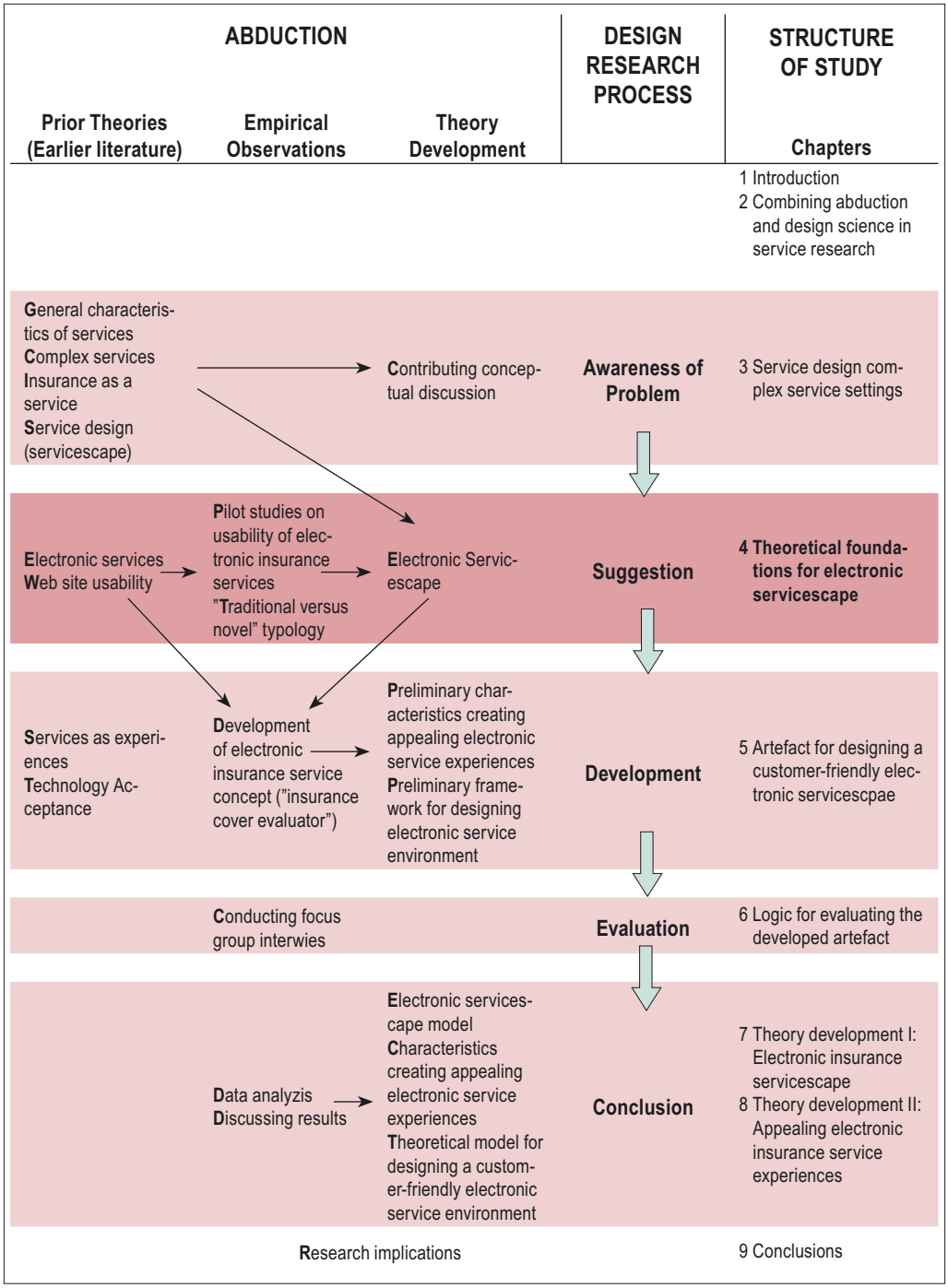

FIGURE 8. OBJECTIVE OF CHAPTER 4

4.1 Electronic services

As argued above, due to the characteristics of the electronic services the design of electronic service environment should be approached differently as the design of the physical service environment. In this regard, I argue that in order to better understand the discussion on the design of the electronic service environment, which is the main theme of this study, it is particularly important to first discuss the essential characteristics of the electronic services in general.

I shall begin the discussion with characterizing the conceptual nature of *electronic services* in chapter 4.1.1. Taking the service providers' perspective, the role of technology in services in general is discussed in chapter 4.1.2. Customers' perspective on electronic services is elaborated in chapter 4.1.3. The sub-chapter ends with characterization of electronic insurance services in chapter 4.1.4.

4.1.1 Conceptualizing electronic services

Electronic services have usually been attached to the same connection with the Internet. Electronic service as a construct has evolved along with the evolution of tools and infrastructure that were created to the Internet environment. When firms started to shift their activities (and services) to the Internet (or Web) in the mid-1990, more popular terms were *electronic commerce (e-Commerce)* and *electronic business (e-Business)*.

Since the rise of Internet the development of the used technologies and the content itself has been rapid. Kalakota and Robinson (2001) have identified three chronological phases of the evolution of the Internet as a service (or delivery) channel. In the *first phase of the Internet* (1994–1997) the trend of service providers can be called as "*being there*". In other words, every company had to have home pages and be available on the Internet. The *second phase* (1997–2000) was about "*eCommerce*" when online-trading (buying and selling) was emphasized. This phase was strongly driven by the technology and technological innovations. In the *third phase* service providers started to think more about customers and their needs, and also the strategies that would help them receive real business benefit out of the Internet channel. This phase was defined as "*eBusiness*" phase (2000–).

After the "hype era" of the Internet was over the Internet was seen in a new light. Just constructing home pages did not mean that a service provider would become a millionaire. Content creation and the logic of making business profitable were new drivers for the development of Internet-based services. Term "electronic service" or "e-Service" also started to occur. Researchers as well as business people started to see the Internet (and also other electronic channels such as digital TV) as a potential and optional service channel

to other, more traditional, service channels of a firm (e.g. branch offices, telephone service), and thereby to emphasize the service dimension of the electronic channel, such as the Internet.

In this regard, Rust and Lemon (2001) stated that the Internet is also much more than a place for accessing good and/or order fulfillment, and more benefits could be taken out from it by developing electronic services, not just e-Commerce goods distribution places. Hence, the current discussion, at least within the service research field, focused on e-Services instead of e-Business or e-Commerce.

Rust and Kannan (2002) have defined e-Service simply as "the provision of service over electronic networks such as the Internet" (p. 4). According to Boyer, Hallowell, and Roth (2002) e-Services are "comprised of all interactive services that are delivered on the Internet using advanced telecommunications, information, and multimedia technologies" (p. 175). As can be interpreted, both definitions refer to considering the electronic channel as a holistic platform for offering services, and thereby, pursuing business.

A more comprehensive definition of electronic services is proposed by Järvinen and Lehtinen (2005). According to them "*e-Service is a benefit-providing object of transaction that can be characterized as an intangible process that is at least partially produced, marketed and consumed in a simultaneous interaction through electronic networks*" (p. 84). From conceptual point of view, the definition by Lehtinen and Järvinen (2005) is found to be generally illustrating the essential nature of electronic services, and thereby, represents the insight followed also in this study.

Further, term e-Service is an extensive concept that can be understood to contain different kinds of services offered in the electronic service environment, such as the Internet. More concretely, one could raise a question: "what are those services actually"? What can be defined as e-service? For instance, offering information (reading newspaper) on the Internet is electronic service similarly as electronic buying transaction (e.g. making a hotel reservation through a Web site of travel agency or other service provider). Online banking has become particularly popular e-service at least in Finland and other European countries as well as in the United States. According to the recent interview research by The Finnish Banker's Association (2006) 66 % of the customers of Finnish banks nowadays prefer the Internet as the service channel for paying bills. Concerning the insurance sector, searching for insurance information or getting an insurance quote on the Internet are also electronic services, although they are used much more rarely than, for example, banking services.

To conclude the discussion from the perspective of service researcher, Internet is about offering services. Almost all the content available on the Internet can nowadays be considered as a service to some extent, be it information search or buying movie tickets on the Internet. At this point it is essential to emphasize that in this study electronic services

are referring to the services that are offered via the Internet only. Other electronic service channels, such as mobile devices and digital TV, are excluded from the scope of the study.

4.1.2 The role of technology in services

The role of technology in the service sector has been growing along with the development of the Internet as a service channel. From the service management point of view, new phenomena influencing the entire nature of service business have arisen. As Heinonen and Strandvik (2005, 187) note, new electronic media, such as the Internet, *has high potential for interactivity and flexibility in terms of accessibility* (where) *and availability* (when) *of services*. Further, following the insights of Normann (2002, 145) three essential types of new phenomena for services in the electronic environment can be identified: 1) customers are now living in *real-time* economy by expecting that they get service without delays, 2) service is *interactive* meaning that the electronic system on the Internet through which customer is using a certain service is responding to customer's needs, and 3) along with the Internet as a network service business has become *global*.

Other kind of characterization of electronic services has been suggested by Fitzsimmons and Fitzsimmons (2006). In their characterization the essential features of traditional (physical) services are compared to the ones of electronic services. The characterization by Fitzsimmons and Fitzsimmons is depicted in Table 3.

Table 3. Electronic services vs. traditional services (adapted from Fitzsimmons and Fitzsimmons 2006, 114)

Features	Electronic Service	Traditional Service
Service encounter	*Screen-to-face*	*Face-to-face*
Availability	*Anytime*	*Standard working hours*
Access	*Anywhere*	*Travel to location*
Market area	*Worldwide*	*Local*
Ambiance	*Electronic interface*	*Physical environment*
Competitive differentiation	*Convenience*	*Personalization*
Privacy	*Anonymity*	*Social interaction*

The classification presented above describes particularly well the essential differences between the traditional (physical) services and electronic services. Naturally, it should be noted that this classification is not, by any means, exhaustive. In addition, some of the

characteristics presented in the table are somewhat questionable. For example, in recent years firms within different fields of service business have put effort to the development of *personalized electronic services*. Services that are secured with user names and passwords (user accounts) in order to provide a customer with services that are tailored according to the customer information (e.g. delivering news and other kind of information based on customers preferences) exist at least within the banking and insurance business. However, the classification provides an illustrative insight into the characteristics of electronic service environment, and thereby, is useful for the purpose of this study.

Technology can be involved in service experience in many ways. It can be seen as a supporting tool, assisting resource, or a crucial part of the service system enabling the service experience as a whole. In my opinion, Froehle and Roth (2004, 3) have successfully described the different roles of technology in service experience through five distinct modes. The model is depicted in Figure 9.

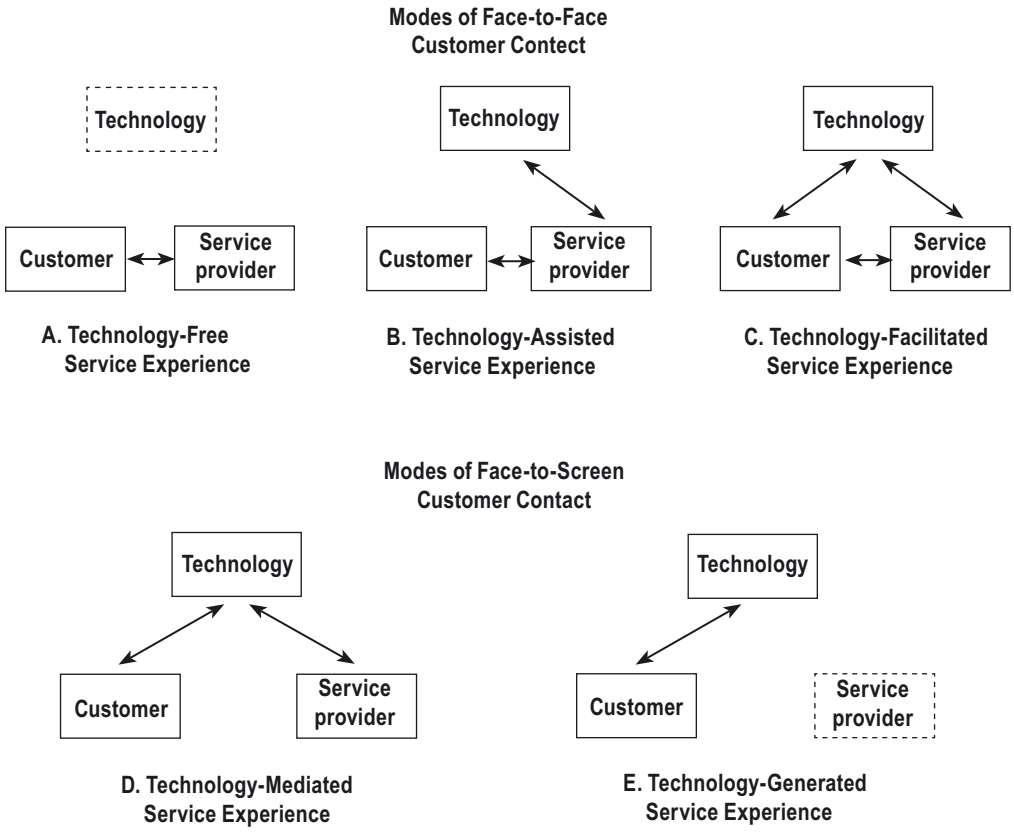

Figure 9. Types of customer contact in relation to technology (adapted from Froehle and Roth 2004, 3)

Mode A (*technology-free service experience*) refers to the traditional service experience where a customer and a service provider are communicating together in a physical location and service is based on service provider's physical skills, such as getting a haircut. Mode B (*technology-assisted service*) describes a situation in which a service provider uses technology (e.g. technical device or software) that assists finishing the service experience. Check-in at the airport can be mentioned as an example of technology assisted service experience. *Technology-facilitated service experience* (mode C) refers to a situation in which a customer and a service provider are using the same technological device or system in creating service experience. For example, financial advisors can show models, stock rates etc. to the customer on the screen. Customers using call-center services to support the electronic transactions on the Internet can be mentioned as an example of mode D (*technology-mediated service experience*). Mode E (*technology-generated service experience*) refers to a situation that generally refers to a Internet-based service. In this case a customer completes a service encounter in an electronic service environment without a (physical) support, help or any kind of presence of the service provider. In the service literature this mode of service experience is also defined as *self-service* (see e.g. Fitzsimmons and Fitzsimmons 2006, 106; Meuter, Ostrom, Roundtree, and Bitner 2000; Bitner, Meuter, and Ostrom 2002; Boyer et al. 2002, 179).

From the conceptual point of view, "*Self Service Technologies (SSTs)*" is a generally established term referring to, for instance, Internet-based services, services through telephone or other services in which technology and/or technical interface is involved but the physical service contact is lacking (see e.g. Bateson 1985; Dabholkar 1996; Meuter et al. 2000; Rust and Kannan 2002; Curran, Meuter, and Surprenant 2003; Chen 2005). SSTs are defined as "*technological interfaces that enable customers to produce a service independent of direct service employee involvement*" (Meuter et al. 2000, 50). Of course one could criticize that self-service is not service at all since customers have to take care of their service needs by themselves, for instance, by using services available on the Internet. This is certainly one way to approach the issue.

However, as electronic services in many cases, such as banking, have become particularly common, customers perceive them and their characteristics, such as self-service logic (customers might produce the entire service outcome, or part of it, by themselves) or good accessibility, as one considerable and equal option to other service channels – despite the lack of physical contact and support. Since a possibility to get advises through telephone has been a widely utilized strategy within insurance sector already before the Internet era, and still is, *SSTs are considered to include both technology-mediated and technology-generated types of service experiences in this study*. Nevertheless, as the goal of service environment design in the scope of this study is offering comprehensive and comprehensible elec-

tronic services without any need to switch to another service channel, such as telephone, *technology-generated service experiences obviously are in the main role*.

In order to describe the change in how customer and service provider interact in a *marketplace*, a new term has been suggested to replace term marketplace in electronic service environment, namely "marketspace" (Rayport and Sviokla 1994, 1995; Lovelock and Wright 2002). The traditional term marketplace refers to the physical place where customer and service provider meet in order to do business 2002, 243). *Marketspace* refers to the "electronic virtual realm where products and services exist as digital information, and where customer and service provider do not meet but where they can do business electronically, for example, through the Internet" (Rayport and Sviokla 1995, 14).

To conclude, technology-generated, and also technology-mediated services to some extent, are in the main focus of this study. In this regard, term "SSTs" as conceptually determining the nature of the electronic services, which are mainly based on self-service logic is used in the extant service literature. *In this study, I mainly use terms "self-service logic", "servicescape", or "service evironment" throughout the report while referring to "SSTs"*. Whereas this sub-chapter generally characterized the role of technology in services from service provider's viewpoint, the main attention in the next sub-chapter is paid to customers.

4.1.3 Customer perspective on electronic services

Offering electronic services is nowadays "everyday-life" to most companies. *Understanding why customers use or decide not to use electronic services is of the utmost importance in this study*. However, before moving to consider electronic services from a customers' point of view, I shall take a short glance at the benefits the companies acquire through offering electronic services, and thereby give financial justifications for electronic service business from the perspective of the service provider. In this regard, at least two primary features are essential and should be mentioned.

First, companies are nowadays intensively looking for *effectiveness and cost savings*. In terms of costs required to produce a service, electronic services are found to be more cost effective than traditional services (e.g. Verma, Iqbal, and Plaschka 2004; Bitner, Ostrom, and Meuer 2002). Further, electronic services are considered to facilitate the transfer of information, goods, and services between a firm and a customer, and thereby increase the efficiency of business (Cavusoglu, Mishra, and Naghurathan 2004, 69). On the other hand, continuous development of new services makes it necessary for the companies to invest in development work (Verma et al. 2004, 44). Thus, despite the fact that electronic services may be cost effective the case is necessarily not unambiguous. *Second*, as the In-

ternet is a global network it provides a company with potential and possibilities to reach new markets and new customers, and thereby opportunities to increase sales volume and profits (Boyer et al. 2002; Bitner et al. 2002).

Characteristics encouraging customers to use electronic services

Taking the perspective of a customer, certain characteristics can be found in the literature that encourage the customers to operate in the electronic service environment. These kinds of characteristics comprise: *accessibility, time and cost savings, self-service logic, media richness*, and *customization and personalization*. Naturally, the characteristics discussed here do not constitute an exhaustive list of the benefits of electronic services for the customers but they are picked up from the earlier literature, and discussed in the following paragraphs in order to illustrate, at least in my opinion, some of the most focal features of electronic services for the customers.

Accessibility. One characteristic of electronic services that customers are perceived to appreciate is good accessibility. This feature can be considered through two distinct dimensions: *time and place*. First, customers in the electronic service environment are delighted with the possibility to use the services independent of the office hours of service providers (see e.g. Reichheld and Schefter 2000, 113; Bitner 2000, 55). Customers can use the services whenever, or anytime, as suggested by Fitzsimmons and Fitzsimmons (2006), it is suitable for them. Second, customers are not dependent on place-dimension. They do not have to go to a certain physical location of service provider in order to be able to get service. Instead, they can use the services, for example, from home through the Internet connection, or in general, *wherever* (or anywhere) they want (Fizsimmons and Fizsimmons 2006).

Time and cost savings. For many customers using electronic services, *time saving* is one of the most essential features. For example, in case of paying bills, online banking is usually a faster alternative than going to a physical location of a service provider (e.g. Bhasin 2005, 152). Time saving can also be considered to be closely related to accessibility elements (whenever and wherever). Similarly as time saving, *electronic services are in many cases also more cost efficient than traditional (physical) services*. Also here, the above described banking example can be referred to.

Self-service logic. The possibility to have control of the service situation without any interference of service personnel of a service provider by using self-service technologies (SSTs) is also seen as one positive feature of electronic services from the customers' point of view (e.g. Bitner 2000, 55). In using electronic services based on self-service logic customers do not have a feeling that someone is watching or looking after them but they can use as much time as they want to fulfill their service needs.

Media richness. Whereas newspapers provide customers with a piece of information in a written form, radio through sound, wall paper advertisement on the walls through sight, TV combines these elements. However, *Internet* as a channel for providing a customer with a piece of information does even more: it is an *interactive media* (Rust and Lemon 2001, 86). There is a wide range of information of different levels, from written information to multimedia, available for customers, which they can use in a way most appropriate for them. Moreover, the customers can *communicate interactively with the media* (Palmer 2002, 153).

Customization and personalization. Although Fitzsimmons and Fizsimmons (2006), while comparing the characteristics of traditional and electronic services, indicate that traditional services are more customized and/or personalized than electronic services, also they can be customized. As an example, Amazon.com learns from customer's operations (navigation activities) on the Internet, and customizes its electronic service content according to the customer's preferences indicated by his moving. However, customization, although it might appear easy to the customers, is a complicated task for service providers. This is especially the case when services dealing with a large amount of information, such as insurance, are concerned. In this regard, Meister, Patel, and Fenner (2000) have raised their concern by referring to the issue that one of the greatest challenges for developing electronic services is customization of services without making the Web sites more complex but rather retaining the simple, accessible, and easy-to-use interface (see also Boyer et al. 2002).

Characteristics discouraging customers to use electronic services

In addition to characteristics encouraging customers to operate in the electronic service environment, there is another side of the coin. In general terms, customers' attitudes and feelings towards electronic services might decrease their willingness to use them (e.g. Heinonen and Strandvik 2005, 196). Further, structural characteristics of electronic services might discourage customers in using them as well, or in a worst case make the customers reluctant to use them at all. These kinds of characteristics comprise: *lack privacy, lack of security, lack of trust, self-service logic*, and *poor design*. As stated also in the case of the encouraging characteristics, the list is not exhaustive but in my opinion the above mentioned characteristics certainly are essential from the customers' point of view.

Lack of Privacy. Customer data is very valuable for service firms trying to develop and improve their electronic services. In this regard, customers' direct feedback provides the firms with concrete insights into the directions of improvement(s). However, taking the customers' perspective, the intensive tracking of customers' movements in the electronic service environment, and thereby, comprehensive utilization of the gathered customer

data might get customers to feel uncomfortable, as if they have been watched all the time when they are browsing on the Internet (e.g. Dinev and Hart 2005; Malhotra, Kim, and Agarwal 2004). In other words, *while using electronic services customers desire to retain their privacy to some extent*.

Lack of security. Customers are used to operate on the Internet, at least to a certain extent. Searching information, for example, is convenient but when it comes to delivering personal information or especially information related to payment (i.e. credit card numbers) over the Internet, customers still become skeptical. There is lack of trust in the security of the Internet by customers (see e.g. Cavusoglu et al. 2004, Iyengar 2004). The customers are afraid of, for example, security breaches and interferences by unauthorized unknown parties, which might cause troubles or even serious financial losses to the customers operating on the Internet.

Lack of trust. In general terms, trust, or trustworthiness, is a multidimensional concept, and defining it is not unambiguous. This notion is also discussed in the earlier literature (see e.g. Mayer, Davis, and Schoorman 1995). However, in the context of electronic services trust is often considered to be referring to the relationship between the customer and the service provider (e.g. Gounaris, Dimitriadis, and Stathakopoulos 2005; Hwang and Kim 2007), or information available on the Web sites (e.g. Flavián, Guinalíu, and Gurrea 2006). On the basis of the earlier research on trust in the context of electronic services, it can be stated that in terms of trust and trustworthiness *it is utmost important to the customers that they can trust in both the content of the electronic service environment (i.e. information) and the service provider*.

Self-service logic. The possibility to use SSTs, i.e. using services without the presence of service clerk has also another side. Lack of face-to-face contact namely has been perceived as a negative feature of electronic services by the customers. Especially in cases where customers would need guidance or assistance to support their decision making, the self-service nature means that they have to help themselves (Colby 2002, 31). As to offering personalized services, customers might also feel that lack of face-to-face contact hinders the possibility for personalization. Instead, electronic services might be perceived as faceless and standardized (i.e. same service for all customers). In any case, if customers wish to successfully use electronic services based on self-service logic, they have to possess sufficient physical and mental skills and/or appliances to make self-service possible (e.g. Vargo and Lusch 2004). In this regard, more might be required of the customers than is required of them in the traditional (physical) service environment by service providers.

Poor design. If electronic services do not work properly, or better said, in a way a customer expects them to work, customers are not satisfied with the content of the services. The electronic services could be, for instance, poorly designed technically (functionality), or the service environment could be difficult to use (Bitner 2000, 56). If that is the case,

customers might easily switch to another service provider, or become reluctant to use electronic services at all.

On the basis of what is discussed above about the encouraging and discouraging features of electronic services, few concluding remarks can be drawn. *First*, self-service logic can be perceived as both positively and negatively by the customers. If everything goes well self-service logic is perceived positively but if problems occur, customers might need (physical) support and assistance. In that sense, self-service logic is perceived negatively by the customers.

Second, following the insights by Yousafzai, Pallister, and Foxall (2003) trust and trustworthiness of the electronic service environment can be considered to incorporate both security and privacy[1]. In my opinion, this indicates the central role of trustworthiness in the context of electronic services. In addition, insurance as a service should create trust among customers (see chapter 3.1.3), which emphasizes the role of trustworthiness even more as a crucial characteristic to be considered from the service design point of view. And third, poor design of the electronic services and service environment in general might cause customers to become reluctant to operate in the electronic service environment. *This point of view strengthens the justification for the essential objectives of this research in investigating the design of an electronic service environment in the context of complex services, such as insurance*.

For the sake of clarity, and in order to complete the general discussion on the nature of electronic services I consider it important to still characterize electronic insurance services. In this regard, the nature of electronic insurance services is discussed in the next sub-chapter.

4.1.4 Characterizing electronic insurance services

Insurance as a service was generally characterized in chapter 3.1.3, and the conceptual nature of electronic services was discussed in chapter 4.1.1. As the *main focus* of this study is on *electronic insurance services* it is also essential to shortly review the specific nature of electronic insurance services.

In the following sections the nature of electronic insurance services is discussed from two essential perspectives. First, the electronic insurance services are reflected through the IHIP framework. After that, electronic insurance services are classified based on the earlier discussion on general service classification and a model of classifying financial services from a strategic point of view.

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[1] In their model of e-trust for electronic banking Yousafzai et al. (2003, 856) propose *perceived security and perceived privacy* as main antecedents of e-trust.

IHIP framework perspective

From the IHIP framework point of view, the specific characteristics of insurance and electronic services are somewhat similar (cf. discussions in chapters 3.1.1 and 3.1.3). However, few refining remarks should be made. As to *intangibility*, it is stated that *insurance services possess high level of both physical and mental intangibility*. However, all electronic services, although physically intangible, are not necessarily mentally intangible. Buying a camera over the Internet can be considered as an example of physical but not mental intangibility. Thus, *in electronic insurance services mental intangibility is emphasized*.

Furthermore, Lovelock and Gummesson (2004) claim that heterogeneity is not fully applicable service characteristic in the electronic context. While I agree with that, my opinion is that *insurance products and services are more heterogeneous than simple services*, such as buying a camera over the Internet or reading an online newspaper, since insurance cover is usually affected by personal customer characteristics (see also chapter 3.1.3). Thus, I suggest that *heterogeneity can be considered as an applicable characteristic of electronic insurance service*.

Inseparability of the service production and consumption is neither applicable service characteristic for traditional (physical) insurance services nor electronic services in general. Thus, *inseparability is not a relevant characteristic for electronic insurance services*.

From *perishability* point of view, Lovelock and Gummesson (2004, 31) state that a possibility to record some types of electronic services, such as music or movies, enables the reusing of electronic services. As discussed in chapter 3.1.3, a possibility to reuse a purchased insurance cover makes insurance services perishable, to some extent. Combining these two insights, I shall argue that *electronic insurance services can be considered perishable* as well.

Classifying electronic insurance services

The above presented discussion referring to the IHIP framework provides a detailed picture about the characteristics of electronic insurance services. However, in order to provide a more comprehensive picture about the essential nature of electronic insurance services, they are classified by referring to the earlier literature discussed in chapter 3.1.1. The discussion is concluded by applying a three-dimensional cube model on classifying different types of financial services from strategic point of view to the scope of this study (Järvinen, Lehtinen, and Vuorinen 2003).

In their model Järvinen et al. (2003) have combined the insights of earlier studies on classifying services by attaching customization approach together with service encounter and technology approaches. The model reflects services through three dimensions which comprise: 1) *service encounter* (extent of physical resources by service provider in service

performance); 2) *technology* (extent of technology involved in the service process); and 3) *service type* (whether the service is "standardized", "partly customized", or "customized). All the dimensions are ranging from "low" through "middle" to "high" in terms of their extent.

Even though the cube model is developed for the context of financial services, it is not applicable for the purposes of this study as such. As customer-friendliness is one of the key phenomena of this study customers' insights are taken into account also in the classification of electronic insurance services. In this regard, the cube model has to be refined according to the following remarks.

First of all, service encounter is not distinctively examined in this study. Services are often seen as being produced and consumed simultaneously. This is especially the case in the context of electronic services since *customers' operations are based on self-service logic*. Following the IHIP framework, the above presented statement refers to inseparability (i.e. simultaneity) of service. On the other hand, service production and consumption might be considered as two different phases of service as well (Järvinen et al. 2003, 776). Since the focus of this research is not on examining neither service production nor service consumption distinctively, but it is on investigating the service environment in which the overall service performance occurs, *service production and service encounter are considered as one entity*, namely, *service performance*.

Regarding this, Chase (1978) has suggested that service performances can be classified according to the extent of customer contact required in service delivery. Due to the highly intangible (both physically and mentally) nature of electronic insurance services the proportion of tangible elements and physical resources, such as presence of service personnel, in service performance is particularly low. Hence, the *extent of customer contact in insurance service performance is high*. On the other hand, as Järvinen et al. (2003, 779) point out, Internet-based service supported by call center services, can be perceived rather as middle touch than high touch services since there is physical interaction between the customer and a representative of service provider to some extent. Based on the notions of Chase (1978), Kotler (1980; 2008), and Järvinen et al. (2003) the first classification dimension for electronic insurance services is suggested to be the extent of customer contact (touch) in service performance (from "low touch" to "high touch").

Second, in this study electronic services are the focus of attention. Although the cube model also reflects the electronization of services, in this study no other than electronic services are examined. Therefore, the *technology dimension of the cube model is irrelevant, and thus, it is not examined in this study*.

Instead, one of the most crucial features of insurance services in both physical and electronic environments is that they are used only occasionally. For instance, when compared to certain banking services (i.e. paying bills etc.), which might be used even daily, insur-

ance services are often used only a couple of times a year. As Grönroos (2000, 49–50) has suggested, services can be classified according to their *frequency of use* (discretely/continuously rendered services). Thus, following and applying the insights of Grönroos (2000) the second classification dimension for electronic insurance services, and naturally insurance as a service in general too, is named according to the extent of the *frequency of use* (from "low frequency" to "high frequency").

And third, customization is discussed as a discouraging characteristic of electronic services in general from customers' point of view. However, the emphasis of this study is not on investigating the customization of the (electronic) services distinctively. Thus, *customization dimension* of the cube model *was found somewhat irrelevant for the scope of this study*.

In order to describe customers' attitude towards insurance services in general, it can be stated that insurance does not arouse any particular interest or emotion among customers. Instead, insurance as a service is usually perceived as a more or less compulsory matter by the customers, which just has to be taken care of. Customers are rather interested in, for instance, their leisure-related affairs, such as traveling, hobbies, culture etc.

In the field of consumer research, there has been discussion about the *extent of involvement of customers* (e.g. Rotschild 1984; Kapferer and Laurent 1985a; Kapferer and Laurent 1985b; Dahlén, Rasch, and Rosengren 2003). Originally the construct was related to products and advertising, but my opinion is that it can be discussed in case of (insurance) services just as well. *Involvement* refers to the "customers' state of motivation, arousal, or interest in getting themselves familiar with a certain product or service, and it appears through types of searching, information processing and decision making" (Rotschild 1984, 217). In their recent study on consumer responsiveness to marketing communication Heinonen and Strandvik (2005, 190) have taken a more extensive approach to the topic by discussing about *relevance* that indicates the extent of customer's *commitment* to a certain service provider as well as his *involvement* to a certain product category. However, as insurance services (and products) are of the focus in this study, more narrow approach embracing the involvement of the customers in insurance services is preferred.

Earlier research has suggested five antecedents for determining the involvement, namely: 1) personal importance of the product, 2) perceived importance of negative consequences of a mispurchase, 3) subjective possibility of a mispurchase, 4) hedonic value of the product class, and 5) perceived sign value of the product class. The involvement is usually described through two dimensions: *high* or *low*. Following the generally acknowledged definition of involvement by Rotschild (1984) *high involvement* indicates customers' *high levels of interest, motivation and arousal towards a certain product and/or service* whereas *low involvement* indicates *the opposite situation*. In order to limit the discussion on involvement in this study, *it is* not considered in its extensive meaning through the five

antecedents but it is *considered from the perspective of its above presented generic definition by indicating the extent of the interest of the customers only*. In this regard, the third classification dimension for electronic insurance services indicates the extent of the involvement by the customers in relation with (electronic) insurance services (from "low involvement" to "high involvement").

After introducing the most crucial classification dimensions elements a cube model for classifying electronic insurance services is proposed in Figure 10. As discussed above the model is based on the logic introduced by Järvinen et al. (2003), which adapted to the purposes of this study.

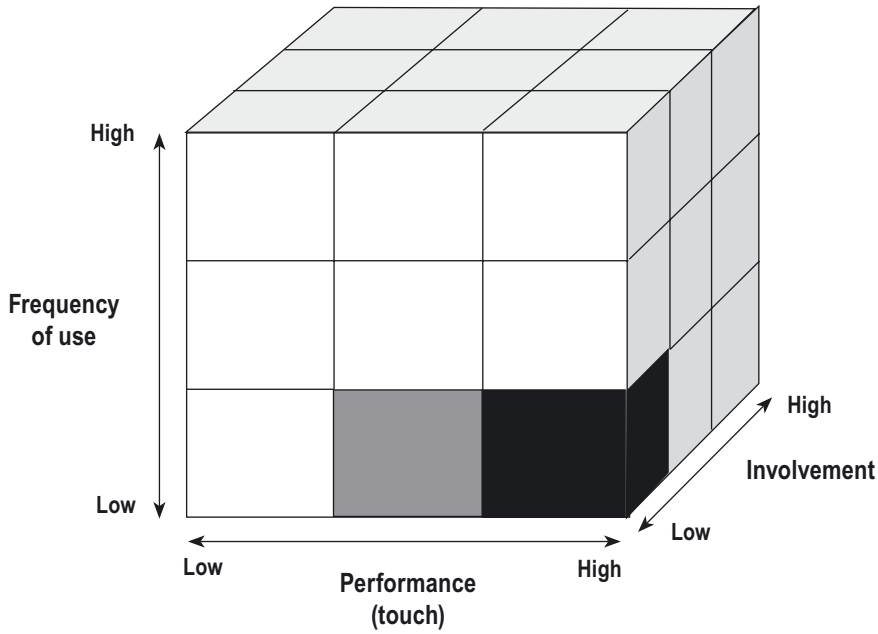

Figure 10. A proposed model for classifying electronic insurance services (adapted from Järvinen et al. 2003, 787)

To conclude, the black colored area on the lower right corner illustrates my insight into how insurance as a service can be classified in electronic service environment. It is reflected by *low involvement* by the customers, *low frequency of use*, but on the other hand, *high customer contact* because customers are, according to the self-service logic of Internet-based services, basically using the services to the extent their skills enable them to use them. A grey area on the left side of the black area describes the notion of Järvinen et al. (2003) that electronic, Internet-based, services supported with, for instance, call center services are rather considered as middle touch than high touch services.

4.2 Web site usability

The usability of Web sites has become an important research subject in recent years. This is understandable since Web sites are the key interface for customers using the Internet (Palmer 2002, 151), and thereby, self-service technologies. However, before the Internet era usability as a construct was mainly related to the research on information systems (IS) and human-computer interaction (HCI) research (e.g. Booth 1991). Within these fields several researchers have suggested different kinds of metrics to evaluate the usability (e.g. Nielsen 1993; Van Laan and Julian 2001; Koubek, Benysh, Buck, Harvey, and Reynolds 2003). Van Laan and Julian (2001) have generally defined the *usability of information systems* as "the practice of taking human physical and psychological requirements into account when designing programs and documents" (p. 6). In their opinion, the purpose of usability is to improve products and services and make them more intuitive for the user.

Since the Web has become essential and widely used electronic interface between service providers and their customers, the usability research has also primarily focused on Web service environment (Nielsen, 2000, 10–11). On the other hand, web site usability may be perceived as referring somewhat too much to engineering approach (e.g. Palmer 2002). In this regard, term *Web site design* is used in discussions on the characteristics of the Web environment (e.g. Paden and Stell 2000; DeWulf, Schillewaert, Muylle, and Rangarajan 2006).

Differing opinions on the relationship between Web site usability and Web site design have occurred in the extant literature. It has been suggested that usability is a feature of Web site design, and thereby, Web site design is a more extensive concept than Web site usability (e.g. Palmer 2002). Further, in discussions on the quality of electronic services (e.g. Parasuraman, Zeithaml, and Malhotra 2005; Fassnacht, and Koese 2006) as well as IS quality (Flavián et al. 2005; McKinney, Yoon, and Zahedi) usability is suggested to be considered as a quality attribute of the electronic (Web) environment. On the other hand, Web site design is referred to as *indicating the issues mainly related to the graphical layout of the Web* (McKinney et al. 2002; DeWulf et al. 2006). In addition, the two terms are discussed as being synonyms to each other (e.g. Huang 2003).

Despite the somewhat fuzzy discussion and differing opinions on the relationship between Web site usability and Web site design, my opinion is that *although discussing Web site design (or quality) the theoretical literature often refers to the usability field* from which the concept Web site usability is derived. Therefore, *Web site usability is preferred in this study* to indicate the conceptual elements through which the electronic service environment is constituted.

From conceptual point of view, it has been proposed that the goal of Web site usability is to "provide what potential users would consider to be a successful experience" (Huang

2003, 24). Henneman (1999, 133) supports this insight by arguing that "usability exists when the system is designed in a way that its characteristics and functionality match end users' needs and expectations".

Translating the above presented definitions into the service language the *electronic service environment is of good usability when customers' user experiences meet their expectations, and thereby, appealing service experiences in the electronic service environment are created*. For instance, a corporate Web site with low usability may require users to find alternative ways and/or channels to contact the company in order to do business, or even switch to competitor's service. Therefore, it is particularly important that the electronic service environment is designed to respond to the needs of the customers (Price 1997, 12).

Earlier research has suggested a great variety of features and frameworks for evaluating the *usability* (e.g. Nielsen 2000; Benbunan-Fich 2001; Flavián et al. 2006), *success* (e.g. De Wulf et al. 2006), *or quality* (e.g. Parasuraman et al. 2005; Fassnacht and Koese 2006) *of Web sites*. Since the purpose of this study is not on exhaustively exploring and characterizing the field of usability attributes, few examples about such frameworks and attributes are mentioned.

Zeithaml, Parasuraman, and Malhotra (2002), basing on earlier SERVQUAL framework[2], have proposed a five-dimensional scale for measuring the quality of electronic services. These dimensions comprise: *information availability and content, ease of use, privacy/security, graphic style*, and *reliability/fulfillment*. Recently, Parasuraman et al. (2005) have refined the e-SQ scale to contain four dimensions which comprise: *efficiency, system availability, fulfillment*, and *privacy*. Following the insights of Heinonen (2006, 383), many of the models and frameworks indicating the quality of electronic services are based of SERVQUAL framework, and thus, do not possess radical distinctions to each other. Therefore, the above presented e-SQ scales proposed by the developers of the original SERVQUAL framework represent the extant general discussion on the topic particularly well.

Jacob Nielsen (2000) who can be considered as one of the most distinguished researchers within the field of usability has suggested four usability features as determinants of Web site usability. These comprise: 1) navigation; 2) response time; 3) credibility; and 4) content. Further, Scharl and Bauer (1999) have suggested a framework for evaluating usability which contains three attributes: 1) content; 2) navigation; and 3) interactivity. In general terms, at least content, navigation, and interactivity seem to be generally referred as determinants for (Web site) usability also by other researchers (e.g. Benbunan-Fich 2001; Benbunan-Fich and Altschuller 2003; McKinney et al. 2002; DeWulf et al. 2006).

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[2] SERVQUAL model for assessing the quality of service is originally developed by Parasuraman, Zeithaml, and Berry (1985; 1988).

As can be interpreted from the discussion above the attributes indicating both the quality of electronic services and the usability of Web sites are similar to each other, to some extent. However, *since the conceptual discussion originates from the literature on usability research, the attributes are referred to as usability-related features of Web environment instead of service quality attributes*.

Referring to the earlier usability research, two pilot studies on the usability of electronic insurance services were conducted. Through them the most appropriate usability features were found in order to describe the essential Web site usability characteristics of electronic service environment for complex services. However, at this point it is essential to note that in this study usability is considered from the perspective of the elements through which the Web environment is constituted rather than its functionalities from the more technical aspect of usability referring to, for instance, response time (e.g. Nielsen 2000), effectiveness and/or efficiency (e.g. Henneman 1999) of the system. The pilot studies are discussed in the next sub-chapter.

4.3 Pilot studies on usability of electronic insurance services

Two pilot studies were conducted to investigate the essential nature of Web site usability from the perspective of electronic insurance services. The main reason for conducting the pilot studies was the lack of prior research on the issue. To my knowledge, no research had been done, at least not at the time when the pilot studies were planned and conducted. Another crucial and somewhat obvious reason behind the pilot studies was to be better able to understand the nature of electronic insurance services as a practical business phenomenon, too.

According to Sampson (2004, 383), pilot studies are common within positivistic research in which they are used to refining research instruments, such as questionnaires. However, through her study Sampson establishes that pilot studies are particularly useful for qualitative research as well. For instance, pilot studies can be used in foreshadowing and structuring the research setting as well as highlighting the gaps or wastage of data collection (ibid., p. 399). In this regard, using pilot studies to adjusting the general discussion on Web site usability to the insurance service context is justified. In addition, pilot studies are utilized while constructing the empirical research setting as is established later in chapter 6.

In order to acquire a holistic picture on electronic services currently available and the characteristics of those services, a multinational perspective was preferred in the first pilot study. The results of the first pilot study were then applied and employed further in the

second pilot study. In the next two sub-chapters both pilot studies are discussed more thoroughly. The first pilot study is elaborated in chapter 4.3.1, and the second pilot study is discussed in chapter 4.3.2. In addition, full conference articles discussing the usability studies can be found in the appendices 2 and 3.

4.3.1 Pilot study I[3]

Background information

The idea behind the first pilot study was to acquire information about the current state of the electronic insurance services from the usability point of view. However, since markets and business logics vary depending on the country, national (only Finnish) perspective was found insufficient for creating a general picture about the phenomenon. In this regard, three additional insurance markets (USA, UK, and Germany) were included in the study. The countries were considered to represent the approach of remarkable and developed insurance business markets from the global perspective. Altogether 25 companies were investigated in the study. The guideline for selecting the companies in each country was that they all were remarkable actors in their home markets, to some extent. The investigated companies can be found in the appendix 2.

At the time, non-life insurance services (e.g. home, car, travel) were extensively offered through the Internet in each of the selected countries (they still are). In the article, this was assumed to be due to the lower product complexity and higher transaction frequency than, for instance, in case of life insurance services. Therefore, the focus of the pilot study 1 (as well as pilot study 2) was on *non-life insurance services*. In the paper the distribution channel history was theoretically considered as an interesting phenomenon since there were different types of companies included in the study in terms of distribution channel history. In this regard, the companies were categorized into three different types which comprised:

1. *Traditional insurance providers*. Insurance firms with a long history of having a strong physical distribution channel but have recently added Internet as a distribution channel.

[3] This chapter is based on a conference paper published in the proceedings of International Conference of Service Systems and Service Management in 2004 (Windischhofer and Ahonen 2004). Therefore, the paper is not constantly referred to except in those situations when it is directly cited. However, the references used in the article are naturally cited as such also here. The title of the paper is: "The Effect of Physical Distribution Channels on Online Distribution Channels in the Insurance Industry – An Examination of Electronic Insurance Services on the Internet".

2. *Online insurance providers*. Insurance firms operating on the Internet only (though might have call centers as supporting service). Before the Internet era might have sold their products via telephone, only. Might have linkages to bigger insurance groups in terms of ownership, but operating independently.
3. *Idiosyncratic insurance providers*. Online insurance service providers that have grown out from mail-order firms or consumer goods retailers by having recently extended their business to also concern insurance. This type of firms naturally have a physical distribution channel but not for insurance. They are offered on the Internet only.

The main purpose of the pilot study 1 was to *investigate whether insurance firms with different distribution types approach the Internet as distribution channel differently*. It was assumed that, for instance, traditional insurance companies might possess weaker capabilities for operating on the Internet than online insurance providers in terms of usability. The main reason for including the type 3 companies in the study was the interest in investigating whether they bring "a new approach" differing from the traditional matter-of-fact insurance-like approach on offering insurance services since type three companies might have strong experience on operating through the electronic service channel but less experience on traditional insurance approach.

Usability attributes

Different usability attributes have been suggested in the earlier literature on usability of information systems, and more recently, Web site usability. Taking the consumer perspective, Preece, Benyon, Davies, and Keller (1993) suggest that usable products are characterized through *health, safety, efficiency*, and *enjoyment*. Further studies have suggested learnability, efficiency, memorability, errors, satisfaction (Nielsen, 1993), and aesthetics (Huang 2003) as attributes indicating usability.

Referring to the earlier literature (e.g. Cespedes and Corey 1990; Hennemann 1999; Preece et al. 1993; Huang 2003; Nielsen 1993) altogether 12 usability variables were chosen to be observed and examined in this study. These comprise [directly cited from the article]:

- *Efficiency* – Does the user save time by using the Web site?
- *Security* – Is data transfer through this Web site secure?
- *Informativeness* – What is the amount and quality of information displayed?
- *Aesthetics* – Does the Web site look "likable"?
- *Clearness* – Is the information clearly displayed?

- *Learnability* – Is it easy to learn to use the Web site?
- *Memorability* – Can the user find its place quickly after glancing away?
- *Supplementary services* – What additional useful services could the consumer get on this Web site?
- *Interactivity* – Can the user communicate with a company representative for example through chat or a 24h telephone help line?
- *Enjoyability* – Is it enjoyable to use this Web site?
- *Intuitiveness* – Is the firm able to imagine what its users want?
- *Assistance* – Does the Web site offer the user assistance?

Research methods

An exploratory approach was found appropriate for the purpose of this type of study. The evaluation was conducted by the authors first observing the Web sites of the selected 25 insurance service providers according to the 12 usability variables. In the first phase, a questionnaire containing 40 questions related to one or more of the 12 usability variables was designed and constructed. Next, the Web sites of all the 25 insurance service providers were independently evaluated by both authors. In order to reduce subjectivity of the results, five persons working within the insurance business field were asked to analyze three randomly selected Web sites each.

In the second phase, the authors evaluated each Web site again together for approximately 30 minutes by using the designed usability questionnaire. In addition, the evaluations conducted in the first phase (both authors' and external evaluators' from insurance field) were compared in order to reach better reliability. However, qualitative analysis was preferred (in fact, it was nearly necessary) since the sample size was too small to enable deriving generalizable quantitative results from the data.

Essential results

While reporting the results, the companies were categorized into four groups according to the extent of their performance. These categories comprised *Web sites with "good", "fair", "poor"* and *"very poor" overall usability*. First of all, the results suggest that the firm's distribution channel history is necessarily not the most crucial indicator from the perspective of usability criteria. Instead the market (country) in which a company operates plays a more essential role.

On the basis of the result it was suggested that United Kingdom can be considered as a leading market for electronic insurance services in terms of usability. Type 3 companies (idiosyncratic insurance providers) were evaluated as performing well since their Web sites

and electronic services offered through them were characterized by clearness to a large extent. However, it was concluded that most of the type three companies seemed to offer insurance-related information only insufficiently on their Web sites. On the other hand, the fairly small amount of information enabled the clearness of the Web sites but clearness is partly achieved at the expense of informativeness. Therefore, offering a comprehensive insurance service through the electronic channel was questioned to some extent.

Concerning type 2 companies (online insurance providers), the results suggest that the connections to larger traditional insurance groups, although operating independently, may have helped them in gaining a comprehensive understanding about insurance business and successfully applying that information on the Web particularly quickly. In case of type 1 companies (traditional insurance providers) the assumption that traditional insurance companies provide more comprehensive service on their Web sites, at least in terms of information, was confirmed through the study.

Another interesting point emerged from the empirical data. It referred to whether the Web sites of the insurance service providers were emphasizing selling orientation or service orientation. In this regard, it was concluded that *type 1 companies* possess *higher service orientation and lower selling orientation* while *type 3 companies*, quite the contrary, indicate *lower service orientation and higher selling orientation*. Type 2 companies were perceived as representing the medium level in both service orientation and selling orientation.

As to the most relevant usability attributes for insurance context according to this study, few concluding remarks were presented. First of all, *low level interactivity* was perceived among the most critical shortcomings on the Web sites of insurance service providers. The results reveal that *the role of interactivity should be emphasized* since customers are dealing with complex services, which most probably refers to the fact that customers need to be certain of having a chance to communicate with a customer servant in case they face problems too difficult to solve by themselves.

Second, the results indicate that every firm was *lacking informativeness* to some extent. This refers to issues in information quality (e.g. nature of information), access, or structure (e.g. font size). Maybe the most critical issue concerning many examined companies was that they were offering hardly any information between superficial product key features and insurance policy terms. In other words, the *customer-friendly* (marketing) *information was lacking*.

All in all, the final conclusion was that many of the companies performed *fairly well* in terms of usability. However, none of them performed *very well* in all of the usability categories. In order to provide the customers with a comprehensive electronic insurance service, efforts in terms of usability as well as the coverage of electronic services are still needed.

Implications for this study

The most fundamental implications of the pilot study 1 refer to designing and conducting the second pilot study. In fact, it would not have been even possible to conduct the pilot study 2 without many relevant and useful insights provided by the first pilot study. In general, it can be stated that the first pilot study offered valuable insights for this study but they were employed and refined more comprehensive through the pilot study 2.

As to distinctively discussing the implications of the pilot study 1, the first thing that can be mentioned was *the description of the current state of electronic insurance services globally available*. A comparison on different insurance markets proved that *there are clear differences in performances of the companies in different countries*. The British market was considered as representing the higher level in terms of usability of the Web sites of the insurance service providers. In this regard, British market was selected as a target for the second pilot study discussed in chapter 4.3.2.

Second, characterizing different types of insurance service providers from the perspective of their distribution channel history increased my general understanding on the electronic insurance services offered on the Internet. This information was very valuable since there are no type 2 and type 3 insurance providers in the Finnish market. In this regard, investigating the Finnish insurance companies only would have only restricted the scope of this study to a great extent. *In fact, this characterization is the most valuable implication of the first pilot study for this study* since it led me to develop the "traditional vs. new typology" on designing electronic insurance service environment, which is discussed more in detail in chapter 4.4.

And third, the first pilot study provided *preliminary insights into the usability variables, which may be relevant to be applied in the insurance context*. This discussion is elaborated further in the second pilot study. Following the similar logic as in this sub-chapter the essential outcomes of the pilot study 2 are discussed in the next sub-chapter.

4.3.2 Pilot study II[4]

Background information

The underlying idea behind the paper was created on the basis of the first pilot study by being aware that competitors within the insurance industry have become more versatile in

[4] This chapter is based on a conference paper published in the proceedings of International Conference on Electronic Business in 2005 (Ahonen and Windischhofer 2005). Therefore, the paper is not constantly referred except in those situations when it is directly cited. However, the references used in the article are naturally cited as such also here. The title of the paper is: "*The Web Performance of Different Types of Online Insurance Providers – A Wake up Call to Traditional Insurance Providers*".

electronic (Internet) service environment. More precisely, newer types of insurance service providers have recently appeared alongside the traditional types of insurance companies possessing a long history of having a physical distribution channel but also having transferred their services to the Internet. This kind of development is apparently perceivable at least in British, American, and German insurance markets.

Although the distribution channel history was not perceived as the most relevant indicator for the usability of insurance Web sites, the idea of concentrating on investigating and comparing the essential characteristics of electronic services of different types of insurance providers from usability point of view more thoroughly was found particularly interesting. This was mainly due to the fact that *this type of study had not been carried out before*. At least no studies referring to the issue positioned above could be found.

In the beginning of the study few pre-assumptions were made. First, it was assumed that in order to be able so succeed in the electronic service environment, certain skills for operating on the Web are required of the service providers. These kinds of skills (experience in doing business on the Internet) were assumed to be better handled with new entrants, referring to company types 2 and 3. However, as the first pilot study revealed, the newer types of companies might have shortcomings in their skills when it comes to insurance business activities which are, without a doubt, well possessed by the type 1 companies (traditional insurance providers).

Hence, the same three types of insurance service providers generated through the first pilot study (traditional insurance providers, online insurance providers, and idiosyncratic insurance providers) were maintained in this study, too. However, in this study three British insurance service providers, each representing one of the three company types were selected as target companies. British markets were chosen since, according to the results of the first pilot study, UK was considered as the most advanced electronic insurance market in terms of usability. Further, all three company types can be found from the Bristish market. List of the investigated companies can be found in the appendix 3. The main criterion for choosing the companies was that they represented the best performer in their company type in the first pilot study.

All in all, the main purpose of the study was to *compare the performances of different types of insurance service providers on the Web from usability point of view*. In addition, another interesting aspect to be investigated was "*to assess whether the companies have a new approach to online insurance, and how these companies – and the insurance industry in general – could benefit from that approach*" [directly cited from the article].

Usability attributes

One fundamental reason for investigating the usability of corporate Web sites, which was addressed throughout the study, was referring to the fact that if the Web site is of low usability the customers might be required to switch the service channel in order to do business with a service provider. Naturally, this kind of issue does not increase customers' intentions to operate in the electronic channel.

In order to develop a framework for evaluating the usability of electronic services in insurance context, the implications of the first pilot study were considered. Since analyzing the suitability of certain usability attributes to insurance context was only narrowly and more generally discussed in the first pilot study, earlier literature on usability research was scanned again to sharpen the focus of the research and in order to be able to develop a framework for evaluating the usability of electronic insurance services. In this regard, the usability framework introduced by Scharl and Bauer (1999) containing three usability attributes was considered relevant for insurance context. These three usability attributes are: *content*, *navigation*, and *interactivity*.

In the following three paragraphs these three usability attributes are characterized more in-detail. In order to strengthen the argumentation presented in the article, which is mainly based on the framework by Scharl and Bauer, the following discussion is supported by also adding the insights of other researchers (not discussed in the article[5]) referring to these three usability variables.

First of all, it is particularly important that customers really understand the content of the electronic service environment in which they are operating. It is important that information on the Web sites is presented in a clear form, and that there is not too much information available on the Internet because it might only cause confusion among customers. Therefore *content* (e.g. Scharl and Bauer 1999; Palmer 2002; Flavian et al. 2006; De Wulf et al. 2006) can be considered as one key feature of Web site usability especially in the context of complex services, such as insurance. *Content* refers to *the amount and nature of the information available on the Internet*.

Further, it is even one of the prerequisites for the use of the electronic services from the customers' point of view that it is easy and clear to move in the electronic service environment. In the complex service context this is even more important because otherwise customers might feel the service environment is too complex to use – it is already complex enough to try to understand the features of the (insurance) products and services. Thus, *navigation* (see also Nielsen 2000, Flavián et al. 2006) can be considered as a crucial feature. *Navigation* refers to *how easy it is for the customers to move, browse, search, and access information on the Web*.

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5 See appendix 3.

However, if the customers still end up in difficulties in electronic insurance service environment, be those difficulties then a consequence of the complex nature of the service or the service environment, it is essential to the customers that they can communicate interactively with the system and get assistance if needed. Hence, *interactivity* (e.g. Järvenpää and Todd 1997, Scharl and Bauer 1999) is also one of the most crucial Web site usability attributes in the complex service environment. *Interactivity* refers to *the ability of the environment to communicate with the customers (e.g. through e-mail, online chat, telephone etc.)*.

Research methods

The nature of empirical study is mainly qualitative. The methodology of the study was a combination of *heuristic evaluation* (Nielsen and Mack 1994; Nielsen 1993), which can be considered as one of the most used usability evaluation methods, and grounded theory approach (e.g. Glaser and Strauss 1967; Strauss and Corbin 1990) emphasizing the inductive theory generation based on empirical data. At this point it is essential to distinguish between objective ease of use and perceived ease of use (Venkatesh and Davis 1996): "While the objective usability is determined by the systems' usability features, the perceived usability also depends on the individuals' proficiency with the system" [directly cited from the article]. In this regard, usability was approached from the consumer's perspective.

The Web sites of the selected three British insurance companies were evaluated by a group of 28 students. The quality of responses was discussed in the article as follows [direct citation from the article]: "As to the quality of the results the aim was to get as competent responses as possible but, on the other hand, the responses should also represent the opinions of consumers. Therefore, the participants were chosen from a group of university business students with insurance science as their major subject".

The empirical data was collected by arranging two distinct data collection rounds. The first data collection was conducted in November 2004 including 9 participants. The second data collection round was conducted in February 2005 including 19 participants. The evaluation contained altogether four phases which comprised: 1) open questions on the attitudes towards electronic insurance services; 2) Free browsing and review about the performance of the companies; 3) set of tasks related to home insurance; and 4) Re-evaluation about the performance of the companies.

From the perspective of reliability of the study, all 28 students evaluated the performance of all three companies. Thus, altogether 84 evaluations were included in the empirical data of the study. In addition, data triangulation was used. More precisely, it was desired that each company will be equally evaluated by the research participants. Therefore, three different evaluation orders were formed in a way that each company was evaluated as first, as second, and as third by, approximately 12 students.

The collected data was analyzed by using software called NVIVO, which is designed to handle qualitative, non-numerical data. The grounded theory approach was applied to analyzing the data.

Essential results

In the paper theoretical and empirical results were discussed separately. They are presented in the same manner also here. As to theoretical results, two additional usability attributes relevant to insurance context were suggested. These are: *appearance* and *assistance*.

First, it is proposed that a good graphical design and layout make the electronic service environment easier for the customer to use (e.g. Henneman 1999; Parasuraman et al. 2005). In addition to the service design discussion presented in chapter 3.2, it has also been proposed in marketing literature that people might evaluate and judge the service and/or product characteristics based on appearance (e.g. Levitt 1981). My opinion is that this is certainly the case especially in service context since they usually contain more intangible elements than products. The empirical results of the second pilot study also support these insights by suggesting that the way the content on the Web sites is presented is clearly associated with the aesthetic aspects, such as colors and graphical design. In this regard, *appearance* can be considered as important usability feature in the complex service context in which the ease of use is even more emphasized than in many other environments (e.g. simple services[6]). *Appearance* refers to *aesthetic appeal of the Web site* (e.g. its colors, and clarity of design and structure).

Second, in the insurance context it is particularly important that the customers are able to get assistance if they need support and/or advices. *Assistance* is not generally established in the prior research on Web site usability as one of the essential characteristics. Despite this, and referring to the fact that assistance is perceived as one of the elements that have to exist in self-service type insurance service environment by the customers, it was suggested that assistance also needs to be considered as one of the crucial usability elements of electronic insurance service environment. *Assistance* refers to *tools and services (e.g. insurance calculators, "FAQ:s", help windows etc.) available on the Internet, which can be used interactively to support operating in the electronic service environment*.

Practical results suggest that, all three usability attributes included in the framework by Scharl and Bauer (content, navigation, and interactivity) as well as the two suggested additional attributes derived from the empirical data (appearance and assistance) can be proven relevant to be utilized in the context of complex services, such as insurance. However, it has to be noted that since the nature of the study was qualitative the results are not confirmed as being generalizable. On the other hand, it was not even the aim of this study.

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6 See chapter 3.1.2

Instead, the main focus was on suggesting a theoretical framework for assessing usability in the context of electronic insurance services. Generalizing would require further (quantitative) research on the discovered attributes.

As to the performances of the investigated companies, the empirical results provided interesting results, namely the type 3 company (idiosyncratic insurance provider) first characterized as childish and non-insurance like, but was actually outperforming both type 2 (online insurance provider) and type 1 (traditional insurance provider) companies in the end. This was slightly surprising as type 2 company was assumed to have the best skills for doing insurance business in electronic service environment beforehand, due to its advanced skills in both insurance and electronic service field. The difference between type 3 and type 2 companies was not big, but still type 3 company was perceived as slightly better in terms of Web site usability. The performance of type 1 company was actually perceived as worst in the end.

The main reason for the success of both type 3 and type 2 companies was their clear and lively approach on offering electronic services in general. Although characterized as somewhat childish and non insurance-like (this was the case especially for type 3 company) both online insurance provider and idiosyncratic insurance provider were characterized as bringing rather positive and fresh approach to insurance business in electronic service environment. However, the empirical results also reveal that *since insurance as a business generally should create trust among the customers it is important for the service providers to recognize the thin line between being too lively and "refreshing but still matter-of-fact" approach in developing the electronic insurance service environment*.

In case of traditional insurance provider the most fundamental issues had to do with the lack of clearness in terms of appearance, and too large amounts of information. First of all, although the appearance (e.g. used colors) of the Web sites was perceived as trustworthy and matter-of-fact (insurance-like approach) clearness in design might cause the customer to get lost. In addition, this impression is even emphasized when there is too much poorly structured, and thereby inaccessible, information on the Web sites as was the case for type 1 company.

Implications for this study

The second pilot study provided particularly relevant implications for my dissertation from many perspectives. First of all, *the usability framework by Scharl and Bauer* (content, navigation, and interactivity), complemented with two additional usability attributes derived from the empirical data (appearance and assistance) *was proven feasible for evaluating the usability in electronic insurance service context*. Hence, these five above discussed usability attributes are employed further in this study.

Second, the results referring to the performances of company types 2 (online insurance providers) and 3 (idiosyncratic insurance providers were particularly encouraging since they indicate that it is possible to approach the development of electronic insurance services as well as electronic insurance service environment in general, from a *novel perspective*. By novel perspective, I am referring to *adding more fresh and lively elements to the development electronic insurance services and service environment*.

And third, the development of "traditional versus novel typology" was inspired by the notion referring to the novel approach on develop electronic insurance services. *In fact, "traditional versus novel" typology can be considered as the most fundamental implication of the second pilot study for this study*. Further, the developed "traditional versus novel typology" had a crucial role in constructing the empirical research setting for this study. In the next chapter (4.4) the idea of traditional and novel approach on designing electronic insurance service environment is introduced and discussed.

4.4 Traditional and novel approach on designing electronic insurance service environment

Through conducting the two pilot studies on the usability of electronic insurance services it became obvious that *different types of insurance service providers possess different kinds of approaches on offering electronic insurance services as well as designing the electronic insurance service environment*. This was particularly interesting observation to be considered also in the context of this study, especially from the perspective of constructing an empirical research setting.

As the empirical results of the second pilot study indicated, *traditional insurance providers* (company type 1) *were characterized as possessing a typical matter-of-fact, conservative, and thereby, insurance-like approach on offering electronic insurance services and designing electronic insurance service environment from the usability point of view*. As the name of the company type indicates, this kind of tendency can be determined as *traditional approach*. According to the empirical results of the second pilot study, characteristic to traditional approach is that these types of service providers use more or less *dark and trustworthy colors*, which can even be considered conservative on their Web sites. *Same goes with pictures*, if there are any. The *amount of information is well sufficient*. The results actually indicate that traditional type of companies often have *a tendency of providing too much information* on their Web sites, which might cause confusion among the customers while they might easily get lost in the electronic service environment. As an example of a

traditional type insurance provider, a front page of the British insurance company called Prudential is illustrated in Figure 11.

Figure 11. Front page of "Prudential" Web sites (visited March 8, 2006)

Prudential is one of the largest insurance groups in United Kingdom. It has been operating a long time through a physical distribution channel (i.e. offices). However, nowadays it also offers insurance service via the Internet. Prudential was used as an example of traditional insurance provider (type 1 company) in the second pilot study on usability of electronic insurance services.

In comparison, the results of the second pilot study revealed that online insurance providers (company type 2) and especially idiosyncratic insurance providers (company type 3) were characterized as having a *fresh, lively, and non insurance-like approach on offering electronic insurance services and designing electronic insurance service environment from the usability point of view*. This kind of tendency was also referred to as a *new* (i.e. *novel*) *approach*. The results of the second pilot study indicated that peculiar to the novel approach on designing electronic insurance service environment is *the use of light and lively pictures (possibly animated) and colors*. From the *content* point of view, the *information is provided moderately, in some cases even insufficiently*. In this regard the clearness of the Web environment can be considered to be mainly emphasized, but sometimes at the expense of

informativeness, unfortunately. As an example of the novel approach company, the front page of Tesco Web sites is illustrated in Figure 12.

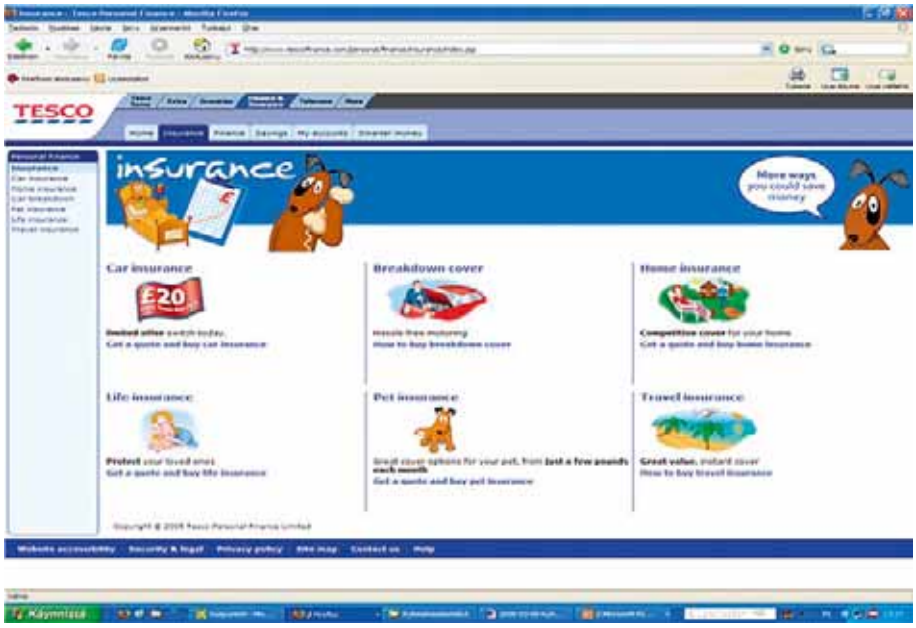

Figure 12. Front page of "Tesco" Web sites (visited March 8, 2006)

Tesco is one of the most remarkable British retailers, which also operates in global markets. Recently Tesco has extended its business to cover also insurance business. However, Tesco does not have their own insurance products but they are marketing and selling the products and services of a collaborative insurance company. In addition, Tesco provides insurance services through the electronic service channel only. Tesco was used as an example of *idiosyncratic insurance provider* (type 3 company) in the second pilot study on usability of electronic insurance services.

All in all, the above described logic of distinguishing between the traditional and novel approach on designing electronic insurance service environment was found very interesting and also relevant to be further examined in this study since the developed "insurance cover evaluator" service concept introduced and discussed in chapter 5.3 also represents something, which is totally different from the approach traditionally followed within insurance field in general. In this regard, *I argue that the "traditional versus novel typology" on designing electronic insurance service environment is feasible in empirically investigating the characteristics of electronic servicescape as well as the features of creating appealing electronic (insurance) service experiences*. The empirical research setting is discussed more thoroughly in chapter 6.3.

4.5 A preliminary framework for characterizing electronic insurance servicescape

Designing a physical service environment has been a topic of research already for many decades. However, designing electronic service environment has been a somewhat neglected area of research, at least from the perspective of service research. On the other hand, plenty of research has been conducted, for instance, within the area of Information Systems (IS) research, especially in *Web site usability*, and *Web site design* contexts. In addition, in her studies Heinonen (2004a; 2004b; 2006) has examined temporal and spatial value of electronic services. In these studies service environment also incorporates physical surroundings in which customers use electronic services. However, since I am interested in the *electronic service environment from a structural point of view*, the physical surroundings (i.e. where the computer is physically located) are, therefore, excluded from the scope of the study. Thus, the *influence of physical surroundings on customers' perceptions about electronic service environment is not examined in this study*.

In this study the electronic service environment is considered from the *service design point of view*. The discussion on the "servicescape" by Mary Jo Bitner (1992) is referred to as a theoretical basis. At the time, Bitner originally suggested three features to determine the physical service environment. These features were: 1) ambient conditions; 2) spatial layout and functionality; and 3) signs, symbols, and artefacts.

The above mentioned features are widely acknowledged and cited in service management and marketing literature, and thus "servicescape" as a concept referring to the service environment in which the service performance takes place, is well established. In my opinion, the "servicescape" approach provides a useful theoretical approach also for this study. However, as the focus of the study is on investigating the *electronic service environment* the "servicescape" approach cannot be applied as such. It has to be adapted to the electronic context. Thus, the term "electronic servicescape" is one of the most fundamental concepts in this study.

Yet, it is essential to note that "electronic servicescape" is not a brand new concept generated through this study. To my knowledge, it has been discussed in the earlier literature on electronic commerce by a few researchers. *First*, in their study on designing e-Commerce systems Wanninger, Anderson, and Hansen (1997) have used term "electronic servicescape" to describe one of the phases of the service encounter in the context of catalog industry call center functions. In their study, Wanninger et al. have applied Bitner's three-dimensional *model of promises in service encounter*[7], and characterize "electronic servicescape" as the phase of *enabling the [service] promise* for customers (p. 11).

[7] Bitner's (1995) model of promises in service encounter contains three phases: 1) making the promise; 2) enabling the promise; and 3) keeping the promise

Second, term "electronic servicescape" has appeared in the context of examining the trust formation for e-Commerce (e.g. Papadopoulou, Kanellis, and Martakos 2001; 2002). In their studies Papadopoulou et al., referring to the work of Wanninger et al. discuss the "electronic servicescape" through the three promises of service encounter originally discussed by Bitner (1995). Thus, "electronic servicescape" refers to the phase of "enabling the [service] promise" for a customer. According to my interpretation, they just state that "electronic servicescape" is an electronic environment, such as the Internet, in which service providers enable their service promise(s) for their customers. However, neither Wanninger et al. nor Papadopoulou et al. discuss the nature of the "electronic servicescape", for instance, what kinds of elements constitute the electronic servicescape and how the electronic servicescape is structured through these elements.

And third, a more recent study by Vilnai-Yavetz and Rafaeli (2006) explores the *effects of aesthetics and professionalism on virtual servicescapes*. From a thematic point of view, this study is closer to the scope of my study than the above mentioned earlier studies on the "electronic servicescape". However, as the study of Vilnai-Yavetz and Rafaeli is quantitative of its nature, and it aimed to investigate the phenomenon in question through a set of research hypotheses referring to aesthetics and professionalism in the context of service delivery over the Internet the structural nature of the "electronic servicescape" remains undiscussed also in this study.

All in all, peculiar to all the above discussed earlier studies on "electronic servicescape" is that they do not discuss its structural characteristics or the overall composition. In this regard, a *different view emphasizing the service facility design approach on the "electronic servicescape" is taken in this study*. As the (*physical*) *servicescape* conceptually refers to what the customers *see around them* I shall suggest that *in the electronic context* the question is: "what do the customers see *on the screen*"? From a structural point of view, the *electronic servicescape* can be determined *as the scene the customer sees on the (computer) screen*.

As was discussed in chapter 3.2.3, customers, while observing and evaluating a service, actually often observe and evaluate the physical facilities of a service provider instead. However, in electronic service environment such physical elements cannot be observed since they do not exist. Based on the results of the two pilot studies on the usability of electronic insurance services, I theoretically suggest that *the elements the customers are observing and evaluating are referring to Web site usability attributes. The five discovered usability attributes* (content, navigation, interactivity, appearance, and assistance) are found relevant and appropriate to be applied in evaluating the usability of electronic insurance service environment.

However, referring to what is discussed above about the nature of interactivity as well as assistance (see chapter 4.3.2) I argue that *assistance in the electronic insurance service context is strongly related to interactivity*. Therefore, I propose that *these two elements can be combined* as one usability indicator of electronic insurance service environment, which is

titled *interactivity/assistance*. Hence, altogether four features are suggested to preliminarily characterizing the structure of electronic insurance servicescape. These features comprise: *content, appearance, navigation*, and *interactivity/assistance*.

Referring to earlier discussion, I suggest that a preliminary framework for describing the characteristics of electronic insurance servicescape can be constructed by integrating the original servicescape characterizing the physical service environment and the suggested four usability features. In this regard, I argue that clear similarities between the elements of the (physical) servicescape model and the suggested usability-related attributes can be identified. Based on these insights, *a preliminary framework for characterizing the "electronic insurance servicescape"* is depicted in Figure 13. In the framework the above mentioned relationships between the original servicescape determinants and the suggested features of electronic servicescape are indicated with strokes.

"*Ambient conditions*" is one of the features in Bitner's servicescape. It refers to *characteristics that can be considered to affect the five senses, such as temperature, music, lightning*, etc.

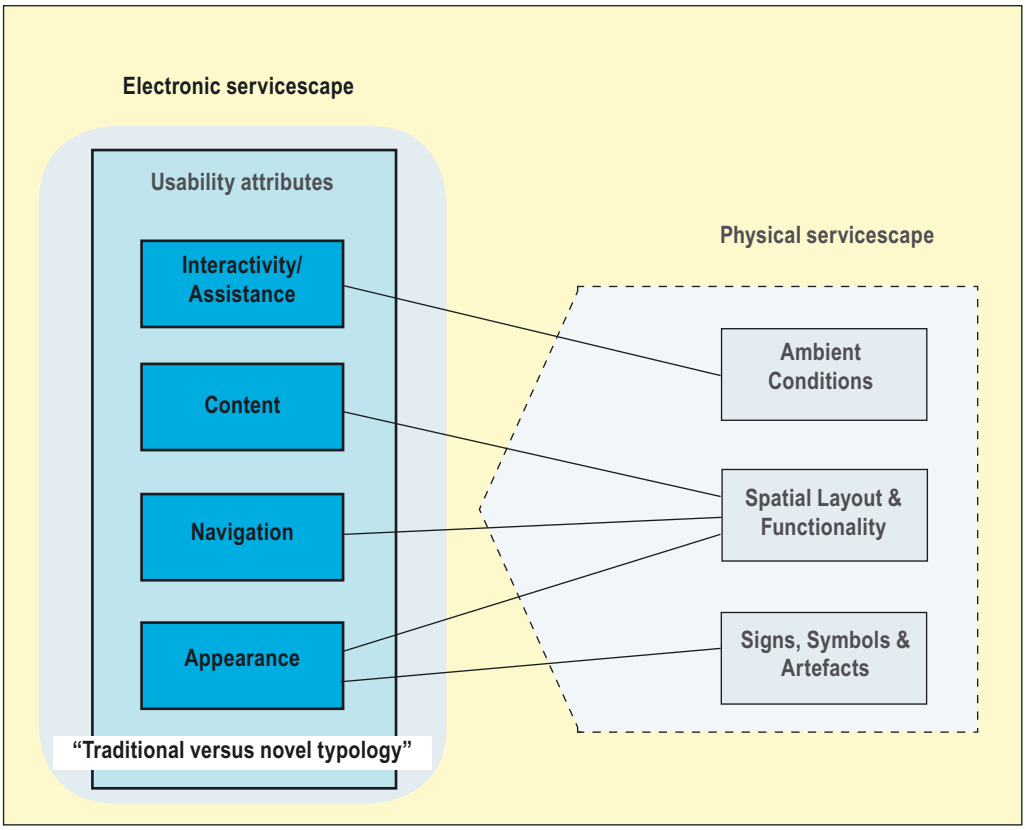

Figure 13. A preliminary framework for characterizing "electronic insurance servicescape"

Naturally, it is impossible to affect such senses as smell, touch, or taste through the electronic service environment. Therefore, the metaphor of "servicescape affecting the (five) senses" is considered to the extent realistically possible. On the other hand, Bitner (1992, 66) states that *ambient conditions reflect the background characteristics of a service environment*. "Interactivity/assistance" can be considered to be one of the crucial background characteristics of electronic service environment. Therefore I suggest that "interactivity/assistance" is referring to "ambient conditions" of the original servicescape.

"Spatial layout and functionality" are, on one hand, seen to refer to *the arrangement of equipments and furnishing in service environment*, and on the other hand, to *the ability of these elements to facilitate service performance*. In this regard, "appearance" referring to the arrangement of graphical layout of electronic service environment, can be considered to *refer to spatial layout* dimension of the servicescape. As to *functionality* part, "content" referring to the arrangement of information on the Internet *clearly reflects the functionality of electronic service environment, similarly as "navigation"* which refers to the easiness of browsing, searching, and accessing information in the electronic environment, perceived by a customer.

"*Signs, symbols, and artefacts*" represent a more abstract feature of physical facilities. Therefore, *this dimension could be almost applied to the electronic service environment as such*. However, in order to reach better conceptual adequacy, also this dimension is adapted to the electronic context. Certain elements, such as colours, graphical shapes, and other similar features indicating appearance on the Internet can be considered to include such symbolic cues that *appearance* can be suggested to reflect *signs, symbols, and artefacts* dimension of the "electronic servicescape". Similarly, customers can be given instructive cues through *navigation*. By this I am referring to, for instance, identifying the path the customer has used while surfing on a certain Web site. Thus, navigation is suggested to indicate the *signs, symbols, and artefacts* in the electronic service environment as well.

"Traditional versus novel typology" reflects the empirical observations by the research participants of the second pilot study on the usability of electronic insurance services. For this study the typology gives more extensive view on considering the design of electronic insurance service environment, and it is therefore found feasible to be discussed. In the framework for "electronic insurance servicescape" this is indicated with a violet, partly transparent area on the usability-related attributes (Figure 13).

To conclude, the suggested framework for "electronic insurance servicescape" provides a basis for discussing the structural characteristics of the electronic service environment as well as constructing an empirical research setting for the study. In the next chapter this discussion is elaborated further. In addition, term "customer-friendliness" is attached to the discussion on designing electronic service environment in the context of complex services, such as insurance.

5 ARTEFACT FOR DESIGNING A CUSTOMER-FRIENDLY ELECTRONIC SERVICESCAPE

As discussed in the introduction of this study, discovering the conceptual characteristics and the structure of the electronic servicescape is only the first step in designing a customer-friendly electronic service environment. Thus, I argue that integrating customers' insights into the designing work is particularly important. Within service literature services are suggested to be perceived as experiences, to some extent. Considering customer-friendliness from IS research point of view, *technology acceptance* reflects customers' intentions to use a certain technology and/or electronic service.

In this study *I suggest that combining these two aspects (services as experiences and customers' technology acceptance) provides a relevant theoretical approach on characterizing customer-friendliness in designing the electronic service environment in the context of complex service, such as insurance*. Discussing the above mentioned concepts, and thereby, establishing their relevance in the scope of this study are the key objectives of this chapter (Figure 14).

The service experience approach is elaborated in chapter 5.1, and technology acceptance approach is discussed in chapter 5.2. In addition, empirical approach on customer-friendliness is taken in chapter 5.3 while introducing an electronic insurance service concept called "insurance cover evaluator" through which customers are offered a possibility to evaluate and chart their personal need for insurance cover by using a visual electronic interface. Finally, the entire theoretical discussion complemented with empirical observations is concluded in chapter 5.4 while introducing a preliminary framework for designing customer-friendly electronic service environment in the context of complex services, such as insurance.

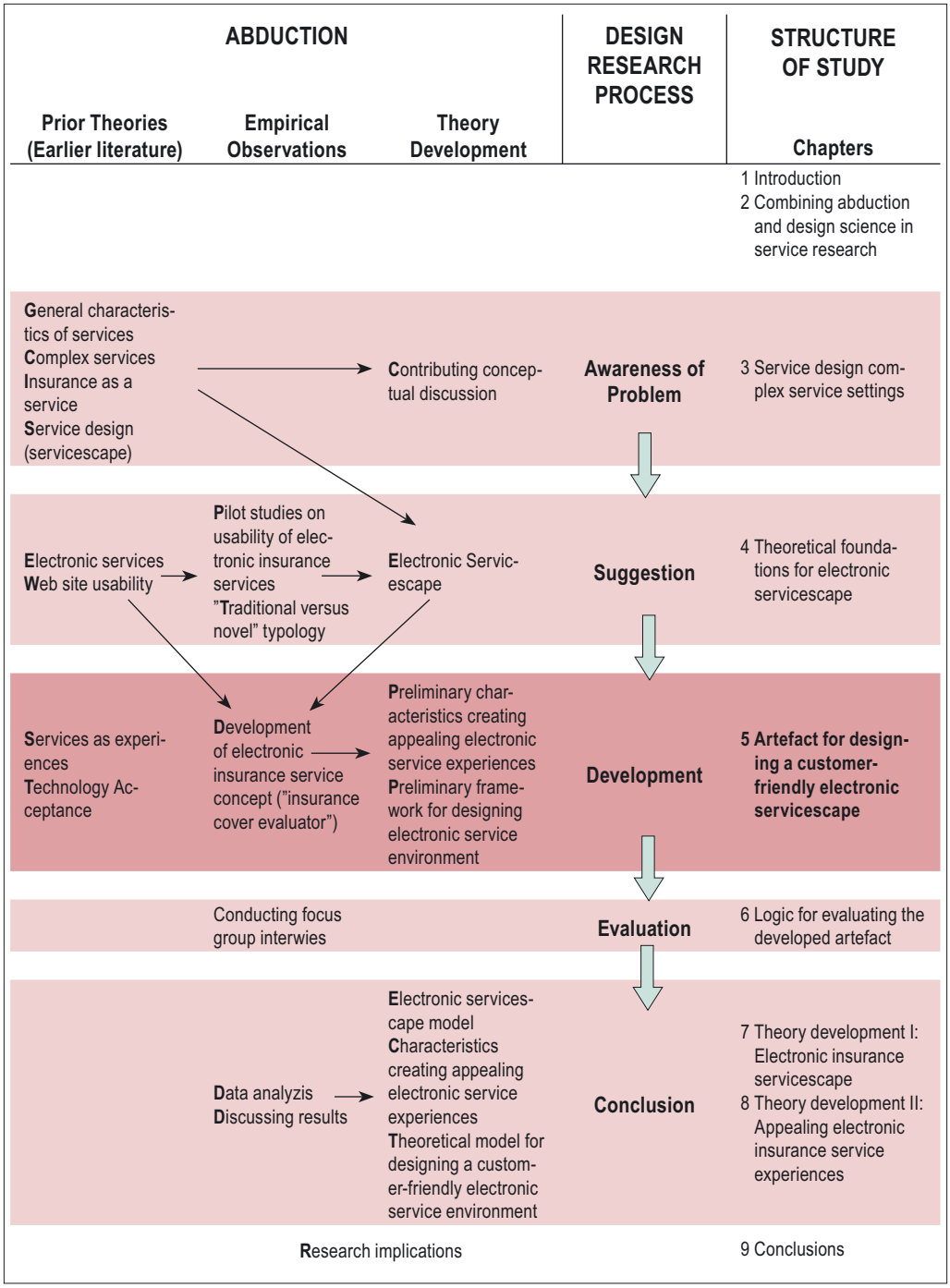

Figure 14. Objective of chapter 5

5.1 Services as experiences

In today's world, customers have become more demanding when it comes to services. More information is available for customers in order to make themselves familiar with a certain service they are involved with. Thus, customers are provided with better tools to evaluate a certain service, and thereby, prerequisites to make a decision whether or not to purchase and/or use the service. However, offering the possibility of making a service transaction is not enough for customers. They expect to get more "value for their money".

According to recent literature, services are seen to be undergoing a transformation process from being perceived *as transactions and/or encounters* to ones defined as *experience* (Fitzsimmons and Fitzsimmons 2006). Approaching the theme from causal point of view, Stuart and Tax (2004) have stated that *services are performances, and that great performance leads to memorable experience*. In line with this notion, one of the three dimensions suggested to classify electronic insurance services refers to the extent of customer contact in a service performance (i.e. low touch vs. high touch service performance).

In addition to the "experience approach", *service quality* is an extensively discussed concept within the service research field (see e.g. Parasuraman, Zeithaml, and Berry 1985; 1988; Gummesson 1991; Grönroos 2000; Heinonen 2004b; 2006; Zeithaml and Bitner 2006). It refers to evaluating customers' expectations and experiences towards a certain service or services. Especially *perceived service quality* indicating "customers' judgment about the overall excellence of service" (Parasuraman et al. 1988, 15; see also Grönroos 2000, 62–63) is an essential approach from customers' point of view. *Thus, service quality approach could have been a useful theoretical approach for this study.*

However, discussion on service quality contains many conceptually concise and extensively established frameworks on measuring the quality of services, such as SERVQUAL scale by Parasuraman et al. (1988) and "total perceived quality" model by Grönroos (2000). *In this study more loosely structured approach is preferred* since empirical research setting focuses on examining customers' direct and impulsive insights into the constructed sketch of electronic service environment that does not yet exist in reality. For the same reason, the empirical research approach is rather inductive and explorative than tightly deductive. In this regard, discussion on service experiences is found to be more appropriate and allowing for this study, and therefore, it is preferred over the service quality in the discussion.

Similarly, value-in-use approach discussed in the context of service-dominant logic which represents the most recent tendency of discussion within the service field could also have been followed. However, value-in-use approach refers to considering the "consumption" of a service (see chapter 3.1.1). As this study is focused on investigating customers' impulsive insights into a phenomenon which is does not exist in reality, discussion on (service) experiences was found more appropriate since the service phenomenon (i.e. sug-

gested models) cannot be "consumed" yet, and thereby, customers cannot have a precise picture about the existing phenomenon.

Concerning experience as a construct, it has been approached in a variety of ways in the service literature. Some authors use the term "service encounter" as a parallel construct to service experience (Bettencourt and Gwinner 1996; Hill et al. 2002; Clark, Johnston, and Shulver 2000; Lovelock and Wright 2002). Following this approach, Carbone and Haeckel (1994) consider service experience as "the 'takeaway' impression formed by people's encounters with products, services, and businesses" (p. 8). Gupta and Vajic (2000) taking a more extensive view, suggest that experience refers to "*any sensation or knowledge acquisition resulting from a person's participation in daily activities*" (p. 35).

According to the extant literature, some researchers have attached terms service and experience together (see e.g. Carbone and Haeckel 1994; Johnson, Menor, Roth, and Chase 2000; Edvardsson, Enquist, and Johnston 2005). In that sense, *service experience* is defined as "a service process that creates the customer's cognitive, emotional, and behavioral responses, resulting in a mental mark, a memory" (Edvardsson et al. 2005, 151).

A more high-flown view on the relationship between services and experiences has also appeared. According to this perspective *services are performances aiming at creating memorable experiences to customers* (see e.g. Pine and Gilmore 1998a; 1998b). Further, Pine and Gilmore (1998) conceptually distinguish between *experiences* and *services* similarly as services are distinguished from products. They can be seen as pioneers of "experience economy" philosophy by bringing theatrical approach into service business context.

Earlier, services have been seen as intangible customized transactions delivered to customers on demand. Encapsulating the essentials of comparison between *commodities, goods, services* and *experiences* by Pine and Gilmore (1998b, 6) it can be concluded that *experiences are perceived as personalized experiences, which are revealed to customers over time*. Further, Pine and Gilmore (1998a) suggest that "an experience occurs when a company intentionally uses services as the stage, and goods as props, to engage individual customers in a way that creates a memorable event" (p. 98). The above discussed approach has recently been supported also by other researchers (e.g. Fitzsimmons and Fitzsimmons 2006; Stuart and Tax 2004; Stuart 2006).

In order to attain a more comprehensive conceptual understanding about the nature of experience Pine and Gilmore (1998b, 30) have established a visual classification model, which illustrates different dimensions of the experience. The classification model is depicted in Figure 15.

In the model, the circle is divided in four sectors with horizontal and vertical axes. Horizontal axis describes the level of customer's participation in producing the experience by using the scale from *passive to active participation*. The vertical axis illustrates customer's connection to the process of experience creation. The scale goes *from absorption to*

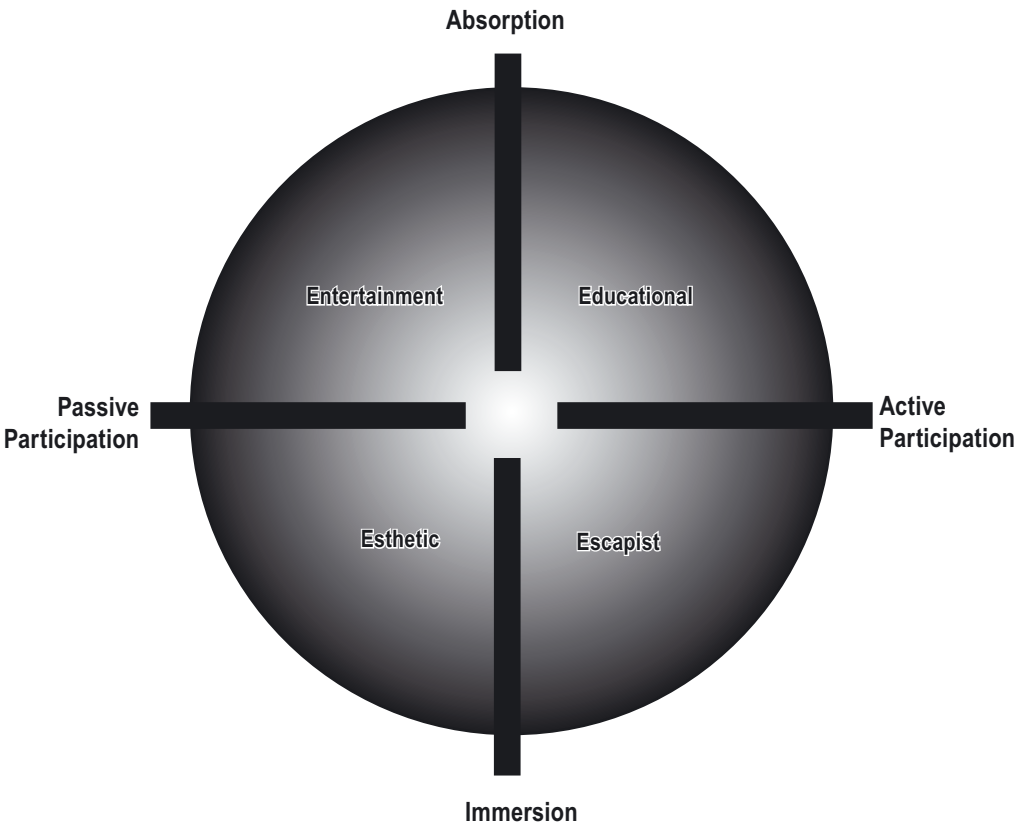

Figure 15. The experience realms (Pine and Gilmore 1998b, 30)

immersion. "Absorption" refers to affecting on customer's attention and mind whereas immersion means that the customer is also physically (or virtually) involved in the experience creation process.

The upper left segment of the model is titled as *entertainment*. It indicates the situations in which people are *passive participators, and absorbing the experience*, such as watching TV or listening music. People usually perceive these kinds of experiences as entertainment. *Educational* dimension on the upper right segment, similarly as entertainment dimension, indicates *the absorbing of the experience, but unlike the entertainment dimension, emphasizes the active role (e.g. students in a lecture) of the customer in creating the experience*. The *escapist* dimension refers to *immersed active participation of the customer in creating experiences*. Playing ice hockey, visiting a casino or amusement parks can be mentioned as examples of this category. The last dimension is titled as *esthetic*. It indicates the experiences such as *visiting a museum or an esthetically remarkable viewpoint (Eiffel tower)*

(Pine and Gilmore 1998b, 30–38). To encapsulate the experience realms model, Pine and Gilmore (ibid., 35) argue that customers involved in *entertainment* experience desire to *sense* the experience, customers involved in *educational* experience desire to *learn*, customers involved in *escapist* experience desire to *do*, and finally, customers involved in *esthetic* experience just want to *be* there.

The above mentioned model on the experience dimensions is found usable for this study, and it is later discussed while determining the nature of electronic insurance service experiences. However, before discussing the model in the insurance context it is essential to make a conceptual clarification concerning the difference between service experiences and experiences as well as explaining which of the concepts is found more appropriate for the scope of the study.

As far as I am concerned, terms *service experience* and *experience* have been used more or less in parallel in the literature, and therefore, confusion about how to define the constructs in a certain context has occurred. In this regard, I suggest that defining experience needs to be divided to two levels. Following the insights presented by Edvardsson et al. (2005), I argue that the former term (service experience) more or less refers to how experience is perceived, for example, in the context where the relationship between customer's expectations and experiences towards a product or service are compared. Thus, I suggest that the *service experience can be either positive or negative*, or similarly, *appealing or unappealing mental mark about a certain service process*. The latter construct (*experience*) refers to *a situation where customer undergoes something that really appeals to his or her feelings and senses – something unique and memorable*.

The approach preferred in this study refers more to the definition of *service experience* rather than *experience*. In my opinion, service experience is more suitable to the complex service (here, insurance) context. Thus, I disagree with Stuart (2006) by arguing that *service experience need not be something ultimately extraordinary*. Especially, when complex services (e.g. insurance services) are in question, service experience means something else than what it means when you are, for instance, having dinner in a theme restaurant. In the complex service context the elements determining service experience are more common and based on everyday-life, such as intelligibility of service. In addition, complex services are usually not positioned to the top of the people's "level of interest list" (i.e. low-involvement). People are naturally (and voluntarily) more interested in, say, entertainment (movies), sports, culture, health, and other elements of their life, which can be considered to have a clearer influence on people's well-being and happiness in life. Based on the above said, I suggest that instead of discussing "memorable experiences" more appropriate concept to be used in insurance context is "appealing service experiences", which is used in this study while referring to (service) experience discussion.

Although the above presented experience realms model by Pine and Gilmore *refers more to the world of experiences than service experiences* as they are understood on the basis of the discussion above, I suggest that it is still applicable to characterizing service experiences in the insurance context. In this regard, I propose that creating appealing insurance service experiences mostly refers to the *educational segment* of the experience realms model. By this I mean that *in electronic insurance service environment customers are rather absorbing the information than immersing into it* since the main purpose of visiting insurance Web sites is often information acquisition possibly followed by electronic transactions (e.g. online buying or reporting a claim online). In addition, electronic service environment is based on self-service logic. This refers to the fact that customers are operating in the environment within the limits of their skills and competencies to use the electronic services (SSTs) since the physical service contact is lacking. Thus, it can be stated that *customers possess an active role in such a service environment*.

To conclude the discussion on services as experiences, it can be stated that service encounter and service experience are discussed as synonyms. As the focus of this study is on investigating a customer-friendly design of electronic insurance services, *I prefer to use the term "service experience"* since it is, in my opinion, more appropriate in the insurance context. Further, the term "memorable experiences" as such goes too far away from the nature of (electronic) insurance services. Therefore, and referring to what is discussed above, I suggest that *in the scope of this study it is more appropriate to speak about creating "appealing service experiences" than "memorable experiences"*. In the next sub-chapter the discussion on service experiences is applied to the electronic environment.

5.2 Service experiences in electronic environment: Customers' technology acceptance

Putting effort to designing the Web sites from usability point of view provides service providers with better possibilities to offer customers a comprehensive and comprehensible electronic service environment. However, it is only one side of the coin. Another side is *customers' abilities and willingness* to use the electronic services. Even if the electronic service environment would be extremely functional, customers would not necessarily want to be served through the electronic channel. In that case, a firm's designing work is a waste of money.

One of the most crucial challenges to all information systems is, and has been, to get users (i.e. customers) accept and exploit them. From service design point of view the above said refers to *the ability of the electronic services and service environment to create appealing*

service experiences to the customers. This is even more important in systems, such as Self-Service Technologies (SSTs), which are based on voluntariness and self-service logic since a service performance cannot be influenced by a physical service contact. The reasons could be many but some solutions for being able to affect on customers' intentions to use new technology and/or electronic services are suggested through the research within the field of information systems (IS). In this regard Technology Acceptance Model (TAM), discussed in the following sections, is introduced. Further, Technology-Readiness model discussed within the field of service research is elaborated as well.

Technology Acceptance Model (TAM)

Technology Acceptance Model (TAM) originally introduced by Davis (1989) provides one insight into the question why users (i.e. customers) might be reluctant to use applications based on information technology. TAM suggests two main features for explaining customers' intentions to adopt new technologies, namely, *perceived usefulness* and *perceived ease of use*. Other researchers have later supported the validity of TAM as well as applied the model in various technology contexts (e.g. Adams, Nelson, and Todd 1992; Venkatesh 2000; Benbunan-Fich 2001; Chen and Tan 2004).

Perceived usefulness refers to the customers' belief that "using a certain system would enhance their performance in order to get their job done and/or needs fulfilled" (Davis 1989, 320). However, it is not necessarily enough that the system is useful. If the customers perceive the system as complicated and difficult to use they most likely hesitate, or in worst case, do not use it. The system has to be also easy to use. *Perceived ease of use* refers to the "situation where customers' think that using the system is free of effort" (ibid.). According to more recent research, perceived ease of use is seen to have direct influence on perceived usefulness (Venkatesh 2000, 343). Further, it is also confirmed that perceived usefulness is found to be a stronger determinant for customers' intentions to use electronic services than perceived ease of use (Venkatesh and Davis 2000, Venkatesh, Morris, Davis, and Davis 2003).

Along with the continuously increasing use of Internet, the World Wide Web (WWW) has become a very important environment for both service providers, and, naturally, customers (e.g. Nielsen 2000, 10). As an example of the increasing importance of the Internet and WWW, Moon and Kim (2001, 217) note that a change in the means people search information has already been observable. Therefore, investigating technology acceptance of people (i.e. potential customers) in the WWW context has been considered important.

In this regard, Moon and Kim (2001) have suggested a third feature, *perceived playfulness*, to be added to TAM in WWW context. There is a common agreement that defining playfulness is somewhat complicated since the term is used in so many different contexts

(see e.g. Ellis 1973; Day 1981; Lin, Wu, and Tsai 2005). However, in their research context Moon and Kim (2001, 219) perceive playfulness as referring to *concentration* (e.g. customer might forget the time, noises or other surrounding factors, or even what the work was that he was supposed to do), *curiosity* (e.g. customers might forget the actual purpose of use, and start exploration), and *enjoyment* (e.g. customer perceives it fun and entertaining to operate in WWW environment) related to the use of WWW. Through their research work Moon and Kim confirm playfulness to be valid and important feature for explaining technology acceptance of the customers in WWW environment. Further, they investigated the importance of perceived playfulness in both working and entertainment situations and reported that playfulness also has a significant effect on situations when WWW is used for working purposes (p. 227).

In order to apply TAM in the scope of this study, few remarks have to be made. *First of all*, it is *assumed already beforehand that electronic insurance services should be designed to be useful*. Otherwise no one bothers to operate with the electronic service environment based on self-service logic – not in the case of complex services. In addition, as far as I am concerned usefulness is more focused on measuring more engineering-based values, such as time, system effectiveness and efficiency, and productivity (Venkatesh et al. 2003, 448). Therefore, *usefulness determining customers' intentions to use electronic insurance services is not of a particular interest in this study*.

Second, research has evidenced that the significance of ease of use on customers' intentions to use a certain technology becomes less important as customers become more experienced in using the technology (Venkatesh and Davis 2000, Venkatesh et al. 2003). However, *as the frequency of use in case of electronic insurance services is particularly low* (maybe only once or a few times a year), *I contend that in the electronic insurance service context perceived ease of use is utmost important in order to get customers to use the electronic services*. In addition, perceived *ease of use*, *is established to be particularly crucial feature in WWW environment* (e.g. Moon and Kim 2001, 224; Lin, Wu, and Tsai 2005, 691).

And third, the work of Moon and Kim (2001) clearly indicates that playfulness is a crucial element in the context of designing electronic service environment in general. Moreover, since insurance can be characterized by complexity, low levels of interest by customers, abstract, and matter-of-fact nature, the fact that playfulness also has a crucial impact on customers' intentions to use WWW for working purposes, justifies that *playfulness is a crucial element to be considered in the context of this study*.

Further, it is suggested that *perceived ease of use and perceived playfulness are significantly related to each other in WWW environment* (Moon and Kim 2001, 226). These findings clearly give theoretical support for the scope of this study. Thus, ease of use and playfulness are considered as crucial design elements affecting customers' intentions to operate in the electronic (Internet-based) service environment.

Concerning the conceptual discussion on the characteristics of playfulness, *enjoyment* was proposed as one of its crucial determinants. Referring to this, Huang (2005, 841), following the earlier insights by Hoffman and Novak (1996), notes that searching information to solve (a) certain problem(s) is not customers' only purpose to visit the different Web sites. They are also using the Internet for socializing, and looking for entertainment. In this regard, De Wulf et al. (2006) have investigated the influence of pleasure on the Web site success. They propose that *pleasure indicates such elements as fun and enjoyment of a certain Web site*. De Wulf et al. (2006) define *pleasure* as "the extent a customer perceives the service performance to be enjoyable" (p. 436).

Referring to the above said, I suggest that *playfulness* and *pleasure can actually be considered as referring to the same phenomenon*. As playfulness is a more complicated and multidimensional concept, and since it might be mixed up with phenomena more referring to the game world (i.e. playing), *pleasure* is therefore *preferred in this study to indicate the design of a customer-friendly electronic service environment to* the extent that Web sites should be providing customers with experiences, which are also characterized by fun and enjoyment. However, playfulness as a construct is used in empirical research setting of the study to indicate the nature of "insurance cover evaluator" a service concept, which is introduced and discussed in chapter 5.3.

Technology readiness

Whereas *TAM* approaches customers' intentions to use the electronic services from the perspective of the requisites for the service environment, in the service literature the issue has been approached from the customers' attitudes point of view. *Technology readiness (TR) model has been suggested to describe the drivers affecting customers' attitudes towards the adoption of technological solutions* (see e.g. Parasuraman 2000; Parasuraman and Colby 2001; Tsikriktsis 2004). In the model customers' attitudes and beliefs towards the adaptation of technological solutions (electronic services) are described through four drivers that comprise: *optimism, innovativeness, insecurity, and discomfort* (Figure 16).

The four dimensions indicating customers' beliefs towards the use of electronic services reflect both positive ("contributors") and negative ("inhibitors") attitudes. *Optimistic* customers have strong faith in the possibilities of new technology to make their lives easier and more efficient. They have natural curiosity to learn how to use a new system despite the time they consume on getting themselves familiar with the system. *Innovativeness* refers to customers who can be considered as *self-learners*. They like to update their knowledge on new technological solutions and they are keen to try new systems even if the actual functionality would be poor.

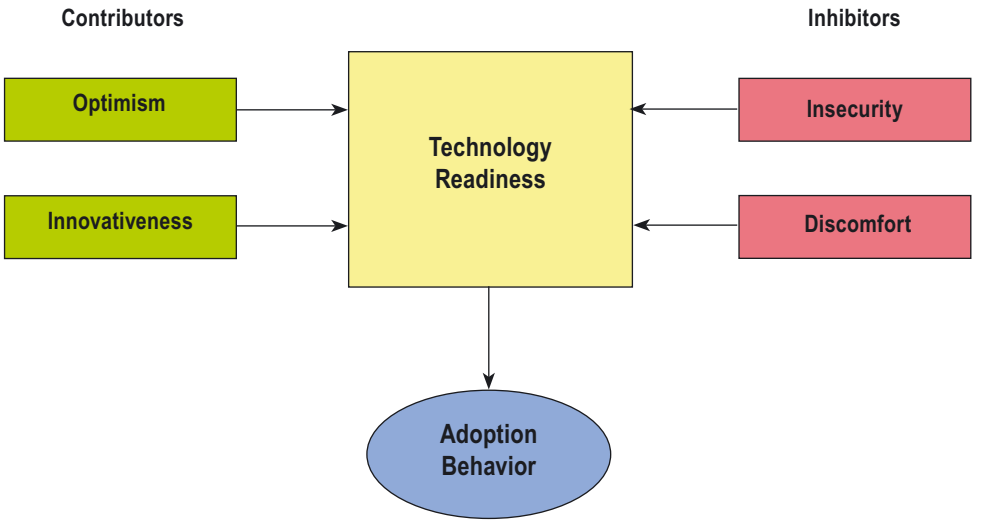

Figure 16. Technology Readiness Model (adapted from Colby 2002, 30)

Insecurity is one of two dimensions indicating inhibiting beliefs towards the adoption of electronic services. Insecurity has been considered as the most remarkable barrier on the advancement of electronic services. It refers to, for example, delivering confidential information (e.g. credit card numbers or other personal information) over the Internet, and the need for the assurance that the system is working as it is expected to work without failures. Another inhibitor is *discomfort*, which refers to customers' anxiety that they are unable to use electronic services because a service environment might be difficult to use. In that case, customers might feel embarrassed and incapable (Parasuraman and Colby 2001, 34–46; Colby 2002, 29–32).

Further, Colby and Parasuraman (2001) have proposed a framework for classifying customers according to their attitudes towards TR. The classification contains five customer categories which are: *explorers, pioneers, skeptics, paranoids*, and *laggards*. In order to provide a more comprehensive picture on the linkage between TR model and customer classifications discussed above, Parasuraman and Colby have assessed each customer type from the perspective of TR model. In evaluating the extent of each dimension of TR model a very simple scale ranging from "low" to "high" is used. The evaluation is depicted in Table 4.

Table 4. Differing beliefs of technology adoption segments (Parasuraman and Colby 2001, 60)

	DRIVERS		INHIBITORS	
	Optimism	Innovativeness	Discomfort	Insecurity
Explorers	High	High	Low	Low
Pioneers	High	High	High	High
Skeptics	Low	Low	Low	Low
Paranoids	High	Low	High	High
Laggards	Low	Low	High	High

In the following five paragraphs each customer segment is individually characterized. The presented discussion is based on the original characterizations by Colby and Parasuraman (2001, 59–61).

Explorers are highly motivated to adapt new technology, and have *both optimistic and innovative attitude* towards the new technological solutions. They can be considered as *self-learners* in getting themselves familiar with new technologies. Explorers are *often male and younger people*.

Pioneers also have *optimistic and innovative attitude* towards electronic services but they also *might feel some levels of insecurity and discomfort* in trying new solutions. Unlike explorers, they *might need help* in adopting new technologies. Pioneers are *often young and from their income level middle-class*.

Skeptics lack optimistic insight into electronic services, and they need to be convinced about the advances of new technological solutions before they become active adapters. Skeptics usually have *average income level*, they are already older than pioneers, and they are less likely to work in technology professions.

Paranoids feel high levels of insecurity and discomfort towards electronic services. They are often *lower-income*, *lower-education*, and *older people*. However, this customer segment might still be willing to adopt new technology but only after careful reassurance and help in adoption.

Laggards are the least likely to become adapters of electronic services. They do not see, or do not want to see, the advantages of new technology, and are often the *most brand loyal* segment. Laggards are often *the oldest*, *least educated*, and have *the lowest income*.

While TR model described customers' attitudes towards the use of new technology (e.g. electronic services), Bitner et al. (2002, 102–103) have suggested a *consumer readiness (CR) model to describe the factors determining customers' competencies to try and adopt self-service-based technologies*, such as Internet-based electronic services. The model suggests that consumer readiness to adopt self-service technologies (SSTs) is determined through three features: *ability, role clarity*, and *motivation*. *Ability* refers to customers' skills and

capabilities to use electronic services, and resources (i.e. the customers have the required equipments, such as a computer and Internet access, to be able to use the services). *Role clarity* means that customers know what they have to do in order to get their transactions completed in the electronic service environment. *Motivation* refers to the fact that the benefits of the electronic services should be so visible and clear that customers easily recognize them, and thereby, become motivated to try and adapt the electronic services. Both TR and CR models are used to construct the empirical research setting for this study, and thus, discussed later in chapter 6.2.

To encapsulate the essential contribution of this sub-chapter to the overall service design approach of the study, few remarks are essential to be noted. First, it can be stated that electronic servicescape describes the structural characteristics and the composition of the electronic service environment. However, *ease of use and pleasure* are considered as *crucial determinants* of customer-friendliness of the electronic insurance servicescape in the scope of the study.

Concerning the users (i.e. customers) of electronic service environment, *the focus of this study is on customers who have a more positive than negative attitude towards new technology and electronic services provided on the Internet*. Following the categorization of Colby and Parasuraman (1999) the main interest lies in the first four categories (explorers, pioneers, skeptics and paranoids), since these customers segments can be considered to have the required motivation on using electronic services, and thereby, they are considered as potential customers for electronic service environment. Even though some of the customers considered to belong to some of these four categories (especially in case of skeptics and paranoids) may have prejudices or even skeptical attitude towards electronic services they might still be potential customers for electronic services. However, it is not even of insurance companies' interest to shift all their services to the Internet (or in general, electronic environment), and to get all the customers engaged in electronic service environment. Therefore, *only the above mentioned four customer segments that can be considered as potential customers in the electronic service environment, at least to some extent, are examined*. The customers that have the most negative attitude towards using electronic services (i.e. laggards) are excluded from the scope of this study.

5.3 Introducing "insurance cover evaluator" service concept

In earlier chapters customer-friendliness in designing electronic service environment is theoretically discussed from the perspectives of service research and information systems

research. In this sub-chapter a more practical and empirical approach on designing a customer-friendly electronic insurance service environment is introduced.

As a result of a research and development project titled as "eInsurance" an electronic service concept for consumers called "insurance cover evaluator" was introduced. Since describing the "eInsurance" project is not of the main interest of this study, I do not talk about it in this context. However, the project is introduced and shortly discussed in the appendix 1.

Guidelines for developing the "insurance cover evaluator"

Getting customers engaged in the electronic service environment in case of complex services is a particularly challenging task. In the insurance context the complex nature of the service makes the task even more challenging since the service characteristics are particularly difficult for the customers to comprehend (see chapter 4.1.4; see also Järvinen et al. 2001).

In order to make complex services easier to understand, they have to be brought closer to customers' mindset and everyday lives. In the insurance context it has to be pointed out that "customers' everyday life" is far away from daily insurance business world. Thus, service provider has to come up with means to speak the same language (not insurance jargon) with customers in the context more familiar to them. Now the natural and also essential question can easily be presented as follows: "how is it possible, in general, to bring the insurance world closer to the customers' world"?

In order to answer to the question from a *practical point of view*, the insights into the novel approach on designing electronic insurance service environment (see chapter 4.4) provide a favorable basis for employing this issue. *From a theoretical point of view*, recent studies have established that emphasizing such conceptual elements as *pleasure, enjoyment*, and *fun* are considered to have a positive influence on customers' willingness to use electronic services (e.g. Chen and Wells 1999; Chen, Clifford, and Wells 2002; Huang 2005; Lin, Wu, and Tsai 2005). In addition, it has been suggested that perceived *playfulness* obviously contributes to determining whether a user would return to a certain Web site on a regular basis (Lin et al. 2005, 691). In the context of physical (offline) services Morgan and Rao (2003, 93–95) have reported that *adding elements indicating fun*, such as live music or other special events, to service sites, *has resulted in positive results from both profitability and customer satisfaction point of views*. The empirical examples in the study of Morgan and Rao are taken from furniture and banking business fields.

In order to concretely consider, *what pleasure could mean in electronic insurance service context*, the essential characteristics of electronic service channel, such as interactivity, and possibility to integrate text, image, graphics, voice, animation, and motion, (see e.g. Hoffman and Novak 1996, 53) but also the essential characteristics of insurance (i.e. low levels

of interest by customers and frequency of use, and high level of intangibility) have to be considered. De Wulf et al. (2006, 436) note that, for instance, using multimedia elements to improve the service performance in electronic environment affects the likelihood that customers purchase through the electronic service channel, and also encounter appealing (service) experiences.

From insurance perspective, utilizing the insights of De Wulf et al. (2006) could be considered as facilitating the customers in constructing a mental picture about electronic insurance services as well as electronic insurance service environment. Hence, customers might have better possibilities to comprehend what they are provided with (i.e. the nature of electronic insurance services), and thereby, it would be more likely that the customers perceive operating in the electronic insurance service environment as appealing, and even fun and enjoyable.

Development of "insurance cover evaluator"

A starting point for the development of the electronic insurance service concept was to make electronic insurance service environment more appealing and comprehensible for the customers. So, the next question was: "what could this mean in practice"? The ultimate idea and guideline for developing the "insurance cover evaluator" as it was developed actually can be considered to rather be a result of "collaborative practical brainstorming" than careful scanning of prior theories and literature. More precisely, the idea for developing this kind of concept was born as "ad hoc" in a project meeting while discussing about various kinds of phenomena on the Internet. At some point the discussion concerned "Habbo Hotel"[1], a virtual world on the Internet which has a graphical interface. Hence, the *idea of including visual elements into the design of insurance service environment was born*.

The main idea was that in designing the service model, the strengths of electronic channel, such as combining motion, graphics, and pictures, should be utilized[2]. In addition, Internet environment enables customers' active participation by moving and clicking a mouse, and typing with the computer. Thus, moving certain objects and clicking with the mouse brought their own flavoring to the "package", and even complemented it from before. In other words, *the development of the service concept aimed to get rid of the traditional insurance-like "scroll-down masses of text, read it, try to understand it, and you might, but not necessarily, find what you were looking for" approach on the Internet*. Instead, the "eInsurance" project focused on offering the evidence that insurance business and insurance services could be approached from a totally different perspective: *text mass could be visualized!*

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1 See http://www.habbo.com

2 For more extensive discussion on the principles of *visual design* see e.g. Guttormsen & Krueger, 2001; Najjar 1998.

At the sketching phase of the service concept one of the key questions was: "what will be the most important outcome of the forthcoming service concept for customers"? In other words, "what is the use of it"? In this regard, *customer service life-cycle (CSLC) model* (Ives and Learmonth 1984, Ives and Mason 1990) was considered as a feasible guideline for the development by the project participants. The CSLC model is depicted in Figure 17.

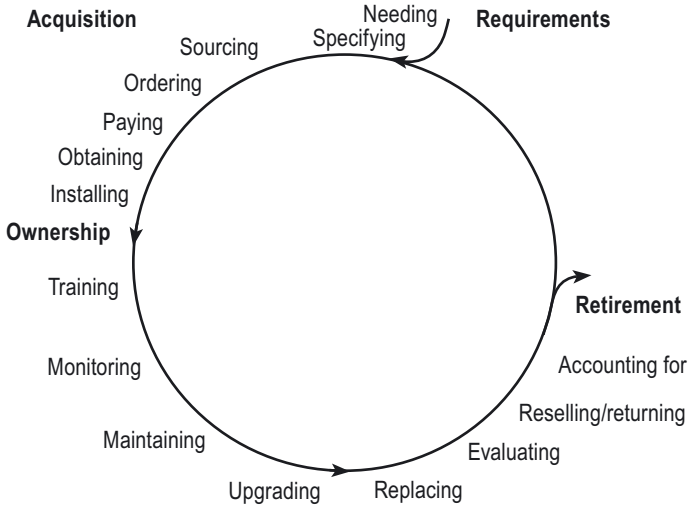

Figure 17. Customer service life-cycle model (adapted from Ives and Mason 1990, 59)

The idea behind the model is that certain distinct phases can be identified during the production and consumption of a certain service by customers. These phases are considered as an entity through life-cycle logic. For example, before a customer purchases a new computer he first recognizes that he might need it. Then the customer purchases the computer, tries to learn to use it, maybe acquires some accessories etc. At some point the computer comes to a certain age and the customer recognizes the need for acquiring a new one. Then the life-cycle starts again from the beginning.

It was commonly agreed by the project participants that the logical basis for the development of the service concept is the beginning of the CSLC model (recognizing and specifying the need). It was decided that the forthcoming service concept should facilitate customers in *recognizing the need for insurance cover, and* on the other hand, also help the customer to *realize what kind of insurance cover he possibly might need*. In this regard, the basic principle of visualizing a certain piece of the overall electronic insurance service environment was concretized. Thus, a *practical key objective for the development work was to develop a visual interface that provides customers with possibilities to consider and assess*:

- What kinds of risks are related to different situations in life?
- What insurance products are essential to a customer in order to be able to better prepare for different risks?
- What kind of matters need to be considered by a customer when acquiring insurance products in question?

The basic principle in using the service concept was that it should be *easy to use*, and it should also create interest in customers towards insurance issues by offering current and useful information about insurance products, possible risks, and insurance cover in general. Another crucial principle was that, instead of traditional product-oriented approach on the Web sites of insurance companies, the service model is customer-oriented focusing on customers needs (Ahonen and Salonen 2005, 36).

In addition to visualization by emphasizing ease of use of the system, other essential design principle was *pleasure (or playfulness)*. In this context pleasure approach *emphasizes the intention of bringing novel, fresher, livelier, and even playful elements to the development of electronic insurance service environment*. More concretely, in the practical development work of the service concept pleasure was referred to as a "game-based logic of the system functionality". In this context, *game-based logic* indicated the utilization of elements from electronic games (e.g. computer games or consol games), such as moving objects by grabbing them on the screen with the mouse, or by clicking the mouse.

Further, more practically-oriented, design guideline for the development discussed among the project participants can be referred to as "learning-by-doing". It indicated that customer's learning would be more effective if he actively participated in the process, also in other ways than only by reading a written text.

The shape of the "insurance cover evaluator"

The functioning logic of the service concept entitled as "insurance cover evaluator" is that the system asks a customer to indicate background information related to his life situation. According to the collected information the system provides the customer with an insurance cover solution customized to his needs and preferences. The functionality of "insurance cover evaluator" is modeled in Figure 18.

The "insurance cover evaluator" was developed in the first eInsurance project (2003–2004). It consists of the "*selector*" function that collects information from customers and the "insurance cover suggestion" function that provides the customers with personalized insurance cover information based on their selections. The above presented diagram depicting the functionality of "insurance cover evaluator" is horizontally divided into three different levels which comprise: input level, functional level, and output level. *Input level*

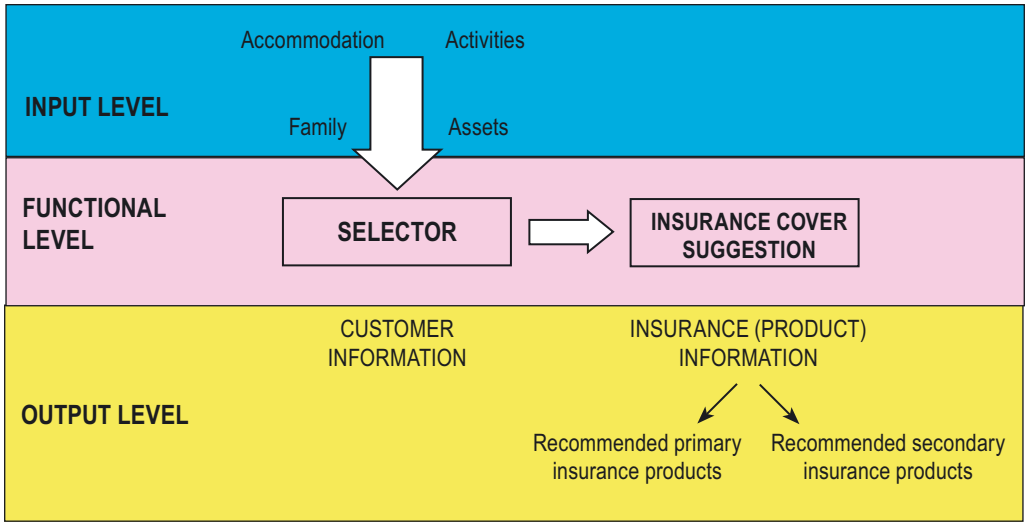

Figure 18. Functionality of "insurance cover evaluator" (adapted from Ahonen, Salonen, Kivistö-Rahnasto, Järvinen, and Silius 2007)

displays information that is provided to the service by the customer (i.e. customer's actions). *Functional level* displays the different service functions (i.e. processes) of the service concept. *Output level* displays the outcomes of the different phases of the service concept (i.e. information that the service concept provides to the customer).

User-interaction with the service is carried out by using a graphical user interface through which the customer either selects an object by clicking the mouse button on top of an object (e.g. house, button) or drags and drops an object onto another (e.g. family member to a house). In the following sections the functionalities of the "insurance cover evaluator" are described more in-detail.

When the customer enters into the "insurance cover evaluator" the first function is called a *selector*. In this function a customer goes through four distinct phases, which comprise: 1) Accommodation; 2) Family members; 3) Assets; and 4) Activities.

In the first phase the customer is asked to indicate his living conditions by selecting a right type of house (apartment, row house, detached house). The customer makes his choice by moving the mouse onto the right symbol (picture of a house type), and clicking the mouse. When the mouse pointer is on the object, the system also provides the customer with a piece of risk information related to the object in question through bubbles. The message is always put in a form of question ("did you know that...") in order to raise customer's interest. As an example of messages related to accommodation (in this case, apartment) bubble might provide a following piece of information: "*Did you know that 2500 fire damages occur in houses every year. Most of them start from living room or kitch-*

en"? The information is not insurance jargon related to insurance terms and conditions but rather a snapshot from the claims statistics or security information meant to raise customer's interest towards different kinds of risks related to certain objects or events possibly concerning his life situation.

In the second phase the customer is asked to indicate the composition of his family by asking "what kind of family do you have" on the upper left corner box of the screen. In order to provide a picture about the "concrete looks" of the "insurance cover evaluator" service concept, the second phase (family members) is illustrated in Figure 19 as an example. In this phase the selection is made by moving the mouse on the family member (man, woman, child, pet), and dragging it to the house. All the selections are illustrated in a table on the upper right corner of the screen. When all the selections are completed the customer can move to a third phase by clicking "next" button on the lower right corner of the screen. Similarly as in the first phase the risk or security-related information is provided through bubbles. The described principle of functionality is followed also in the following two phases (*assets* and *activities*) of the selector function of the service concept.

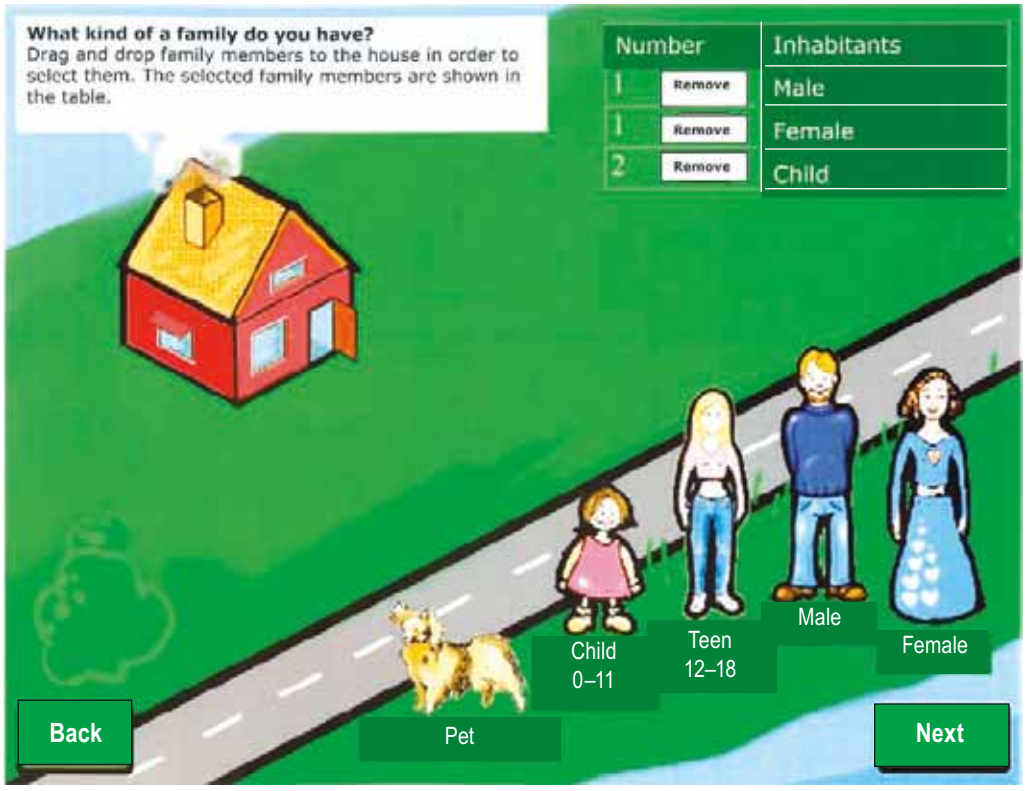

Figure 19. "Family members" window (adapted from Ahonen and Salonen 2005, 40)

After going through all the four phases of the *selector function*, and thereby, indicating the background information related to the customer's life situation, a suggestion for the appropriate insurance cover customized according to the indicated life situation is provided to the customer. This is the second functionality of the "insurance cover evaluator" called *insurance cover suggestion* through which all the items (accommodation, family members, assets, and activities) the customer has indicated through the selector function are summarized in the table. In addition, the *insurance cover suggestion function* provides the customer with a list of insurance products, which might be related to his life situation, and thereby, are essential to the customer. Suitable insurance products are recommended for all the selected items.

Moreover, the recommendations referring to insurance products are prioritized to the extent of their relevance for the customer. In this regard, two kinds of recommendations are provided: *primary insurance products*, and *secondary insurance products*. Primary insurance products refer to the most common, and therefore, highly recommended insurance types for the indicated living environment (e.g. car insurance, home insurance, and travel insurance). Secondary insurance products refer to more optional types of insurance (e.g. all-risk car insurance, health insurance, and sports insurance), which might be useful for the indicated living environment in case the customer desires to be fully covered against possible risks with means of insurance.

The "insurance cover evaluator" was publicly introduced through a press release in January 2005. The press release was followed by a few articles in the acknowledged Finnish newspapers, such as Aamulehti, Kauppalehti, and Talouselämä, and also a few news spots in TV. The achieved publicity increased people's knowledge about the developed service concept, and thereby, it was good advertisement for it in terms of getting potential electronic insurance customers to test and evaluate the "insurance cover evaluator". In order to collect feedback from the developed service concept, a feedback survey was carried out during January and March 2005. Through the feedback survey valuable information for developing an idea of the "insurance cover evaluator" further was gained (see appendix 1). In next sections a short review of the essential results of the feedback survey of the "insurance cover evaluator" is introduced.

Customers' opinions on the "insurance cover evaluator"

Referring to what is discussed about the design evaluation methods by Hevner et al. (2004, 86–87), *testing* was used as a method for examining customers' opinions on the developed "insurance cover evaluator" service concept. Further, continuing by following the insights of Hevner et al. (2004) evaluation of the service concept through a (quantitative) feedback survey performed by the test users refers to the use of *analytical methods*. However,

the role of the quantitative analytical methods (i.e. feed back survey) in this study is only supportive, and superficial statistical analysis is only used to gain background information about utilizing a design logic based on visualization in the insurance context.

Customers' opinions on the developed "insurance cover evaluator" service concept were measured through five dimensions, which comprised: *functionality, attractiveness, utility, layout*, and *social acceptance*. A seven-point Likert-type response format was used to measure all the dimensions. The values were ranging from "1 (fully agree)" to "7 (fully disagree)" for all the questions of the five dimensions. Value 4 indicated a neutral opinion.

Testing the *functionality* is a generally common form of evaluation from the design research point of view (Hevner et al. 2004, 86). In this context *functionality* refers to the possibility to move objects and figures on the screen and thereby to better understand insurance matters, offering pieces of information in simple form (no insurance jargon) through balloons, which are connected to objects and symbols, etc. Altogether five statements indicated the functionality of the developed service concept. The results indicate that 68 % of the respondents expressed positive attitude (selected values from 1 to 3) towards the possibility to move objects and figures on the screen. Further, 63% of the respondents reported positive attitude towards offering pieces of information through balloons. All in all, 66 % of the research participants perceived the functionality service concept as positive.

Customers' motivation and interest towards new technology and/or electronic service affects their intentions to adopt such solutions as it is established through the studies on TAM (e.g. Davis 1989; Venkatesh 2000; Moon and Kim 2001). In the context of the feedback survey, *attractiveness* indicated customers' opinions on whether or not the service concept a) was interesting, b) increases the motivation to take care of insurance issues, and c) the level of interest towards insurance issues in general. Attractiveness dimension was measured through three distinct statements. 62% of the respondents expressed positive attitude towards the service concept. However, the influence of the service concept in order to increase general interest towards insurance was perceived slightly more negative than positive. All in all, 50 % of the respondents reported positive attitude towards the attractiveness of the service concept.

Following the insights of Heinonen and Strandvik (2004, 190) the relevance of information offered in the electronic service environment is one of the most crucial important prerequisites for customers to be willing to immerse "the message" by a service provider. Adapting the idea to the context of evaluating the "insurance cover evaluator", *utility* indicated the usefulness of the insurance cover proposals and the insurance information offered through balloons, and the intelligibility of the insurance cover proposals. Utility dimension was measured through five statements. Generally, 59% of the respondents reported positive attitude towards the utility dimension.

As Hevner et al. (2004, 86) remark, it is also essential to evaluate the development work from aesthetic perspective. In this regard, *layout* dimension indicates the aesthetic factors of the service concept by considering the graphics, used colours, and positioning of the buttons and icons. The layout dimension was measured through six statements. Altogether, 59% of the research participants indicated positive attitudes towards the layout of the "insurance cover evaluator".

Social acceptance was the last dimension to be measured. It does not directly embrace research on information systems or usability but is more related to consumer behaviour. However, it was perceived as generally interesting aspect by the eInsurance project members (i.e. the developers of the "insurance cover evaluator") to be explored. For instance, in their study on motivations to create personal Web sites Zinkhan, Conchar, Gupta, and Geissler (1999) propose that social acceptance indicates the individual's willingness to keep oneself up-to-date in terms of technological development as well as gain acceptance from the members of his reference group (p. 71). In this context, social acceptance refers to, for instance, the likelihood to use this type of service, recommend it to a friend if it was available, and the utilization of game-based logic in order to increase customers' interest towards insurance issues, or to make insurance issues more comprehensible. On average, 61% of the respondents expressed positive attitude towards the social acceptance dimension. For the sake of clarity, the above presented discussion on the positive attitudes of the respondents towards the "insurance cover evaluator" is summarized in Table 5.

Table 5. The extent of positive attitudes by respondents

Dimension	Positive attitude (%)
Functionality	66
Attractiveness	50
Utility	59
Layout	59
Social acceptance	61
Total average	59

To conclude, the testing results generally indicate that *customers showed positive attitude towards a different and novel approach on designing electronic insurance services*. On average 59 % of the respondents generally perceived the "insurance cover evaluator" as positive phenomenon as the last row in Table 5 indicates. In the scope of this study *these results provide a valuable empirical evidence for the logic through which the designing of electronic service environment is approached*. In the next chapter the abductive discussion between prior theories and empirical observations is encapsulated.

5.4 A preliminary framework for designing a customer-friendly electronic insurance servicescape

In this sub-chapter it is finally time to encapsulate the theoretical discussion complemented with empirical observations. In this regard, a preliminary framework for designing a customer-friendly electronic servicescape in the context of complex services, such as insurance, is proposed in the end of this sub-chapter. However, before introducing the framework few concluding notions referring to discussions presented in chapters 3, 4, and 5 are discussed.

From service management point of view, the core of the theoretical discussion of this study is derived from *service design* literature. More precisely, the main focus is on examining the phenomenon earlier referred to as *service facility design*. This approach is preferred since service facility design can be considered as a phenomenon through which the content of the service (concept) is visualized and concretized to the customers. According to the earlier literature, *service facility design emphasizes the designing of supporting facilities and layout factors of (physical) service environment* (e.g. Fitzsimmons and Fitzsimmons 2006). In this regard, the "servicescape" introduced by Bitner (1992) depicts the essential determinants for designing a physical service environment. These determinants comprise: 1) ambient conditions, 2) spatial layout and functionality, and 3) signs, symbols and artefacts.

Further, earlier research on services has addressed that *when customers are observing and evaluating a service they might actually observe and evaluate the physical facilities of a service provider instead* (Baker et al. 1988; Turley and Fugate 1992) *since they provide a tangible "physical evidence" of the existence of service* (e.g. Bitner 1992; Zeithaml and Bitner 2006). However, *in the electronic service environment such physical elements cannot be observed and evaluated since they do not exist*. For the same reason, the "servicescape" model cannot be applied as such. In this study, it is, thus, adapted to the electronic service context.

In this sense, IS literature, especially research on Web site usability is reviewed to discover the essential structural characteristics of electronic servicescape. In this study I theoretically suggest that *the elements that customers are observing and evaluating in the electronic service environment* in order to discover "concrete, although non-physical, evidence" about the content of the service *are related to Web site usability*. On the basis of earlier literature combined with the results of two pilot studies discussed in chapters 4.3.1 and 4.3.2, four usability-related elements (content, navigation, appearance, and interactivity/assistance) are suggested as the determinants of electronic insurance servicescape.

However, characterizing the electronic servicescape only provides a picture about the structure of the electronic service environment. In addition, customers' intentions and attitudes to operate in the electronic service environment as well as the ability of the electronic service environment to create appealing service experiences determine the customer-friendliness approach on the design of the electronic servicescape. In this sense, the extant literature on service experiences (see chapter 5.1) provides an appropriate service-oriented approach on customer-friendliness. From IS research viewpoint, Technology acceptance model (TAM) provides a feasible approach and essential "ingredients" on considering the customers' intentions to use electronic services. Integrating the discussions on service experiences and technology acceptance of customers, I shall suggest that *ease of use and pleasure can be considered as preliminary theoretical indicators of creating appealing electronic insurance service experiences*.

In addition, the results of the second pilot study on the usability of electronic insurance services (see chapter 4.3.2) reveal that *trustworthiness* is perceived as a fundamental feature of electronic insurance service environment, and insurance business in general by the respondents. Further, *security* is discussed as one of the crucial elements of electronic services in general (see chapter 4.1.3). In line with this, discussion on the technology readiness model in chapter 5.2 reveals that *insecurity has been considered as the most remarkable barrier on the advancement of electronic services*. From usability point of view, earlier research has proposed that the greater the usability of a Web site is, the more secure the customers perceive the electronic service environment (Flavián et al. 2006, 3). From the conceptual point of view security and trustworthiness can be considered to be related to each other as discussed by Yousafzai et al. (2003). In this regard, I shall suggest *trustworthiness as an additional element to ease of use and pleasure in characterizing the creation of appealing electronic insurance service experiences*.

Following the principles of design research methodology the constructed framework is called a *development artefact*. As March and Smith (1995) have established artefacts do not necessarily have to be technical devices. At least four types of artefacts can be developed. These comprise: *constructs, models, methods*, and *instantiations*. In this study the presented artefact refers to both *constructs* and *models*. On one hand, conceptual understanding on the investigated phenomenon is acquired by scanning the earlier literature and applying the derived theoretical concepts to the scope of this study. On the other hand, these concepts are bound together as a form of framework preliminarily indicating *the design of a customer-friendly electronic servicescape in the context of complex services, such as insurance*. The developed artefact is depicted in Figure 20.

As chapters 3 and 4 as well as this chapter indicate, the above presented preliminary framework and the concepts included are mainly based on earlier theoretical discussion. However, theoretical framework is complemented with empirical observations. The us-

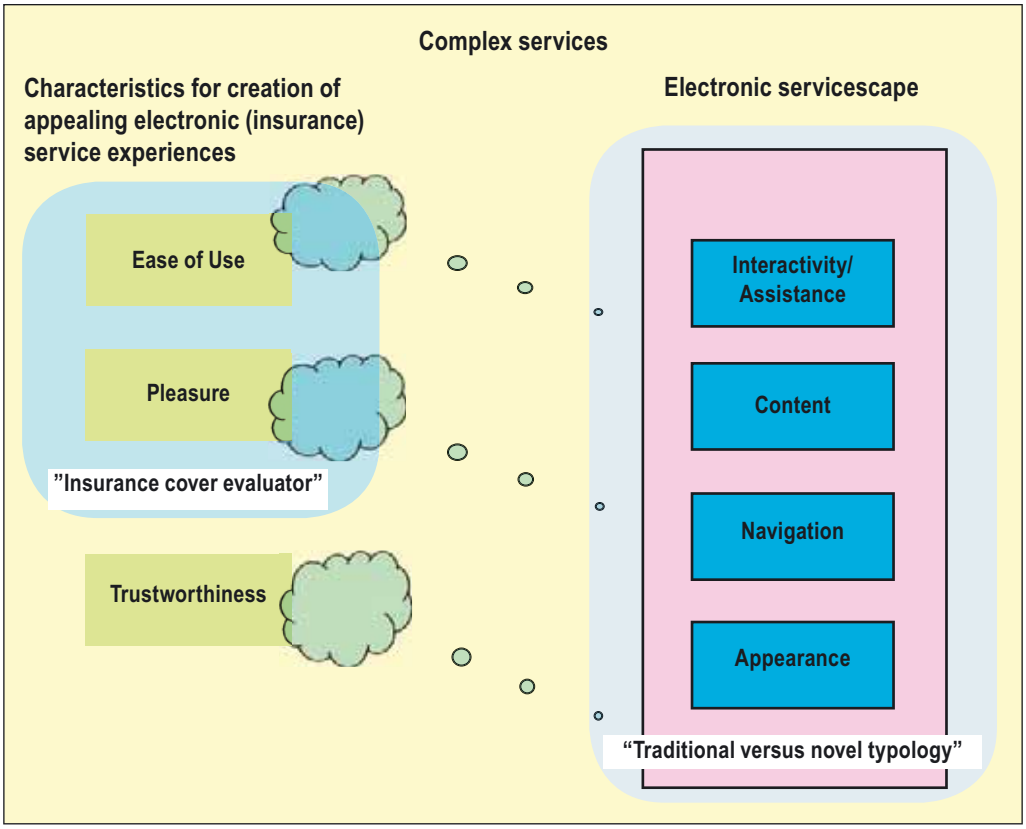

FIGURE 20. PRELIMINARY FRAMEWORK FOR DESIGNING A CUSTOMER-FRIENDLY ELECTRONIC INSURANCE SERVICESCAPE

ability-related attributes (interactivity/assistance, content, navigation, and appearance) are empirically examined in the insurance context through the two pilot studies (see chapters 4.3.1 and 4.3.2), and thereby, established to be appropriate for the purpose of the study. A "traditional versus novel" typology is introduced as the most fundamental empirical implication for this study. In addition, ease of use and pleasure approaches were empirically characterized through "insurance cover evaluator" service concept. The empirical evidence complementing the theoretical framework is highlighted with light blue, partly transparent areas in Figure 20.

From the empirical research point of view the electronic servicescape refers to the question: "*what the customer desires to see in the electronic service environment?*" Another

question ("*what are the factors encouraging the customer to operate in electronic insurance service environment?*") displayed in the framework refers to the elements indicating the customer-friendliness (ease of use, pleasure, and trustworthiness), and thereby, the characteristics creating appealing electronic (insurance) service experiences. The blue clouds illustrate that the customers' insights into the appealing electronic service experiences are engendered through the electronic servicescape. In the next chapter the crucial principles for empirically evaluating the functionality of the developed artefact proposed in Figure 20 are introduced and discussed.

6 LOGIC FOR EVALUATING THE DEVELOPED ARTEFACT

While the essential focus of chapter 3 was on general service discussion, in chapter 4 the discussion was adapted to the electronic context by embracing literature also on IS research, especially within the field of Web site usability. In addition, the general usability discussion was adjusted to insurance context through two pilot studies on the usability of electronic insurance services (see chapters 4.3.1 and 4.3.2). Following the principles of design research the abductive dialogue between prior theoretical literature ("service experiences" and "technology acceptance of customers") and empirical observations ("traditional versus novel typology" and "insurance cover evaluator") was continued in chapter 5, and finally concluded while introducing a preliminary framework for designing a customer-friendly electronic servicescape for complex services, such as insurance (i.e. the developed artefact).

After its introduction, it is essential that the developed artefact becomes *evaluated*. Otherwise it is difficult to assess the overall utility of the development work, be it new software solution or a model for designing and developing business solutions and services. In this regard, the objective of chapter 6 is to introduce and discuss the essential methods and arrangements for conducting the evaluation of the developed artefact (Figure 21).

First, focus group interviews are introduced and discussed as a method for collecting the empirical research data referring to the evaluation of the developed artefact in chapter 6.1. The essential principles for constructing the focus groups are considered in chapter 6.2. Next, chapter 6.3 introduces the procedure whereby the focus group interview sessions were conducted. Finally, the essential methodological principles for analyzing the collected data are introduced and discussed in chapter 6.4.

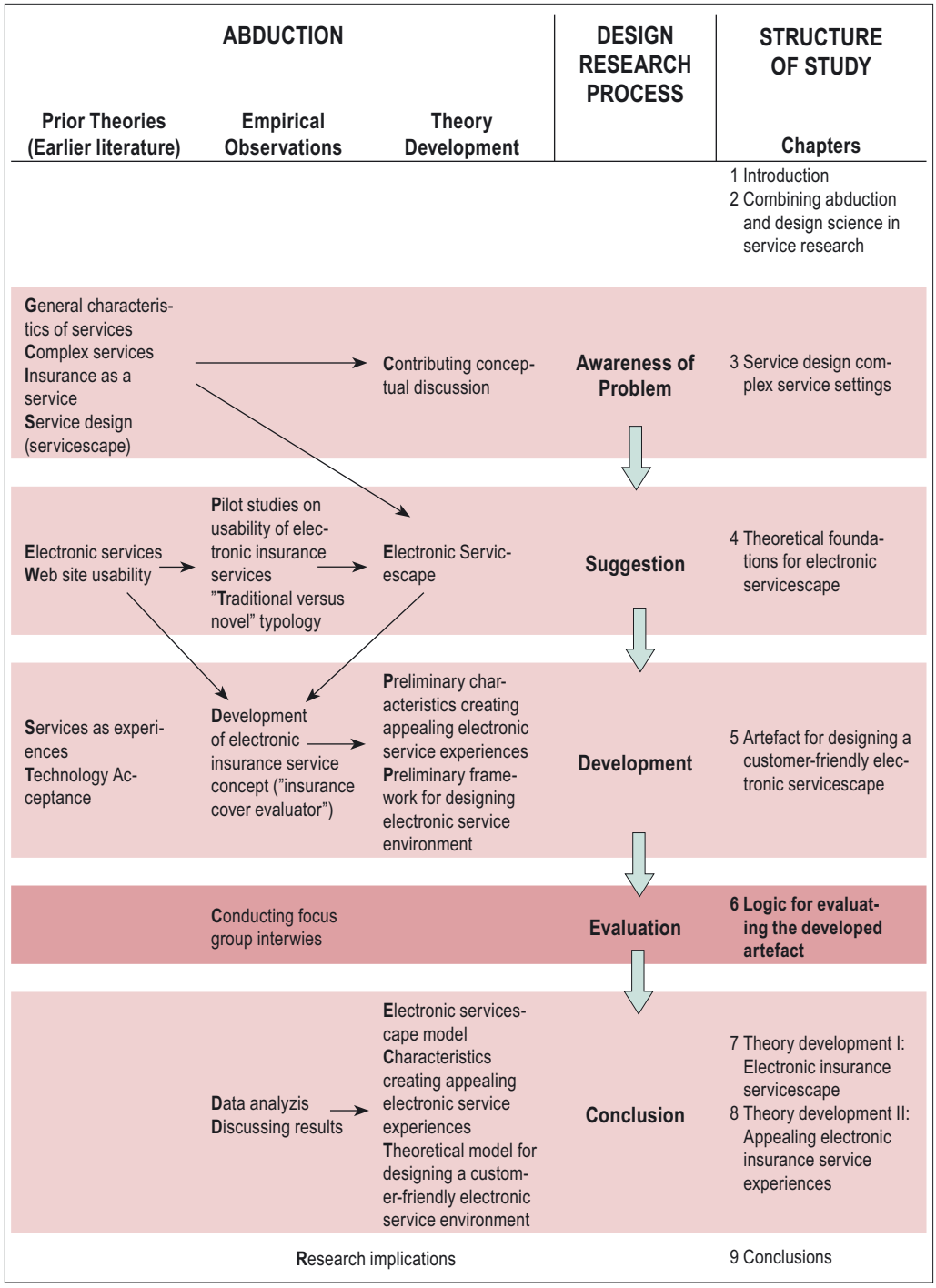

Figure 21. Objective of chapter 6

6.1 Focus group interviews as a method of collecting empirical data

Following the principles of design science paradigm the main focus of my research was on developing an artefact reflecting "something new" from both theoretical and empirical points of view. More precisely, this statement refers to designing a customer-friendly electronic insurance servicescape. In this regard, my study also possesses an *exploratory approach*, which is determined as "potentially useful knowledge-building in a new or lonely area" (Beall 2002, 26). As the above said indicates, exploratory research is usually conducted when the investigated phenomenon and/or the research area is somewhat unknown or totally new. In most cases this also means that the amount of existing literature is particularly narrow (e.g. Martin 2003, 3).

Since quantitative (positivistic) studies usually have their focus on testing the already existing theoretical models and/or theories, it was not perceived as suitable approach for this study. This topic is extensively discussed in chapter 2.1. Instead, qualitative approach was preferred.

From the perspective of design science methodology, Hevner et al. (2004, 86–87) suggest *descriptive methods* as one of the five design evaluation methods. Descriptive methods generally refer to presenting *scenarios* constructed around the developed artefact to the evaluation participants, and building convincing *argumentation* for the utility of the developed artifact. In the empirical research setting of this study *scenarios referring to the Web sites of electronic insurance service providers as well as the "insurance cover evaluator" were constructed and presented to the research participants*. Thus, *descriptive methods* suggested by Hevner et al. (2004) *are found suitable for this study* from the empirical data collection point of view.

However, as the scientific objectives of the study clearly refer to theory development I posit that especially analyzing of the (collected) data reflects the emphasis on explaining the theoretical and empirical phenomena with the help of the research data, not just identifying and describing them. Thus, *explanatory logic* aiming at describing, but also explaining and understanding the nature of the mechanisms under examination (e.g. Van Aken 2005, 20) is followed in analyzing the empirical evaluation data.

In choosing a suitable method for empirical data collection, it was assumed that in order to be able to reach the rich data through which the essential empirical phenomena can be extensively described and explained the various insights from different customers were desired. In this regard, *focus group interview method* was found usable for this study. Focus group interviews are often used *in qualitative studies possessing exploratory nature* (Vaughn, Schumm, and Sinagub 1996, 6). Further, focus group interviews are generally

used for investigating peoples' views, beliefs, perceptions, and opinions on a certain determined topic (Crawford and Acorn 1997, 15).

Following the definition established by Carey (1994) *focus group interviews can be defined as a technique where semi-structured group session is moderated by a group leader, held in an informative setting, with a purpose of collecting information about designated topic* (p. 226). Focus group interviews are usually conducted with groups of six (or eight) to ten participants (Engelbrektsson 2002; Vaughn et al. 1996). The participants are asked to discuss a particular pre-determined topic. The moderator gives instructions if needed and ensures that the discussion moves around the desired topic.

Concerning the strengths of focus group interviews, in comparison to one-to-one interviews, research has suggested that the interaction among the research participants in focus group interviews makes them more productive than one-to-one interviews (see e.g. Catteral and MacLaran 1997; Jordan 1997). Further, interaction between people taking part in focus group interviews may encourage the participants to communicate more openly, also about embarrassing subjects, because the situation resembles more a normal communication, not research circumstances, than one-to-one interview. Thereby, a wider range of various opinions by the participants may emerge (Kitzinger 1994; Vaughn et al. 1996). In addition, focus group interviews emphasize more the insights of *respondents* than one-to-one interviews (Kitzsinger 1994, 116). Thus, it can be assumed that through focus group interview technique it is possible to gain the real and spontaneous opinions of the research participants, and at the same time, extensive amount of rich research information about the desired topic.

6.2 Constructing the composition of the focus groups

The main objective of the focus group interviews conducted in this study was to gain information about customers' beliefs and insights into designing a customer-friendly electronic insurance servicescape. For this purpose, three focus group interview sessions were organized in March 2006. Each group consisted of six participants. In order to ensure that the saturation point in collecting the empirical data is reached, an additional focus group session containing five participants was organized and conducted in February 2007.

No generally acknowledged rule for the amount of groups has been established. Vaughn et al. (1996, 49) suggests that focus group interviews should be conducted until participants' responses are predictable by moderator. However, it has been proposed that in most cases this phase emerges *between two and four focus group interviews* (e.g. McQuarrie and McIntyre 1987; Lyons 1991).

Hence, I decided to first conduct three focus group interviews, and then perform the data analysis. Further, I planned that after analyzing the data of the three conducted focus group interviews it is time to estimate whether or not additional focus group interview sessions were necessary. Due to the correspondence in the discussions, the fourth focus group interview, organized to ensure the saturation, confirmed that *the amount of the interviews was sufficient to qualitatively describe and explain the investigated phenomenon*.

In constructing the focus groups the principles Technology Readiness (TR) model and customer classifications (e.g. Parasuraman and Colby 2001; Colby 2002) discussed in chapter 5.3 were used as an instructive guideline. As to the customer classifications, the general principle in sampling the respondents to the focus groups was that they should be considered as representing one of the four customer segments possessing a somewhat positive attitude towards electronic services (i.e. *explorers, pioneers, skeptics, and paranoids*; laggards were excluded).

In addition, two specifying key principles were followed while constructing the focus groups. *First of all*, similar backgrounds, especially socioeconomic and educational factors, were considered as important determinants in constructing the groups. Demographic factors, such as age and gender, were not considered as such critical determinants that they would have jeopardized the functionality of the group, although people, especially of different ages, most likely have different attitudes towards computers and electronic services. In fact, it was rather desired to include participants of different ages and genders to the same group in order to have various kinds of different opinions and discussion among group members. Instead, education and professional background were assumed to affect participants' world of thoughts more. The above mentioned assumption was based on the principles of TR model. Therefore, people who had similar educational background (e.g. university versus comprehensive school or vocational school) and similar professional background (e.g. managers and specialists versus workers or officers) were put into the same group.

Second, one thing that was common to all the participants of the focus groups was related, in addition to their attitudes towards electronic services, to *their skills and motivation to use electronic services and a computer in general*. Again, referring to the TR model as well as customer classification by Parasuraman and Colby (2001), and Consumer Readiness (CR) model by Bitner et al. (2002), *all the participants should possess sufficient computer skills, and motivation to use a computer and electronic services*. Thus, certain types of customers who can be classified as *laggards* were appropriately excluded from the study since it is not even of insurance companies' interest to try to get all the customers engaged in the electronic service environment. Taking the perspective of research methods, the technique by which the groups were constructed in this study can be determined as purposive sampling often used in this type of research setting. It refers to the "procedure in

which the participants for the focus group interview are selected by researcher's predetermined insights into participants' ability to contribute to the study" (Vaughn et al. 1996, 58–59).

As to the composition of the four focus groups, each of them possessed similar characteristics to some extent (e.g. age distribution or residence), but still the nature of each group was clearly distinct from another. These four groups were named as: 1) Insurance science students; 2) Academics and managers/experts; 3) Non-academics and workers/officers; and 4) Idiosyncratic group. *The list of the interview participants* can be found in *appendix 5*.

All the participants were living in Tampere or its neighbor towns (Pirkkala, Nokia). The decision to select all the participants from the same region was mainly made due to practical reasons. In addition, *regional factors were not considered to have* such a *crucial influence on research results* that it would have been essential to also consider regional factors as one of the key determinants of the group composition.

Students were selected among the people who are studying business studies and have insurance science as their major subject at the University of Tampere. In my opinion, this group provides an interesting surface to reflect the responses of other groups on since the students of insurance science are already familiar with insurance business and services, and therefore, they can also be considered as experts of insurance business. Further, since the students need computer and the Internet in their studies everyday they can be considered to have particularly good skills and motivation to use a computer and electronic services. Moreover, as Lin et al. (2005, 691) point out using students as targets for a research is particularly useful in electronic service environment since students will eventually become the most active Internet users and influential consumers in the marketplace. Hence, they could be considered as potential customers. Understanding the needs and preferences of potential customers is naturally important. As the literature points out good friends should not be included in the same focus group (Koskinen et al. 2005, 127). At this point it has to be noted that, the members of this group knew each other at least on some level, since they were all studying the same major subject at the same University. Despite of knowing each other, the discussion, however, stayed at a professional level, and thus, I am confident that it did not decrease the quality of the results.

Three female and male members between the ages of 27 and 59 constituted the second group (*Academics and managers/experts*). One of them did not have an academic education but instead she was an entrepreneur and owner of a company. Thus, she was perceived to fulfill the criteria to be included in the group. None of the group members knew each other beforehand.

Third group (*Non-academics and workers/officers*) consisted of four male and two female members between the ages of 26 and 60. One of the group members was still a

student at a polytechnic but since he was not going to have an academic degree he was perceived to be suitable for the group. Two of the group members worked at the same place and knew each other superficially but they did not have a closer relationship. Hence, it was not perceived to be harmful to the research execution.

The fourth group was named as *idiosyncratic group* since it can be considered to some extent as a mixture of the other three groups. The idiosyncratic group contained five participants of which three were male and two were female. The age distribution of the participants was not as wide as, for instance, in groups two and three. The ages of the participants varied from 23 to 32 years. Two of the participants studied at the university. One participant having engineering background in terms of education is working as consulting engineer. One participant, who had graduated from vocational school, was working in the metal industry as a regular "worker". One participant having academic education was working as assistant group controller.

Getting people to participate in the research was not an easy task. One reason for reluctance may be the complexity of the topic (electronic insurance services). *The first strategy* to collect group members was to send a letter of invitation for the group of people who fulfilled the above discussed predetermined criteria, and who had responded to the feedback survey, which was attached to "insurance cover evaluator" service concept after its launch in the early 2005 (see chapter 5.3). By responding to the feedback survey the potential research participants would have proved their natural interest towards computers and electronic services, as well as motivation. As good as the idea was, unfortunately it did not work. Altogether 27 (16 to women and 11 to men) letters of invitations were sent. A movie ticket was promised as a compensation for everyone who would participate. Only four responses came back of which only two responded positively to the invitation.

Accordingly, another strategy had to be followed. It was not as organized, and it was based on "word-of-mouth" marketing. I contacted my friends and acquaintances and asked them to think whether they had a friend(s) and/or acquaintance(s) that would be interested in participating in the focus group interview session. Naturally, I was hanging onto the predetermined criteria for the group members all the time. These friends also helped me by ensuring that the people they recommended fulfilled the predetermined criteria for participants of the focus group interviews. For this reason, trying to recruit participants randomly, for instance at the front door of a grocery store, would not have been a functional strategy for the purposes of this study.

Finally, by following the above mentioned "snow-ball" strategy, the groups were constructed. At this point it has to be noted that I recognized (or knew at some level) some of the participants. However, I would not consider that this fact would have skewed the results especially since the group interaction was in question. In addition, a research assistant was present all the time and was also asking questions from the respondents.

6.3 A method for conducting the focus group interviews

The developed artefact is not a complete real-life service solution, instead, it is a framework, which provides insights and guidelines for designing such a solution. For this reason, empirical evaluation of the development work was somewhat challenging. In this regard, Mason (2005) has discussed using visual data, such as images, in conducting the applied qualitative research. As Mason states, visual data can be used as a facilitating element in eliciting information from the research participants (p. 331). For instance, earlier research has paid attention to examining a direct experience of research participants referring to a phenomenon, or phenomena, illustrated by images (e.g. Mitchell and Weber 1998). In addition, images might be useful in cases where people having issues with language competence are involved (e.g. Williams and Robinson 2000). On the other hand, using images has also provoked opposite opinions, while researchers, especially representing a positivistic research paradigm, have raised their concern towards the ability of images to describe the examined phenomenon from the perspective of objectivity and validity (e.g. Adelman 1998).

However, based on the discussion above and applying the idea, I argue that *using images and animations may well facilitate peoples' abilities to better understand the target of the research*. In order to describe the empirical research setting to focus group interview participants in a way that they understand it, and thereby, to ensure the validity of the research to some extent, an illustrative description about the characteristics of "electronic insurance servicescape" and theoretical elements suggested to indicate the creation of appealing electronic insurance service experiences, was constructed.

A "traditional versus novel typology" was utilized as an instructive empirical guideline. In addition, "insurance cover evaluator" was used as an example referring to pleasure (i.e. playfulness) in the electronic insurance service context. As a result a visual performance through which PowerPoint slides describing the usability-related characteristics from the perspective of the "traditional versus novel typology", and the demonstration of "insurance cover evaluator" were superimposed on the screen. At the same time, the participants were given instructions about issues on which they should concentrate while viewing and observing the screen.

Focus group interview sessions began with an introduction speech where I shortly explained the content and the progress of the focus group interviews to the participants. In addition, I always asked for their permission to record the interview. Every group was agreeable to the recording, so all four interviews were recorded (but not videotaped) with a mini disc player. Since the methodological focus of this study is not on interpreting how the content and its meanings are constructed (social constructivism) but instead, on examining and analyzing the meanings of the content, videotaping the interviews was not

considered necessary. The speech of the participants would be the most important source of research data. The *duration* of the interview sessions varied *from one and half hours to almost three hours*.

After the introduction speech the participants were explained that a research assistant is participating in the interview session by making notes according to her observations about the interview session in order to complement the voice data, but she might also ask questions if she considers it necessary. In other words, research assistant was not only a passive bystander but she also took occasionally an active role by asking specifying questions from the research participants.

Before starting the actual interview the participants were asked to fill in their personal information (name, age, marital status, education, profession) to the form that was delivered to them. This was done due to the privacy reasons because respondents did not know each other, and in such cases people might be reluctant to share their personal information with others. Before starting the participants were delivered a superficial one-page question form reflecting the essential themes of the interview session so that they could follow the progress of the interview.

The interview was divided to five sections: 1) Introduction, 2) General information about electronic insurance service, 3) Ease of use/Usability, 4) Playfulness (pleasure), and 5) Trustworthiness. The interview guide can be found in appendix 4.

Introduction. In the first section participants were instructed to shortly tell about themselves. Since the personal information was already collected in written form, the participants were only instructed to identify themselves by their name and place of living. The main point of introducing themselves at the beginning was that it would be easier to identify each one's voice on the tape at the transcribing phase. In addition they were instructed to tell about the frequency of computer use and whether or not they have used electronic insurance services.

General information about electronic insurance services. The second section, as well as the first section, can basically be viewed as a "warm up for the topic" section. In this phase, the participants were asked to express their opinions on offering non-life insurance services on the Internet in general.

Ease of use/usability. After the simple "warm up" questions a discussion around the actual topic was started in the third section. The four usability-related elements of "electronic insurance servicescape" indicating the ease of use (content, appearance, navigation, and interactivity/assistance) were individually discussed in this section. The characteristics of the elements were illustrated for the participants by superimposing PowerPoint slides on two screens in a way that both example slides were indicating a real "print screen" picture from the real Web sites of British insurance companies. The visual illustration was also complemented verbally by describing what kinds of characteristics the participants

should pay attention to in order to ensure the validity of the research (i.e. the respondents know what they have to do). For instance, in case of appearance the participants were instructed to consider the pair of pictures on the screen from the perspective of used colors, placing and shape of buttons and menus etc. *British companies were selected instead of Finnish companies in order to avoid biased responses of the participants based on, for instance, their earlier customer service experiences*.

The illustrative examples of the companies were chosen based on the "traditional versus novel typology" (see chapter 4.4) that was generated through two pilot studies on the usability of electronic insurance services (see chapters 4.3.1 and 4.3.2). The picture-pairs superimposed to the participants always included both "traditional" and "novel" examples. However, in order to avoid instructing the participants too much to any direction, they were naturally not told which one was considered as an example of "traditional" approach, and which one as an example of "novel" approach. Moreover, in order to avoid the situation in which the participants can already beforehand predict which one of the two examples (either on the left side or the right side screen) indicates "novel" and which one "traditional" example, the superimposing of the slides was arranged so that "novel" and "traditional" examples were presented randomly on both left side and right side screens. Furthermore, the basic principle was that the example pictures clearly differed from each other. While superimposing the pictures on the screens the participants were asked to indicate what kinds of thoughts the pair of pictures arouse among them. The same procedure was followed attribute by attribute.

Playfulness (pleasure). The second key topic of the focus group interview was discussed in the fourth section. The title of the section in the context of this study refers to the "insurance cover evaluator" service concept introduced in chapter 5.3. It was described for the participants by introducing the developed service model phase by phase on the screen. After the introduction the respondents were asked to express their opinions on utilizing the described approach, based on more visual logic, in the insurance business context.

Trustworthiness. In the final section, after I had been introducing different kinds of, not so traditional insurance-like, examples reflecting the design of electronic insurance service environment to the participants, the reality was brought back to the discussion. According to earlier research (e.g. Ahonen and Salonen 2005) construct "trustworthy" is often attached to the discussion on insurance issues as well as to the discussion on electronic services in general (e.g. Flavián 2005). *Insurance should create trust among customers*. Consequently, as the last question the respondents were asked to consider whether or not emphasizing ease of use and playfulness-related features in designing electronic insurance service environment affects "trustworthiness" of insurance services and service environment.

6.4 Data analysis procedure

In general terms, the analyzing process of the gathered data followed the principles of *content analysis technique*. According to Huang (2007, 85) Content analysis refers to the procedure through which "*researchers identify structured and patterned regularities in the text and make inferences on this basis*" (see also Miles and Hubemann 1994).

On the other hand, content analysis is a somewhat wide conception, and thereby, does not necessarily provide a researcher with precise guidelines for analyzing and organizing the empirical data as such. In this regard, I found Grounded Theory (GT) approach (e.g. Glaser and Strauss 1967) to some extent appropriate for the purposes of this study. GT can be considered as either in its extensive or narrow meaning. In its extensive meaning GT is perceived as a holistic methodological approach on using "a systematic set of procedures in collecting and analyzing (empirical) data to develop an inductively derived grounded theory about a phenomenon" (Strauss and Corbin 1990, 24). This approach has been recently employed by Windischhofer (2007) in his doctoral thesis on managing commercialization of public water supply.

In its narrow meaning GT can be perceived to be referring to the analysis of (empirical) data. In this regard, Strauss and Corbin (1990) have developed a coding procedure through which the empirical data can be structured and organized. The coding procedure contains three general phases which are: 1) open coding; 2) axial coding; and 3) selective coding. Referring to the above said, *the narrow meaning of GT is preferred in this study to give guidelines for analyzing the empirical data*. Thus, GT is not embraced in this study as an overall methodological approach but only to the extent which refers to the GT coding procedure.

However, one could question whether the GT approach is applicable for the study embracing abductive logic instead of inductive logic, which is peculiar to GT methodology. To respond, I shall refer to the insight stated by Kelle (1995) according to which "an open (inductive) mind does not mean an empty head" (p. 41). Instead, following the insights of Coffey and Atkinson (1996, 157) abductive reasoning with help of prior theories can be used as a tool to develop new ideas and theories on the basis of the (empirical) data (see also Richardson and Kramer 2006). Hence, using GT coding procedure in this study is justified.

As to analyzing the data, all the recorded interviews were transcribed word-by-word by using the *Express Scribe* transcribing program with the computer. Further, the transcribed data was converted into the *NVIVO qualitative data analysis program* to be further employed. In the following paragraphs the essential phases of the data analysis procedure are outlined. Naturally, the data analysis process was not as clear and ambiguous as the following discussion may indicate. In fact, this is often the case for qualitative data analysis

since it is more or less a creative process. In this regard, the discussion is simplified to be more comprehensible for readers.

In the first phase, before starting to operate with NVIVO, all the interviews were printed out and read through a few times. Some main sections were highlighted from the data by underlining the text but, however, not yet coding the data in any way. Next, following the principles of GT coding procedure the analysis work moved towards the first coding phase (*open coding*), and a preliminary "raw" coding of the data was performed. According to Strauss and Corbin (1990) open coding of the GT coding procedure refers to "the process of breaking down, examining, comparing, conceptualizing, and categorizing (the empirical) data" (p. 61).

All the interviews were gone through separately by searching for the expressions that indicate the crucial interview themes (ease of use and its sub-dimensions, playfulness, and trustworthiness). Following the insights of Strauss and Corbin (1990), there are basically two ways to arrange these kinds of expressions in the beginning of the analyzing process. The expressions can be either put into a form of (preliminary) *concepts*, or *short citations* (few words). I felt that in this phase of the analysis the data would be more readable and comprehensible for me if it was in a form of short citations. Thus, the latter option was preferred.

After having gone through all four interviews and forming the bunch of short citations under the main themes of the interview, the formed citations were analyzed as an entity in order to *categorize* them. More precisely, expressions that are actually explaining the same phenomenon were discovered and combined under the same category. In order to preserve their explanatory nature I still decided to maintain the form of short citations instead of forming concepts. The amount of short citations was still over 500 although it was decreased with a good 250 from the first phase. Therefore, I felt that roughly categorized short citations would be better in describing the essential phenomena for me than concepts, and thereby, I could have a better control of the empirical data.

Next, still continuing the open coding procedure, I got rid of the restricting structural key themes of the interviews under which I had arranged the categories and short citations. By these I am referring to the "ease of use" and its sub themes (i.e. content, appearance, navigation, and interactivity/assistance), and "playfulness". It was obvious that, for instance, all the discussion related to *appearance* of the insurance Web sites was not only restricted to the section in which it was discussed according to the interview outline. Therefore, the data was analyzed through from the perspective of all the individual themes at a time. Taking the appearance as an example again, all the data was gone through by considering it from the perspective of appearance only. In this phase the *preliminary concepts*, which aimed at interpreting and parsing the essential phenomena derived from the

empirical (interview) data, were generated. In addition, the concepts explaining the same phenomenon were grouped into larger entities: categories.

After categorizing and conceptualizing the data, I moved on to searching for the explanatory links and patterns between the generated concepts. By following the principles of the Grounded Theory coding procedure this phase of coding the data was referring to *axial coding* through which "the data is arranged in a new way, and put together again in order to discover connections between the discovered concepts, and categories (and subcategories)" (Strauss and Corbin 1990, 97). On the basis of the discovered connections, as well as a more detailed analysis of the data, the concepts and categories were refined, and the conceptual characteristics for electronic servicescape discovered.

The analysis was continued by investigating the dynamics and the causal relationships between the individual conceptual characteristics of the electronic servicescape. This phase of data analysis reflects the *selective coding* phase of GT coding procedure referring to "validating and refining the discovered relationships, as well as establishing dynamics, between the concepts and categories" (Strauss and Corbin 1990, 116–117). In this regard, the causal relationships between the conceptual characteristics of the electronic servicescape were discovered, and on that basis, a structure of electronic insurance servicescape depicted (chapter 7.4).

Furthermore, basing on the electronic insurance servicescape model and including the customer-friendliness in the framework, the analysis was continued by exploring the phenomena indicating the creation of appealing electronic insurance service experiences (chapter 8.1). After conceptualizing the phenomena referring to customer-friendliness, the dynamics and causal links between the discovered concepts were analyzed (chapter 8.2). The empirical data analysis was completed by integrating the characteristics creating appealing electronic insurance service experiences with the electronic insurance servicescape model. As the most fundamental result of the empirical data analysis a theoretical *model for designing a customer-friendly electronic insurance servicescape* was suggested (chapter 8.3).

7 THEORY DEVELOPMENT I: ELECTRONIC INSURANCE SERVICESCAPE

In this chapter the structure of the electronic insurance servicescape is depicted on the basis of the empirical research and its results. From the design research point of view, this chapter refers to the 'conclusion' phase of the design research process. In this regard, presenting the evaluation results (focus group interviews) referring to the preliminary framework for the artefact under development (see chapters 4.5 and 5.4) is begun.

In order to better keep track of the citations and the nature of the empirical data as a whole, the list of the interview participants can be found in the appendix 5. Since the interview data was originally in Finnish the citations presented in this chapter as well as in chapter 8 were translated into English. In order to ensure the quality and correctness of the of the translation work, a professional translator was used for this purpose. Furthermore, some citations extracted from the empirical data, and presented in this chapter as well as chapter 8 may be complemented with my comments to make the citation more understandable. In such cases *my comment is added inside square brackets*.

The objectives of this chapter comprise: 1) characterizing the essential nature of both traditional and novel approach on designing electronic insurance service environment; 2) conceptualizing the essential characteristics of electronic servicescape in the insurance context; and 3) depicting the structure of electronic insurance servicescape. Following the design research logic, the first part of *conclusion* is discussed in this chapter as is depicted in Figure 22.

In chapter 4.4 I discussed traditional and novel approaches on designing electronic insurance services. It is easy to speak about different constructs without defining them specifically. In that sense, they could mean almost anything. For instance "traditional approach" is a very extensive expression that could refer to many different dimensions of insurance service. With help of my empirical research data I will *conceptually characterize what is meant by "traditional approach"* on designing electronic insurance service environment in the first sub-chapter (7.1). Similarly, and reflecting the determinants of the traditional approach, I will discuss the essential conceptual characteristics of "novel approach" on designing electronic insurance service environment in the second sub-chapter (7.2).

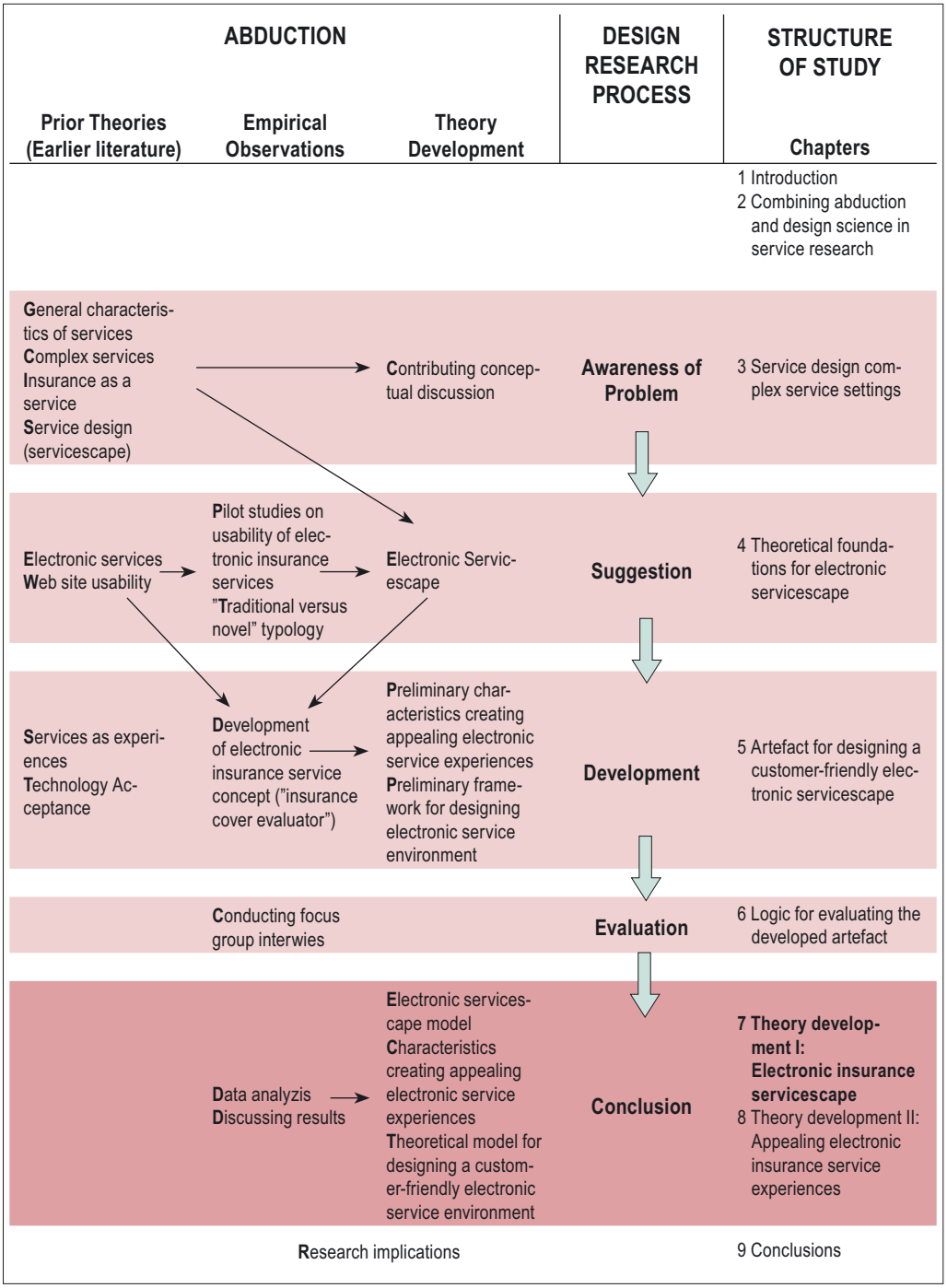

FIGURE 22. OBJECTIVE OF CHAPTER 7

In chapter 7.3 customers' insights into the most essential conceptual dimensions of electronic insurance servicescape are introduced. The discussion is concluded in chapter 7.4 by integrating the insights discussed in previous sub chapters as an entity from structural view point. In this regard, a structure of electronic insurance servicescape is proposed.

7.1 Descriptive characteristics of traditional approach on designing electronic insurance service environment

Insurance is traditionally seen as complex and confusing matter by customers (e.g. Järvinen et al. 2001). The essential characteristics of (electronic) insurance services theoretically discussed in chapters 3.1.3 and 4.1.4 (see Figure 10) refer to low frequency of use, low involvement, and high self-contact by customers. Furthermore, in the electronic service context the characteristics of the service environment may even strengthen customers' perceptions on the above mentioned characteristics of insurance, and thereby, increase the complexity and confusion perceived by the customers. This study suggests that the characteristics of electronic (insurance) service environment can, more or less, be seen to refer to usability-related attributes such as content, appearance, navigation, and interactivity/assistance.

In this research I discuss traditional and novel approaches on designing the electronic insurance service environment. My opinion is that in insurance service context the *traditional approach seems to refer to the nature of insurance as perceived in earlier studies and literature*, and depicted above. The empirical results of the research support this insight as is established through the discussion below.

Altogether four descriptive categories characterizing the traditional approach on electronic insurance service environment were found by interpreting the discussions of the interviewees. These categories comprise: *conservative, trustworthy, comprehensive*, and *unclear*. The descriptive characteristics of traditional approach on designing electronic insurance service environment are depicted in Figure 23. In addition, the dark red color is used to visually symbolize the essential (e.g. conservative and trustworthy) nature of traditional approach indicated through the four categories.

Before discussing the descriptive characteristics of a traditional electronic insurance service environment more thoroughly, I shall consider the issue in more general terms. In this regard, the empirical results indicate that traditional electronic insurance service environment is perceived as *lacking* a kind of *Web-orientation* in designing the electronic service environment by the interviewees. From the perspective of usability-related attri-

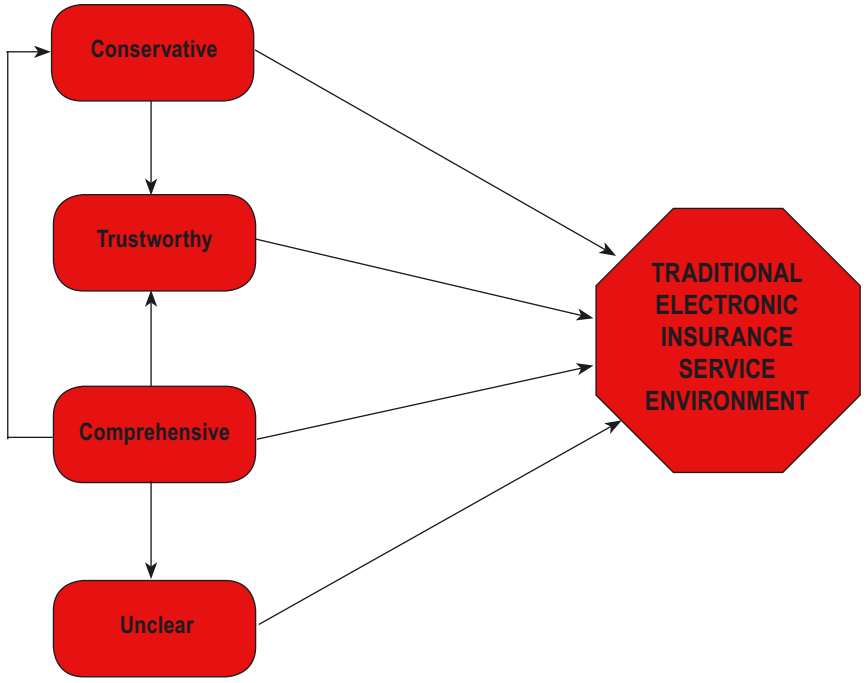

Figure 23. Descriptive characteristics of traditional approach on designing electronic insurance service environment

butes the most crucial factors determining the lack of Web-orientation are especially referring to *appearance*, and *interactivity/assistance*.

As the empirical results reveal, ignoring the importance of designing the *appearance* of electronic service environment can also be interpreted as a sign of low customer orientation. One respondent, even getting slightly irritated, stated that if a company is not putting effort to designing the appearance of electronic service environment, it may be a sign that they are underestimating their customers:

> P14: Well, I certainly wouldn't buy a single insurance from that company. That's for sure. They're nothing but underestimating the consumer by not having paid any attention to the appearance.

As addressed already in theory part, assistance and support are important elements to customers especially in electronic service environment since the physical service contact is missing. In such a case customer has to rely on the ability of self-service technology (SST) to fulfill his service needs. However, if the customer faces problems it is utmost important

to get help and/or advices to be able to go further. In the context of electronic insurance services this issue is even more emphasized due to the complex nature of the service itself.

A generally essential observation concerning the traditional electronic insurance service environment was that *there could definitely be more assistance and support available for the customers*. Otherwise customers are left alone with their questions and/or problems:

> P6: The fact that there's no help available is quite a blunder, in my opinion.
>
> P15: ... here there are also much less help options.
>
> P17: Well, phone numbers and so forth are missing. And the number of phases has also not been presented anywhere.

However, the above presented insights on the traditional electronic insurance service environment being *non-Web oriented* are just preliminary examples about the tendency discussed in this chapter. In the following sections the descriptive characteristics of the traditional approach on designing electronic insurance service environment are discussed in more detail.

Conservative

While comparing and discussing the examples, which described both traditional and novel approach on electronic insurance services and service environments, the interviewees generally described the traditional electronic insurance service environment with terms official, matter-of-fact, outdated, conservative, and even boring.

From the appearance point of view, the layout of traditional *electronic insurance service environment* is described as *outdated and unsophisticated* by the interviewees. The citations below support this notion:

> P17: ... yeah, it looks a bit out-of-date, gives me the impression that they haven't invested in that [appearance] or that it's just what it has been, like yesterday.
>
> P18: right away you get the impression that it's really sort of typically official.
>
> P14: ... by the way, this is very conservative. Slightly old-fashioned.

However, my opinion is that terms "official", "matter-of-fact", "outdated", as well as "boring" can be seen to be related to conservativeness. Therefore, the term *conservative* is chosen to descriptively characterize the traditional approach on electronic insurance services and service environment while *the other four terms are seen to be included in "conservativeness"*.

One reason for interviewees' opinions on the traditional electronic insurance service environment being outdated might be the logic by which the content is displayed on the Web sites. The empirical results indicate that the traditional electronic insurance service environment resembles written insurance brochures and the content is only transferred to the Web by using copy-paste technique:

> P9: ... this reminds me of those brochures which are distributed, like it could be that they have brochures just like that at the office, with basically the same picture and the same text.
>
> P11: ... and that was copy-pasted from somewhere, from some insurance company, because it's just that kind of text added to the end of the other text.
>
> P11: Yes, it has a cut and paste -feel to it, they've probably taken it directly from some brochure and added it to the website.

The empirical results, reflecting the prevailing general attitude of the customers towards insurance business, indicate that matter-of-fact and official-natured business like insurance is also often associated with being boring, or even depressing. This is not any surprise, but as said, the notion gives support to the earlier research on customers' insights into insurance (see e.g. Järvinen et al. 2001; Ahonen and Salonen 2005). As the following citations indicate, one essential point in line with the earlier research refers to the *relationship between matter-of fact and boring*. One respondent associated "grim" with "trustworthy" whereas another respondent from a different focus group doubted whether matter-of-fact and boring could relate to each other:

> P18: it does look quite depressing but of course what they've tried to achieve is trustworthiness... but it is very boring, so would one even bother to start reading it through?
>
> P9: But this is more matter-of-fact, but trustworthy and boring, I wonder if that's the same thing to some extent.

In my opinion, conservativeness, as well as the other four terms (official, matter-of-fact, outdated, and boring), describe particularly well the essential nature of the traditional approach on electronic insurance services, and service environment. In addition, the emerged terms, more or less, follow the prevailing general conception on the nature of insurance business.

Trustworthy

Insurance as a business is generally characterized by the fact that it should create trust among customers. This insight also clearly emerged through the empirical data of this

study. While the focus group participants were discussing the characteristics of electronic insurance services, and electronic insurance service environment, the term "trustworthy" was used very often. Especially the discussion on examples referring to traditional electronic insurance service environment was strongly characterized as being *trustworthy* by the interviewees.

From the perspective of usability-related attributes, the term *trustworthy* was especially reflected through *content*, and *appearance*. In the first case the insights of the interviewees were mostly referring to the amount of the information while in the latter case colors used (on the Web sites) played a crucial role in the discussions.

Concerning the *content*, the empirical results indicate a clear connection between the electronic insurance service environment being trustworthy, and the comprehensiveness. As is indicated in the Figure 23, comprehensiveness might cause unclarity due to the large amount of information. On the other hand, comprehensiveness was, however, seen as one of the crucial factors creating trust. The empirical results reveal that large amount of information and (juridical) clauses create the feeling of comprehensiveness. In addition, traditional electronic insurance service environment was generally characterized as trustworthy in a positive sense by most of the research participants as is established in the last of the three citations below:

> P20: That one is more convincing, because it has a long list of things...
>
> P18: ... like it's an extensive list and they've listed articles, that has a certain trustworthiness aspect so it's extensive and thorough, so that's the impression it gives.
>
> P7: Well, the first thought that came to my mind is that the one on the left is more trustworthy. Yes, definitely.

From the *appearance* point of view, the colors used in the context of traditional electronic insurance service environment were seen to create trust, and also reflect quality. The colors used on the Web pages of the companies representing the traditional approach on electronic insurance services were characterized as cautious, subdued, or conservative. As the latest citation below indicates, one respondent found association with the Finnish insurance company Turva, which also supports the notion of Finnish insurance companies representing the traditional approach on electronic insurance services:

> P18: very understated colors... like let's not use any color that might stand out, so just that kind of very subdued colors.
>
> P3: ... certain quality shines through. At least with this picture, like the colors are subdued, but then again there's too much text...

P14: The left one reminds me of the site of Turva, an insurance company in Tampere.

As the discussion above establishes, the traditional electronic insurance service environment is perceived as trustworthy by the interviewees (i.e. the customers). This characteristic is more emphasized than it is in case of the novel approach on electronic insurance services and service environment as the later discussion in the chapter 7.2 establishes.

Comprehensive

Large amount of information was perceived to characterize the traditional approach on designing electronic insurance services and service environment. When compared to novel approach the interviewees indicated that there is greater amount of comprehensive information about insurance available for the customers. The results also reveal that text-based *page layout* (i.e. appearance) gets customers more convinced about the comprehensiveness of information on the Web than a more graphical page layout. Further, by displaying much information in the electronic service environment a company can deliver a message of openness to the customers, and show that they have nothing to hide:

P9: Well, if I had to search for information, so from these that are here in front of me, I would rather search for information from this one, because I think it contains more information, and there you would get more pictures or other links.

P1: ... and that other one is like, you get all the information from here and we have nothing to hide, read everything and then come and get this insurance from us.

On the other hand, the results also indicate that in most cases there is actually *too much information* available. The citation below illustrates this insight:

P6: And then of course in this one on the right [traditional example], since it has so much text, then maybe it, I don't know, if it maybe should have a little less text.

Traditional electronic insurance service environment was seen as suitable for people who have knowledge and experience about insurance matters. This impression mainly refers to the amount of information and, on the other hand, to the way the companies display the information on the Web (i.e. content and appearance):

P3: This is raw material, one has to have some understanding of what it is they are listing here... The left one [novel example] is graphic, smart looking, where you can click and choose what you want to look at more closely. I think it's easier to find from this one [novel example], but if you know a lot about insurance, then this [traditional example] gives more information even, this left one.

Similarly as in case of "trustworthy", discussion on the traditional approach got some participants to associate with Finnish insurance companies, which supports the fact that in Finland insurance companies generally represent the traditional approach in case of electronic insurance services. This was mainly caused by the great amount of information on the Web:

> P7: If one thinks about Finnish insurance companies, then really they're presenting style is more similar to that right one [traditional example].
>
> P11: They too, try to put too many things in there.

On the basis of the empirical results, it can be interpreted that comprehensiveness as a characteristic of electronic insurance service environment is preferred by the customers. However, as the discussion referring to the traditional approach indicates, service providers should especially pay attention to how the content is structured, and how the layout factors should be organized in order to support the content structure in a way that the electronic insurance service environment is easy and appealing to use for the customers. Otherwise, there might be a risk that the customer faces an unclear electronic service environment when entering onto the Web sites of insurance service provider. Thus, *there is a connection between the terms comprehensive and unclear* as is illustrated in the Figure 23.

Unclear

Clearness is perceived as one factor determining the usability and quality of information systems. Clearness is especially related to the relevance of information (McKinney, Yoon, and Zahedi 2002, 301). In case of insurance the focus group participants more or less generally argued that the Web sites indicating the traditional approach are unclear in many ways. From the perspective of usability attributes, "unclear" is referring to the amount of information (content) but also to the issues related to *navigation* and *appearance*.

Large amount of information is one of the most dominant characteristics of the traditional electronic insurance service environment. The empirical data reveals that large amount of information increases the unclarity of the electronic service environment. For instance, one respondent indicated that due to the amount of information it is more difficult to find the desired piece of information:

> P11: In my opinion they've put too much information in one. ... to find the one thing you need, I could imagine that it would be more difficult here [traditional example].

In addition, the empirical results indicate that structure of text on the Web sites can be a determinant of unclear electronic service environment. This is especially the case when

there is a mass of complex information available on the Web. In traditional electronic insurance service environment the text structure was perceived as poorly executed by the interview participants. Text mass is put to the Web as such without highlighting the essentials or points that might be important and useful for the customers:

> P11: Then again maybe here on the right there's more text, perhaps it gives you more information, but it's so unpleasant to read that if you're considering taking out insurance, you definitely [don't] feel like reading such long verses.
>
> P17: That they've really just listed [things] there... so not even the headings are emphasized in any way, so it's just one chunk.
>
> P18: ... it's extremely heavy to read, that sort of text mass, when there's nothing animating it.

Links on the Web sites were generally perceived *too long and hard to find*. As can be interpreted from the citations below, constructing functional and clear links to the electronic service environment is important in terms of the Web sites being clear rather than unclear:

> P10: In general the headings in the one on the right are much too long, if you need to [search] for something, so what would you really find on any page. Probably just a long chunk of text.
>
> P23: And in that one on the other hand, there's a smaller list over there, a bit apart, so it would be difficult to find the link that you need or where you want to [go]...
>
> P1: But that other one... I mean, you start wondering if you should really start reading it, that would you even know, where you then...

Unclarity also refers to the *appearance* of the service environment to some extent. Many respondents associated the layout of the traditional electronic insurance service environment with a written insurance policy document full of small-printed matter-of-fact text, which customers are used to receiving from insurance companies. That is seen to turn off interest in getting oneself familiar with insurance matters:

> P10: Well this right one in my opinion is the same as a traditional insurance document... Just as tedious to start reading that small print.
>
> P15: That looks boring, that, that looks exactly like the small print that the insurance terms normally contain.

All in all, an interesting notion is that when observing the traditional electronic insurance service environment interviewees use somewhat negative adjectives even though they describe the positive characteristics of the environment. A good example is the discussion above related to the electronic insurance service environment being comprehensive as well as trustworthy. In principle they were seen as positive characteristics but still it was associated with negative expressions (e.g. boring and confusing).

In my opinion, this discussion also well describes the general and traditional attitude towards insurance services - both physical and electronic; insurance is reflected by complexity, severity, conservativeness, and trustworthiness, among others. None of these attributes of the nature of insurance are joyful or frisky attributes, quite the contrary. This is the way things have been within the insurance industry, and also among customers. Nevertheless, there are still both insurance companies and customers who would rather keep the situation unchanged by thinking: "this is the way things have been, and also should be". However, along with the increasing use of electronic services the essential question here is: "can there be something else"? Something easier and more sensible better enabling customers' operations in the electronic service environment? In the next sub chapter the novel approach on providing insurance services in electronic environment is described.

7.2 Descriptive characteristics of novel approach on designing electronic insurance service environment

Despite the prevailing above described attitude towards insurance, new approach on offering service in electronic service environment has been appearing in the past few years at least in some considerable European markets, such as Great Britain and Germany, and the American markets. For instance, insurance companies that offer their services only through the online channel have been established. These kinds of companies may have a relationship with a larger insurance group in terms of the ownership but they do not have physical service locations, such as branch offices. For instance, a British company More Than, which is used as one of the examples representing the novel approach in this study, offers its services on the Internet only but operates as a subsidiary of a larger insurance group Royal & Sun Alliance. In addition, some mail order firms (e.g. Karlstadt Quelle in Germany) and retailers (e.g. Tesco in Great Britain) have recently extended their business to also concern insurance and financial services. However, they do not have their own products but they are marketing and selling the products of their co-operating insurance company.

The pilot studies on the usability of the electronic insurance services (discussed in chapters 4.3.1 and 4.3.2) provided groundings for pre-determining the traditional and novel approach on designing electronic insurance service environment. According to my general pre-conception, *livelier and more non-insurance-like way of presenting is essential to the novel way of designing electronic insurance service environment*. So, what does that mean concretely? In this chapter I will provide insight into the descriptive characteristics of this novel approach by referring to the empirical results of my study.

Altogether five descriptive characteristics were found from the empirical data to indicate the essential nature of the novel approach on designing electronic insurance service environment. These categories comprise: *visual, selling-oriented, exiguous, clear*, and *customer-friendly* (Figure 24). In comparison to the traditional approach symbolized with dark red color (see Figure 23), the light green color is used to visually symbolize the fresher and livelier nature of the novel approach.

In more general terms, the empirical results indicate that *service providers preferring the novel approach possess better skills in operating in the electronic service environment than*

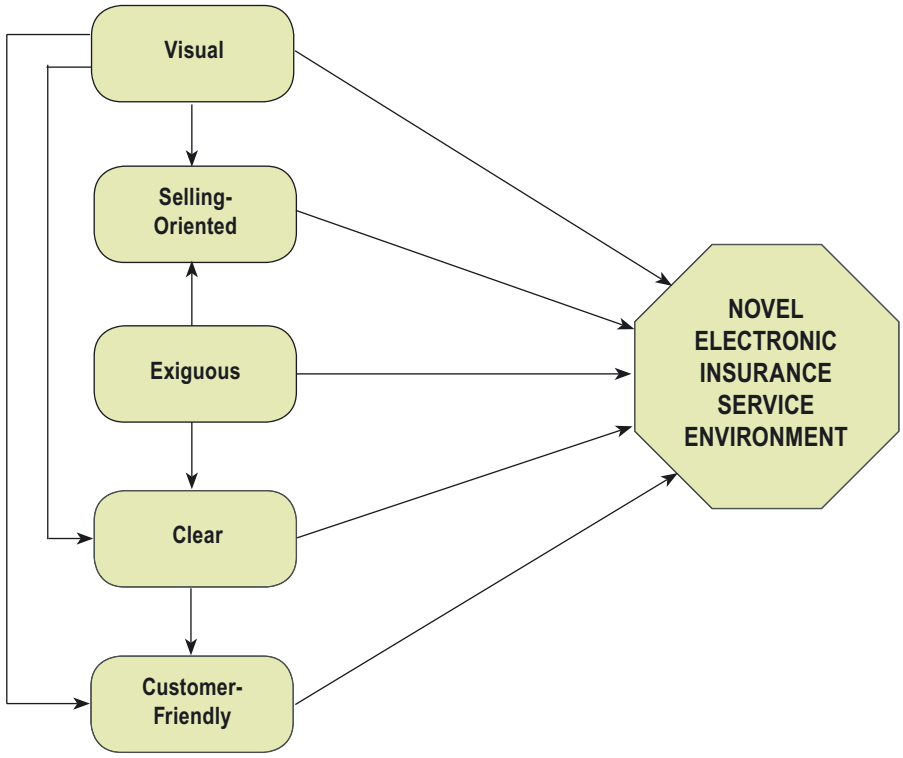

Figure 24. Descriptive characteristics of novel approach on designing electronic insurance service environment

service providers representing the traditional approach. In other words, representatives of the novel approach posses *better Web-orientation* compared to the traditional approach service providers. By this I am referring to the fact that the service providers preferring the novel approach clearly have paid attention to the design of the electronic insurance service environment. The citations below support this argument:

> P11: That one gives the impression that they've seriously considered the Internet as a channel for presenting [things].

> P16: They've... made an effort with that left one.

Further, the empirical results reveal that one crucial difference between the novel and traditional electronic insurance service environment refers to the possibilities to get support and/or assistance on the Web sites. In the novel electronic insurance service environment support and assistance are provided for customers both clearly and diversely. "Getting support" is indicated through help and/or information buttons on the Web sites. By clicking these buttons extra information about a desired topic is provided. Assistance, in turn, indicates various possibilities for contacting a service provider, for instance, through phone or e-mail, in order to get assistance:

> P13: Well at least there's enough of those question marks, so you can get further information.

> P11: That 'Need help' option is really good over there, so you can still call someone.

> P10: Yes and email too, so I think there's plenty of help available in there.

> P5: It's really good to have that 'Need help' -box. You can send email with it and there are the phone numbers with opening hours and information where you can call.

Above few general introductory remarks indicating the nature of the novel approach on designing electronic insurance service environment are presented. The characterization continues in the following sections through which the five discovered descriptive characteristics for the novel approach are distinctively elaborated.

Visual

The appearance of the novel electronic insurance service environment was perceived as visual, refreshing and appealing by most of the respondents. According to the empirical research results, *visuality* can actually be considered as one of the most crucial features characterizing the novel electronic insurance service environment. In this case the term

"visual" refers to *the appearance of the novel electronic insurance service environment being catchy, educational, and joyful but, on the other hand, also untrustworthy to some extent*.

The interviewees indicated that the appearance of the novel electronic insurance service environment is more joyful and appealing. Therefore, it is also catchier from the customers' point of view, and sticks in customers' minds more easily as the citations below indicate:

> P7: ... the right one does appeal more to the eye.
>
> P8: That's true. Catches the eye better.
>
> P6: ... yes this one on the right entices more to read it and concentrate on it because it's visually more appealing. The colors and so forth.
>
> P13: And at least that sticks in your mind better, if you want to go back later to check what the insurance was like, then at least your visual memory will function, like oh yes, I've visited this site before.

Although the appearance of the novel electronic insurance service environment was mainly positively characterized, *there are also critical issues that need to be considered*. The empirical results indicate that visuality of the electronic insurance service environment may decrease the trustworthiness of the service in the eyes of the customers.

In this regard, the interviewees perceived, for instance, that the use of playful cartoon-like pictures might have a negative influence on trustworthiness. The cartoon-like pictures were seen as rather referring to children's world than insurance services:

> P17: a different issue is the pictures, these characters here, I don't know if they really create reliability.
>
> P12: But when you enter such a site, let's say by accident, I would [think], that it's a game for children.
>
> P17: ... these drawings can't be taken seriously.

In addition, lively and flashy colors were associated with pop-up advertisements, and thereby, non-insurance like approach in the context of electronic service environment. In addition, one respondent stated that inappropriate color might even confuse the customers in a way that they might not know what exactly they have purchased:

> P5: On the other hand, the one on the right, at first I [thought], that it's too much like an advertisement, or somehow a little cheap looking. Like some pop-up -advertisement. So your first thought is not that it's an insurance company's site.

P16: On the other hand, I think that with that kind of look you can also distract a little, or in a way, it looks good and buying is fun, but in the end what it offers doesn't correspond with the [image]. I think there's also the risk of getting dooped in a way.

Based on the empirical data, visuality increases the extent of how appealing the electronic (insurance) service environment is perceived by the customers. Therefore, it is important from the service providers' point of view to pay attention to including visual elements into the electronic insurance service environment. Visuality of the novel electronic insurance service environment also reflects the customer-friendliness as is indicated in the Figure 24. However, as insurance as a service should create trust one must recognize that visual elements, such as pictures, can not be too "misleading" in a way that they differ too much from the essential nature of insurance.

Selling-oriented

The empirical results reveal that *one clear difference in comparing the traditional and novel electronic insurance service environment refers to the intention to sell insurance through the electronic channel*. According to the interviewees' opinions selling orientation is clearly more noticeable in novel electronic insurance service environment than in traditional environment as the citations below indicate:

P1: Well, you get the impression that the right [novel example] one sells.

P14: But if the goal is for a site to sell, then this left one certainly sells.

P21: Well I get rather [the impression] from the left one [novel example], that it sells better.

Furthermore, the empirical results indicate that selling orientation might make customers to consider the novel electronic insurance service environment to be more shallow and popularized. This might be the consequence of providing insurance services according to a different kind of logic that the customers are used to in the insurance context. For instance, as the third citation below indicates the novel electronic insurance service environment got respondents to associate the Web sites of insurance service provider representing the novel approach with service providers that are, in fact, selling something totally different than insurance:

P22: That one is somewhat more superficial.

P5: ... it's maybe been made somehow more popular... the content.

P4: and the one on the right looks like, it looks the same as some site, which sells something complete different. Sells cd's for example...

P21: ... sort of looks [more] like an everyman's insurance [than] this one on the right.

The results also indicate that *intention to sell might have influence on the amount of information offered on the Web sites*. In that sense it can be argued that the more orientation to sell less information is provided. Further, empirical results reveal that strong selling orientation get customers to consider comprehensiveness and content of the (possible) purchase. The citation below supports these arguments:

P1: ... that it [novel example] contains almost no information, that it's just like, get it from here, it's easy and it doesn't matter what it contains as long as there are people who want it.

In my opinion, selling-orientation can be considered as a clear sign of a firm possessing good skills to offer electronic services since the electronic service environment is based on self-service logic. Such service providers have realized the essential nature of Self-Service Technologies (SSTs) by indicating that electronic service environment itself should be capable of engaging the customers to make transactions, such as buying, without any help of physical service personnel. However, attention should be paid to also providing the customers with comprehensive information, not just discounts and encouraging messages to buy.

Exiguous

As to the amount of information, the interview participants indicated that there is generally less information available in the novel electronic insurance service environment than in traditional environment. The narrow amount of information actually might get customers feel insecure in the service environment as can be interpreted through the following citations:

P20: I also get the feeling from the left one that is this really all there is.

P12: At least now I think it's somewhat of a problem that what is ...in the left one... what is available next. Like it looks quite insufficient... there are only a few points.

P11: I also had more the feeling like wait a minute, is this all the pages.

Based on the empirical data it can be proposed that in addition to customers' possible feelings of uncertainty, *a little amount of information seems to influence the trustworthiness of*

the overall electronic service environment. One respondent reported that narrow amount of information may subconsciously have an impact on how trustworthy a customer perceives a service provider to be. On the other hand, the image and the reputation (i.e. the brand) of the service provider also have influence on trustworthiness:

> P18: So if you didn't know the company, then... because there isn't much text so... it might create some unreliability or something, unconsciously.

As argued also in case of "selling-orientation", it is important to the customers that information is available comprehensively in the electronic insurance service environment. If that is not the case customers might feel insecure, and make them find the electronic services and service environment less trustworthy. Thus, the empirical results indicate that there is a linkage between the selling-orientation and the narrow amount of information as is illustrated with an arrow from "exiguous" to "selling-orientation" in the Figure 24.

Clear

The general perception of the interviewees was that while the traditional electronic insurance service environment is unclear, the novel electronic insurance service environment is clear indicating that the *electronic insurance service environment is fast and easy to use*. From the perspective of the usability-related attributes the term "clear" especially refers to the *appearance*, and *content*.

Concerning the *appearance* of electronic insurance service environment, the respondents indicated that spaciousness, and large pictures used to illustrate the content of the Web sites make the environment clearer and more comfortable for the customers to operate in:

> P23: It was spacious... there was space also between the lines, so it wasn't like oppressively heavy.

> P10: But clear... and a picture says so much that in general, to use pictures is definitely [positive]...

> P4: ... in my opinion it's good, at least I like big pictures like that... it really is very clear.

Further, the empirical results reveal that the novel electronic insurance service environment is characterized by playful and joyful elements (e.g. picture world), which seem to make the environment clearer for the customers. Few respondents stated that despite the even somewhat childish pictures it is easier to find the desired information or activity in the novel electronic insurance service environment. In addition, enormous masses of

text were perceived as very unfavorable solution in electronic insurance service context in general:

> P9: But, I don't know, it does remind me of some game, but I guess one can find the information easily from there...
>
> P16: Even if the pictures are naive, but at least they are clear and if you find the facts you need to make a choice behind the picture then, in my opinion, it's completely okay. Why should there be masses of text, where language is just jargon...

Content structure was perceived as a crucial factor indicating a clear electronic insurance service environment by the interviewees. Clear content facilitates the customers in finding the desired information easier as well as creating an overall picture about the content in general:

> P2: ... it's really clear, you don't get anxious, like goddammit, where am I going to find travel. Here you see easily that okay, over there, probably it's here.
>
> P11: ... it is structured and presentation is clear, you see [what] is connected to what. But if you're thinking, if you're seriously considering for example taking out insurance, this one does give you a clear picture of it.

As the discussion above establishes, a clear electronic service environment can be considered as one of the crucial requirements in order to get the customers engaged in using electronic services. In the insurance context it is even more crucial due to the complex nature of the service in general. In addition, the empirical results reveal that a clear electronic insurance service environment is a sign of *customer-orientation* of a service provider, and vice versa. Thus, the linkage between the electronic insurance service environment being clear and customer-friendly is illustrated with an arrow from "clear" to "customer-friendly" in the Figure 24.

Customer-Friendly

In a physical service environment customers expect certain supporting elements to be included in the overall service in order to get their service needs fulfilled. For instance, by asking questions customers expect to get assistance from customer servant to unclear issues. Similarly, the customers expect that physical facilities of the service environment, such as furniture, used colors, spatial layout etc., are designed in a way that customers' needs are taken into account by the service provider.

In the electronic service environment assistance cannot be provided to the customers similarly as it is provided in the physical service environment since the physical expertise

of customer servant is lacking in the electronic service environment. Nor can physical facilities be observed in a same way by the customers since they do not exist in similar form they appear in physical service environment.

However, elements indicating *customer-friendliness* certainly can be recognized in the electronic insurance service environment, too. The empirical data reveals that in the novel electronic insurance service environment the signs of the customer-friendliness are clearer than in the traditional electronic insurance service environment. In the context of electronic insurance services the term *customer-friendly* refers to *the ability of the service providers to take customers' (service) needs into account*.

From the perspective of usability-related attributes the term "customer-friendly" is especially associated with *content*, and *appearance*. Concerning the *content* of the Web sites, the empirical data seems to indicate that from the customers' point of view organizing the content without the need for scrolling up and down on the Web sites is a more desired option than having a long list of information continuing downwards on and on:

> P12: Everything is on one page after all.
>
> P18: ... if you can fit everything on one page it's better in a way and more thought out.
>
> P9: So you don't have to scroll back and forth, like what did I write down back there...

However, the above presented argument on presenting the content was not unambiguous. The empirical data, namely, also reveals that in some cases if the customer would like to get an overall picture about the features of an insurance product and/or insurance cover, it might still be better to present all the information as one entity. For instance, making an electronic transaction (e.g. reporting a claim) can be considered such a situation as the citation below indicates:

> P22: When you're reporting a claim, and if it's like [that] that you have to click ten times, whereas in the right one you can go forward with the scroll mouse.

From the *appearance* point of view, using pictures was perceived as a crucial sign of the electronic insurance service environment being customer-friendly by the respondents. According to the empirical data it is one way to bring insurance matters closer to consumers' mindset. In addition, the empirical data indicates that the terms "clear" and "customer-friendly" are related to each other as is indicated in the Figure 24. The argument is also supported through the last citation below:

> P17: ... I like the appearance of the right one better, much better, it's more consumer-friendly.

P16: ... insurance issues are boring enough, so that [using pictures] would be one way to reduce... to bring them a bit closer to the consumer.

P14: But I think that this is, on the other hand, clear and cheery.

Further, another interesting aspect referring to the appearance of the novel electronic insurance service environment is the ability of the environment to offer guidance and educate the customers, no matter in what age, in getting themselves familiar with electronic insurance services and insurance in general. The citations below support this argument:

P13: There are a lot of people who doesn't have insurance, so this could make it easier to get familiar with the issue, like what kind of insurance options are there.

P17: ... talking about the educational aspect, any young person who hasn't yet purchased insurance, ...it's definitely easier to get information and get interested in insurance when the appearance is easy, clear and a little bit more interesting. But if they put a lot of jargon on the front page it might discourage you in looking for information.

P16: It discourages me, so it's also not an age question.

P14: Right. As an older person, I'm probably the oldest person here, I can say that I wouldn't read that [*referring to traditional example*].

Moreover, the empirical results reveal that it is easier to learn about insurance, and on the other hand, teach insurance issues for those inexperienced with them through a more interesting appearance. As one respondent stated, a more visual outlook might even get children interested in insurance matters. In that way, they can be taught the preliminary understanding on insurance already in the early stages of their lives. This might soften the path of forthcoming insurance customers and facilitate the insurance transactions in the future:

P15: ... if I had ten-year-old kids, those pictures might work, I could go through it with my kids, what is insurance... Like secretly teaching them.

Also a clear transaction process indicates the ability of a service provider to view the electronic service environment from customers' perspective. In fact the clearness and simplicity might even encourage the customers to operate in electronic service environment as the citations below indicate:

P16: They've made an effort to make the customer feel that they've thought about him. In the company they've thought about the use situation, or somehow they've been able to put themselves in the position of the searcher or surfer [like] how does he or she see it.

P4: This probably makes ordinary, or just about anybody to carry out [electronic transactions]. If it were terribly complicated, you would just have a look at the first page, and go like okay, great.

The extent of the customer-friendliness in the novel electronic insurance service environment clearly differs from the extent of traditional environment. As the discussion above establishes, the novel electronic insurance service environment was perceived as more customer-friendly than the traditional environment by the interviewees.

To conclude, the attitude of the interviewees towards the examples representing the novel approach on designing the electronic insurance service environment was generally positive. The descriptive characteristics of the novel approach were discussed more positively than negatively although the style of the electronic insurance service environment clearly differed from the style the customers have traditionally gotten used to. However, the fresh and lively (visual) elements caused, on the other hand, the feeling of untrustworthiness among the interviewees to some extent, which most probably is due to the fact that insurance as a whole should create trust. Despite this, the general opinion was that clear, visual, and more customer-friendly approach on designing electronic insurance services and service environment is certainly welcome as long as the service providers remember that insurance should create trust.

7.3 Conceptual characteristics of electronic insurance servicescape

The above presented discussions on the descriptive characteristics of both traditional and novel electronic insurance service environments provided preliminary understanding of the features, which appear, or at least should be appearing, in the electronic insurance service environment in general. In addition, these discussions provide indicative remarks for the conceptual ingredients of the *electronic servicescape*.

As Bitner (1992) has determined in the context of traditional (i.e. physical) services the *servicescape* refers to *the service environment in which the service is experienced by a customer, and/or in which the customer and the service provider interact*. Further, physical facilities, such as ambient conditions, spatial layout, and signs, symbols, and artefacts, are referred as determinant of the (physical) service environment.

However, in electronic service environment these physical features cannot be observed since they do not exist. Therefore, the servicescape, as well as its determinants, has to be adapted to the electronic service context.

As my empirical study is qualitative, I am not aiming at validating and confirming the determinants of the electronic servicescape in the positivistic sense. Instead, referring to my empirical (qualitative) data *I suggest the conceptual dimensions, and later, a structural model for characterizing the electronic insurance servicescape*.

In this study the appropriate usability-related attributes (content, appearance, navigation, interactivity/assistance) are suggested to characterize service facilities in the electronic service environment. However, as these constructs are theoretically referring to the usability of the Web sites, they are not fully indicating the service approach. In order to consider the phenomenon from the service point of view, the usability-related attributes were empirically investigated.

Thus, and according to the basic principles of Grounded Theory coding procedure my intention was not to use the usability-related concepts as such to describe customers' insights into the electronic servicescape. Instead, in the analysis of the empirical data the main attention was paid to inductively discover and generate concepts that rather illustrate the conceptual dimensions of the electronic servicescape in insurance context *as the interviewees (i.e. customers) perceive them*. In this regard, a facilitating question for the data analysis was set as: "what kinds of conceptual dimensions of electronic insurance servicescape do the interviewees (i.e. customers) indicate through the focus group interviews?"

On the basis of empirical research, five conceptual dimensions for electronic servicescape were discovered. These dimensions comprise: *visual outlook, information, interactive features, personal assistance*, and *transactions*. The above presented four usability-related constructs complemented with empirical observations (i.e. "traditional versus novel typology") were used as theoretical "tools" in order to be able to identify the concepts indicating the characteristics of electronic servicescape, not from the usability point of view but from the service point of view. In addition, the "insurance cover evaluator" service concept was used as an empirical example indicating the occurrence of *pleasure* (and *playfulness* in terms of the functioning logic of the service concept) of the electronic insurance service environment. The discovered concepts and their relations to the usability-related attributes as well as "pleasure" are depicted in Figure 25.

As can it be interpreted from the Figure 25 the empirical data indicates that the original usability-related constructs were somewhat interrelated with each other. For instance pleasure and appearance constitute the conceptual dimension *visual outlook*. Navigation, in turn, refers to both *transactions* and *interactive features*. Similarly, interactivity/assistance refers to both *interactive features* and *personal assistance*. Content indicates *information*.

Further, each of the five conceptual dimensions of the electronic servicescape is highlighted with its own distinguishing color as Figure 25 indicates. These symbolizing colors are used while discussing about the dimensions as well as when constructing the mod-

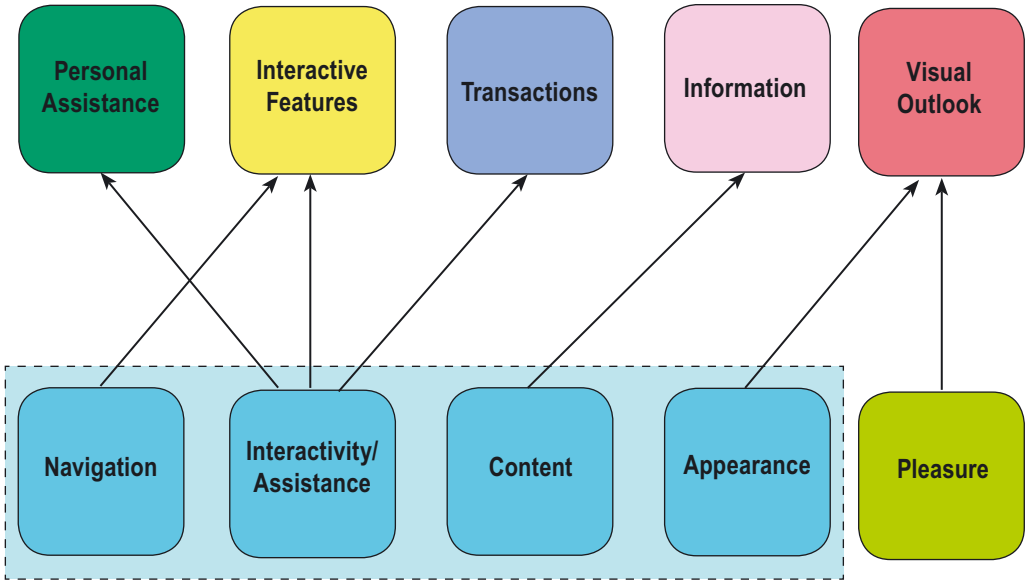

Figure 25. Discovering conceptual dimensions of electronic insurance servicescape

els later in chapters 7 and 8. In addition, the four usability-related attributes as well as "pleasure" are symbolized with their distinguishing colors. The colors symbolizing the usability-related attributes are first introduced in chapter 4.5 (see Figure 13), and the color symbolizing "pleasure" in chapter 5.4 (see Figure 20). In the following sub chapters the five conceptual dimensions of the electronic insurance servicescape as well as their sub-dimensions are individually elaborated in the order of their relevance to the electronic servicescape model introduced in chapter 7.4.

7.3.1 Visual outlook

Term visual outlook refers to the *"looks" of the electronic servicescape*, as well as "appearance" that was the original usability-related attribute. However, the use of visual elements (e.g. colors and pictures) in the electronic insurance service environment was particularly extensively discussed in all four focus groups. As visualization is one of the focal themes emphasized in the scope of this study, term "visual" was preferred also from a conceptual point of view to characterize perhaps the most relevant dimension of the electronic servicescape.

To support the conceptual selection, Table 6 summarizes the positive expressions by the interviewees indicating the use of colors and pictures from visualization point of view.

Naturally, opposite opinions also occurred as is established later in this sub-chapter. The numbers indicating the amount of the expressions in Table 6 are accomplished by reviewing all the four interviews in order to search for all the excerpts of individual interviewees in which either the use of colors or pictures is discussed in a positive sense from the perspective of visualization. However, if either of the terms appeared several times in the same excerpt, it was only counted once.

Table 6. Empirical support to conceptualization: "visual outlook"

Topics	Amount of occurrence	Illustrative citation
Pictures	29	P17: "… those small pictures too, even if they didn't have anything to do with the issue, small pictures somehow make the matter clearer, like for example that there are three points here and there are big headings, which make it clear what is [underneath them]"
		P6: "… yes, the right one entices more to read it and to get into it because it's visually more appealing. Colors and so forth."
Colors	21	P7: "I think in this kind of thing where you progress from one phase to the next, colors bring clarity about which phase you are in and how many phases might be left, if you intend to finish it."
		P6: "… yes, the right one entices more to read it and to get into it because it's visually more appealing. Colors and so forth."

Visual outlook characterizes *the visual elements that are illustrating the content of the electronic servicescape*. As one respondent pointed out, the visual outlook of the electronic servicescape should be perceived as appealing by the customer:

> P5: Yes and this visual look. Kind of clear, nice to look at, not any terrible color, no neon green.

On the basis of the empirical data the "visual outlook" of the electronic servicescape is characterized by two sub-dimensions, which comprise: *illustrative attributes*, and *context*. The illustrative attributes are constituted by (used) *colors, pictures, charts*, and *animations*, which can be perceived on the Web sites. The conceptual nature of visual outlook is depicted in Figure 26.

The empirical results suggest that *illustrative attributes, especially colors* and *pictures*, are considered the most crucial elements of the "visual outlook" by the interviewees. At least illustrative attributes were connected to all the five dimensions of the electronic ser-

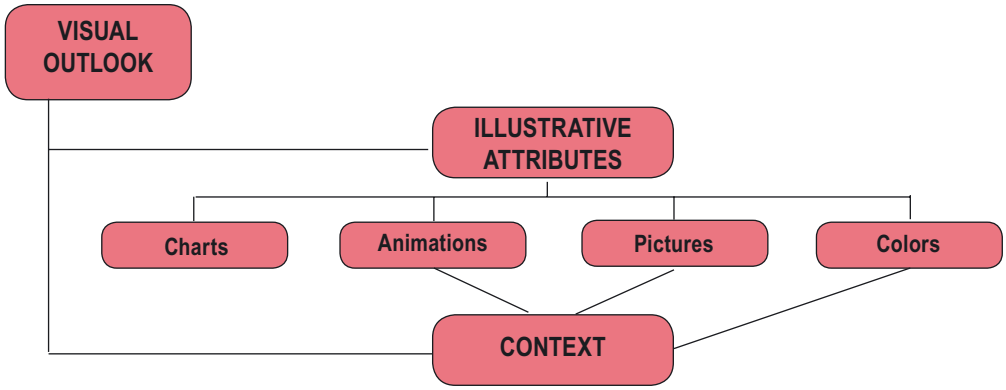

Figure 26. Conceptual nature of "visual outlook"

vicescape in discussions of the interviewees. This statement is discussed more thoroughly in chapter 7.4 when introducing a structure of the electronic insurance servicescape. Concerning the *colors* used on the Web sites, the empirical results indicate that they facilitate the customers in finding the essential information and/or service(s) on the Web sites:

> P5: But those [interleaves] on the Tapiola site, aren't they sort of grey... they don't stand out, you don't notice they're there.

Pictures on the Web sites were perceived as another crucial illustrative attribute characterizing visual outlook of the electronic insurance servicescape. From the perspective of structuring the content one participant stated that using pictures instructs customers to find the desired information or other functions in the electronic service environment:

> P4: The picture also guides you to the right place immediately... the front page, when it opens up, you don't even have to read the texts to find the right spot.

Charts were also perceived as a useful visual "tool" for structuring the content in the electronic service environment through visual aids. As the citation below indicates charts facilitate customers in finding the desired information on the Web:

> P17: Those charts are also a fast and easy way to find the information you're looking for. If the information is in a form of a chart, it's always clear.

In addition to other illustrative attributes, *animations* were perceived as helpful in clarifying the information and the content of the electronic service environment in general for the customers. However, participants' attitudes towards animations in the electronic service environment were somewhat two-fold. On one hand, animations were perceived

as childish and inappropriate to be utilized in insurance service context as the following examples of discussions by the interviewees indicate:

> P7: ... Because [there] they've used, sort of, well, used such animated characters, which refer more to a children's world perhaps considering the imagery, more than to insurance services.
>
> P3: These could also easily be replaced by some [other images], so you wouldn't need to... such animated characters...

On the other hand, however, the animations were perceived as useful and appealing. This insight emerged especially when discussing the "insurance cover evaluator" service concept in focus group interviews. In this context the interviewees actually expressed that animations well cohere with insurance since the main purpose of the animations is not to provide the customers with additional entertainment but rather more appealing surroundings and a setting to operate with electronic insurance services:

> P10: And maybe so that the visual look ["insurance cover evaluator"] was sort of simplified, so it was meant to give information and not [just] to entertain.

One common element for all the sub dimensions of the visual outlook is that by exploiting them, the aim is to make the electronic servicescape easier and more appealing for the customers to use. However, empirical results reveal that even though visual attributes might have above mentioned effects on how the customers perceive the electronic servicescape, they should fit into the *context* in which they are utilized:

> P3: at least in my opinion humor and insurance and what not, these colors and all the rest here, they don't go hand in hand. This is a rather sensitive, or not sensitive, but kind of a serious issue [insurance] to be presenting something like that...
>
> P5: ... it's not a bad thing to make the web sites a bit more entertaining or more pleasant, but there's a limit to everything... for example if this only had those icons, those small links, maybe that wouldn't be bad at all. But when those [animated] dogs appear...

As it can be interpreted from the citations above customers are sensitive to using too entertaining and "non-insurance-like" visualization in the electronic insurance service context. One reason for that is the fact that insurance is perceived as a serious and matter-of-fact service by the customers as the last citation below illustrates:

> P10: I agree what was just said, since this insuring is an serious issue, so if those pictures were, how should I put it, a tad more boring or matter-of-fact, it would make a difference right away, then it would be quite [good].

Referring to what is discussed above, it can be concluded that the visual outlook is a very crucial dimension of the electronic insurance servicescape. However, as insurance is characterized as a complex, serious, and matter-of-fact service, a special attention has to be paid to discovering the appropriate logic in utilizing the visual features in the context of electronic insurance services. Moreover, in insurance service context the customers might be even more sensitive to the inappropriate characteristics of the servicescape than in other areas of services since insurance as a service, and service product, should create trust among the customers. Therefore, the line between appropriateness and inappropriateness is very thin.

7.3.2 Information

The second discovered dimension of the electronic servicescape for insurance services is conceptualized as *information*. The term "information" was generated through the usability-related attribute "content". In principle, content partly reflects the same phenomenon as information. However, in few earlier studies other kinds of elements, in addition to information, are included in the "content". For instance, Benbunan-Fich (2001, 155) incorporate also attributes referring to the layout factors of the Web sites in the category "content". Similarly, in Palmer's study (2002) "content" includes, in addition to information, the use of graphics and multimedia (p. 156).

In this study a clear distinction between information and visual phenomena is made. In this regard, the "visual outlook" dimension (see chapter 7.3.1) covers the phenomena referring to layout and visual features in general. Furthermore, the empirical results provide support for the conceptual argument of using information instead of content as a dimension of the electronic insurance servicescape. Similarly as in case of "visual outlook", all the four interviews were reviewed by searching expressions by the interviewees in which they use either term "content" or "information". In addition, excerpts referring to content were analyzed from the perspectives of both information and layout factors since they are linked together in earlier studies. Each excerpt in which either of the terms appeared was only notified once (Table 7).

Table 7. Empirical support to conceptualization: "information"

Topics	Amount of occurrence	Illustrative citation
Information	31	P7: "The thing with these [electronic insurance services] is also that information, what ever it's about, should be in an understandable format, because for an ordinary person the text that is on these sites is often quite difficult."
Content (information)	12	P2: "Of course one thing is that on the other hand, if you don't really know how to search, if you don't know what you're searching for, then in the left one [traditional example] you can maybe [find] because the whole content is there all at once… so in a way by sniffing around you also read further about the other things…"
Content (layout)	4	P5: "… it's maybe been made somehow more popular… the content."

As Table 7 illustrates, information was clearly a more discussed term than content. Moreover, in cases where content was discussed, most of the excerpts were actually referring to information as Table 7 indicates.

Information is characterized by two sub dimensions (*customization* and *organizing attributes*) as is depicted in Figure 27. Further, *organizing attributes* sub-dimension is constituted by *structure* and *volume*.

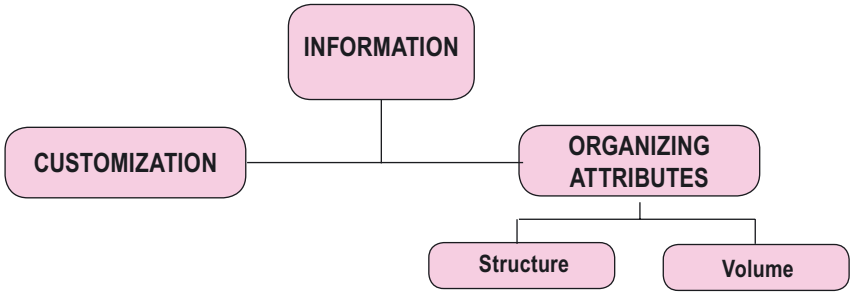

Figure 27. Conceptual nature of "information"

In the context of the study, the term *information refers to the (written) knowledge available on the Web sites of the service providers*. The empirical results of the study suggest two conceptual dimensions characterizing the essence of information. First, *customization* of the information refers to the opinion of the interviewees that the *information available on the Web is desired to be adjustable for different kinds of needs of different kinds of customers*. The following citations related to discussions on "insurance cover evaluator" elucidate the insights of the respondents:

P14: The ["insurance cover evaluator"] was simple, you just put things in the right places and you got an answer, what kind of insurance coverage you should have or you family should have.

P23: ... if you don't know exactly what kinds of insurance types exist, you could for example take that test ["insurance cover evaluator"] in order to find out if there is [an insurance], which I should take from these that I know nothing about...

Further, while discussing the "insurance cover evaluator" the topic was extended to cover not only information but also the overall service. The empirical data reveals that also the overall service should be designed and constructed in a way that it responds to the needs of its target customers as the following citation indicates:

P14: ... this ["insurance cover evaluator"] service is directed to a certain consumer group and wherever it is used, they need to do some research, [that] what are the users like. To take into consideration, specifically, that they use the kind of language the user understands. No seventy-five-year-old granny is going to use this.

Concerning the *organizing attributes*, the empirical results suggest that they are *characterized by volume and structure of the information* as is illustrated in the Figure 27. *Volume* refers to *the amount of the information available on the electronic servicescape*. As the discussions on the characteristics of traditional and novel electronic insurance service environments indicate *there should not be too much information available* for the customers on the Web *since it causes confusion and complexity*. However, in case of insurance services, the amount of information should be comprehensive, at least to some extent, since insurance as a service product consists of many pieces of information, which are put together. In addition, information should be comprehensible for the customers. These insights are supported by the citations below:

P10: And it's surprisingly significant that the page doesn't have too much information available all at once.

P14: And to think very hard about what to write there. That it's short and sweet and gives an answer to whatever is the issue.

P7: In my opinion maybe the most essential issue is that you get enough information in an understandable format.

Now one could ask: "what is the sufficient amount of information"? Furthermore, the above presented citations well describe the dilemma of designing electronic insurance service environment. Namely, *the proper amount of information being sufficient for fulfilling the customers' needs but still not causing confusion is one of the most essential challenges*

for designing electronic servicescape in insurance context. This issue is elaborated further in chapter 7.4.

Structure of the information refers to *how the information content is organized and presented in the electronic servicescape*. From the interviewees' point of view presenting the information in a form of long and continuous text was not perceived as a preferable way. For instance, the way how the different thematic entities are organized and presented was perceived as essential concrete aspect of structuring the information. The empirical data indicates that all the possible information should not be put together in a way that the customers are required to scroll the information up and down on the screen. Majority of the interviewees preferred the logic of grouping the information to entities in a way that there is no need for scrolling up and down on the screen. This argument is supported by the following citations by the interviewees:

> P10: And it's a clear deficit, at least in my mind, that that the whole page can't be viewed all at once. Instead you have to scroll down [the page] with [a mouse].
>
> P18: Yes, it's very heavy to read such a mass of text, when there's nothing animating it.
>
> P4: I was thinking that in general, it's nice that [a site] it's, is it divided in three parts, so you don't need such a long list. You can view everything fast.
>
> P9: So you don't need to scroll, like what was it that I wrote down over here...

However, also opposite opinions on grouping the information emerged in the focus group interviews. It was indicated that if one does not know exactly what he is looking for it might be easier for him to find the desired piece of information by reading the "whole story" without having a need for surfing on the Web sites:

> P2: Of course one thing is that on the other hand, if you don't really know how to search, if you don't know what you're searching for, then in the left one [traditional example] you can maybe [find] because the whole content is there all at once... so in a way by sniffing around you also read further about the other things...

In addition to organizing the thematic entities, too small font size was perceived as one of the most crucial issues in structuring the information. Small font size actually caused negative emotions among the interviewees since many of them associated text with small font with small printed insurance terminology:

> P15: That [traditional example] looks boring, that looks like the small print that's usually included in the insurance terms.
>
> P14: It's like reading a law book.

In general terms, this "small print" is something that every customer wishes to avoid if possible in both offline and online insurance service environments since it makes it more complex for the customer to find the desired information. Similarly, information overload causes confusion among the customers. Therefore these issues should be avoided especially in the electronic servicescape in which customers are operating according to the self-service logic.

7.3.3 Interactive features

In electronic servicescape interactivity can be considered as a particularly important characteristic since physical service contact is lacking. From the usability point of view *interactivity* generally refers to *the ability of the environment to communicate with the customers* as discussed in chapter 4.2.2. Further, in several studies (e.g. Palmer 2002; McKinney et al. 2002; Gounaris et al. 2005) interactivity is perceived to indicate the ability of the electronic service environment *to tailor and customize the (service) content for a customer*.

In earlier studies *navigation* is determined as an individual usability attribute referring to *clear and easy structure of the Web site* (e.g. De Wulf et al. 2006, 443). However, in studies by Scharl and Bauer (1999), and Benbunan-Fich (2001) navigation as a usability attribute is suggested to reflect customization of the (service) content. On the basis of the above said, this study takes a different point of view by suggesting that since the main focus is not on identifying distinct usability variables, but model a structure of the electronic insurance servicescape as a whole, *interactivity and navigation are considered to be interrelated to each other to some extent*. In this sense, navigation is suggested to be included in the interactivity since it indicates customers' (interactive) operations and activities in the electronic service environment, such as browsing, and accessing information and other services (see chapter 4.2.2).

Further, *assistance* can also be considered to be included in interactivity to the extent of electronic *supporting elements* directly available for the customers, such as calculators, "FAQ:s", and help windows. Other features of assistance, such as support via telephone or e-mail, are discussed more thoroughly in chapter 7.3.5.

In this regard the *interactive features* dimension of the electronic insurance servicescape *refers to the elements that enable customers' interactive and real-time communication with electronic services*. As the discussion above establishes, the "interactive features" dimension is generated through *interactivity/assistance* and *navigation* attributes of the Web site usability. The essential conceptual nature of the interactive features dimension is depicted in Figure 28.

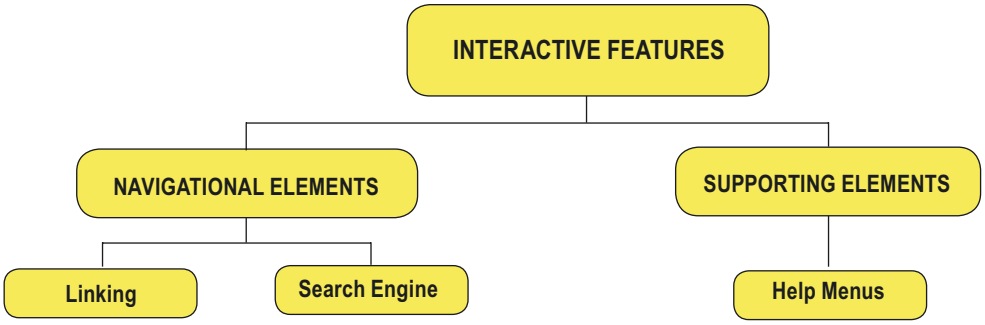

FIGURE 28. CONCEPTUAL NATURE OF "INTERACTIVE FEATURES"

As Figure 28 indicates, "interactive features" dimension has two conceptual sub-dimensions: *navigational elements* and *supporting elements*. Navigational elements refer to the ways and "tools" for moving in the electronic environment. From the service point of view I suggest that the navigation reflects elements that enable customers' service *activities*, such as information acquisition and transactions (e.g. online buying). *Activity*, in turn, refers to *operations or functions performed by the customers*.

More concretely, the empirical results reveal that navigational elements refer to *linking* and *search engine* functions on the Web. *Linking* obviously refers to *links and menus through which the customers are moving from one place to another in the electronic servicescape*. Large, illustrative, and easily distinguishable links facilitate the discovery of desired information or transaction process in the electronic servicescape. In addition, they improve customers' effectiveness since operating in the electronic service environment is faster. This argument is supported by the following citations:

> P2: ... it's like a big heading, big link... you can put text under it or if you [click] text opens up.
>
> P14: Yes but in the left one [novel example] making a notification of claim, you only need to click on one link and that's it.
>
> P23: Well from the left one [novel example] at least you can move ahead a lot faster to where you want to go. So from that... you find the link quickly whatever it is you want to find about the home insurance.

Further, the empirical results reveal that links should be instructive, and thereby, they should lead the customers to the right place(s) in the electronic servicescape. The *awareness* of where one has come from, where one is and where one should go in order to complete the intended tasks in the electronic servicescape is an *important feature of linking* for the customers:

P12: especially if it's something complicated, if you don't know the issue, then at least you'll know what you don't need... you can sort of sense what might be the right path to continue on ... [the links] guide you and then you'll also know where you are at and where you are on your way to. And you can recognize how wrong you've gone.

Search engine, as the name indicates, r*efers to a tool of facilitating the discovery of the desired information or function in the electronic servicescape*. It can be considered especially useful in the complex electronic service environment, such as insurance, in which there is a large amount of different kind of information available for the customers. However, the empirical results indicate that according to the interviewees' experiences search engines on the Web sites of the (at least Finnish) insurance companies have not been completely functional:

P2: I wonder if I've ever visited any [insurance company's] site that had a decent, working search engine. They have them, and I think it's a good idea. I've tried to find something for some school work by using for example annual report as a search word. Sometimes it does work, but they are quite some machines.

P1: ... search engines, they can't look in the whole site.

Supporting elements as a sub-dimension of the interactive features *refer to the elements that facilitate customers' operations in the electronic servicescape in order to ensure their fluency*. Through the supporting elements service providers aim at providing the customers with additional advisory service, and thereby, avoiding the situations in which the customers face such extensive difficulties that they have to exit the electronic service environment and contact the service provider either physically or via telephone.

According to the focus group results *help menus* are perceived as a feasible tool for facilitating the customers' operations in the electronic servicescape. Help menus were perceived useful for both getting additional information and support if obscurity and/or problems occur as the following citation below indicates:

P2: ... if the environment is not familiar, a help button, which opens a small link or a box, where it gives information even if just with four sentences... they're surprisingly helpful.

At this point it has to be noted that the list of interactive features (both navigational elements and supporting elements) is not exhaustive (sure there are also other elements!). However, linking and search engine as the indicators of "navigational elements", and the help menus as an indicator of "supporting elements" emerged as the most crucial features on the basis of the empirical results of this study.

Under these circumstances search engine, linking, and help menus, if working properly, can be considered as efficient elements facilitating the customers' operations especially in the electronic service environment for complex services, such as insurance in which, due to the complexity of the service itself, even more facilitating and supporting elements are needed. Regarding this, my general opinion is that interactive features play an especially essential role in providing the customers with competent and supporting instruments for operating and moving in the electronic servicescape.

7.3.4 Transactions

In addition to searching information through the Internet, the customers are making other activities in the electronic servicescape as well. In insurance context the customers can, for instance, *buy* insurance through the Web. Similarly, if an accident occurs reporting a claim can be performed via the Internet, at least in Finland. In comparison, British insurance service providers (at least mainly) still instruct their customers to contact them via telephone, and only provide the contact information on the Web. However, the activities described above can be considered as *transactions* in the electronic servicescape.

From service point of view, transactions are an essential part of service as a whole since money transfers between the customers and the service providers (and vice versa) are included. Hence, transactions play an essential role also in the electronic service environment since they indicate the actual activities performed by the customers, in addition to information acquisition. In this regard, *transactions are suggested as one crucial dimension of the electronic servicescape in the insurance context*, although usability literature does not include "transactions" as the usability-attribute. From the usability point of view the transaction dimension is generated through *interactivity/assistance* attribute since electronic transactions can be considered as interactive performances by the customers.

However, the actual transactions (i.e. buying, and reporting a claim) are not discussed as sub-categories for "transactions" since they are not characterizing the structure of electronic servicescape but are the most crucial electronic insurance services available in the electronic service environment. Instead, *the essential features illustrating the nature of transaction processes are discussed as the sub-categories of the "transaction" dimension*.

Thus, the empirical results suggest *responsiveness* as a crucial sub-dimension for (electronic) transactions. Responsiveness is also suggested as an attribute for Web site usability indicating the possibility to give feed back to service providers, and correspondingly, get feedback from service providers (e.g. Nielsen 2000; Palmer 2002; McKinney et al. 2002). The empirical data reveals that in insurance context responsiveness concretely refers to *reminder* and *confirmation* (Figure 29).

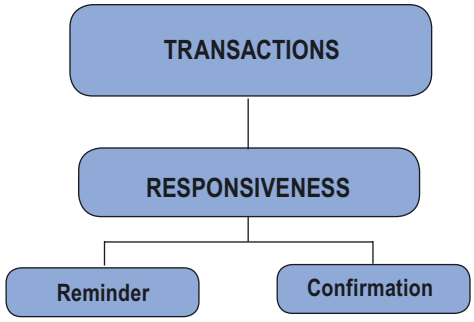

Figure 29. Conceptual nature of "transactions"

As stated, transactions are closely related to interactivity. In fact, reminders and confirmation in the context of the transactions reflect one expression of interactivity in the electronic servicescape. From transactions' point of view interactivity especially refers to the elements that increase customers' confidence towards the operations (e.g. information acquisition and transactions) in the electronic servicescape.

Confirmation in this context refers to the *feature that after completing a certain activity the customers can be confident that their transaction has been successfully registered by the service provider.* As the empirical results indicate, thereby the customers are left with the feeling that their matters are "in progress":

> P16: So the matter is in progress once you've filled in the coupon, so you can trust that when a message comes, that it has really truly gone forward. That it's not just lying around somewhere.
>
> P4: ... it's a good feature that when you do it, it says clearly that they'll inform you per email.
>
> P5: Like a confirmation or something?
>
> P4: Exactly.

In addition, the empirical data indicates that providing the customer with the *confirmation* that his matters are taken care of is also *a sign of the service provider's customer orientation*. The citation below supports this insight:

> P18: Well in a way it's taking you into consideration, or they take you into consideration... that they let you know, like thanks for getting in touch with us and so forth.

While performing a certain activity (i.e. transaction) in the electronic insurance servicescape it is essential for the customers to be aware of the current state of the activity in progress before it is completed. By this I am referring, for instance, to the situation where a customer, during the electronic transaction process, has accidentally forgotten to express some piece of information needed for the completion. The empirical results reveal that in these situations the *electronic service should "remind" the customer by identifying the unfilled but required pieces of information*:

> P2: An idea came to me... that if there are points which are compulsory... I guess all of these [electronic insurance services] have it, that they remind you if you've left something unfilled... [so] you can avoid accidents where you forgot to press some menu.
>
> P6: ... like hey, you didn't fill in this point. If it were a compulsory point. And then you'll see [quickly] from there, what you didn't fill in and then you can continue again.

In electronic servicescape the lack of customer service personnel is concretized very clearly since customers may need the expertise and support for making decisions, be it purchasing-related or claiming-related issues. In both cases money transfers play an essential role. Therefore, the decisions made are certainly important to the customers. To conclude the discussion of the transaction dimension of the electronic servicescape, I suggest that one of the most essential points, if not even the most essential, in performing electronic transactions is that a customer feels that the performed activities are registered and he is taken care of by the service provider from the beginning to the end of the transaction process. But what if problems still occur? This question is discussed in the next sub-chapter.

7.3.5 Personal assistance

As was pointed out in the previous discussions on the characteristics of the "interactive features" and "transactions" dimensions of the electronic servicescape it is important to the customers that their electronic operations are supported and that they know that their issues are taken care of by the service providers. Interactive features provide the customers with tools (navigational elements) and support (supporting elements) for operating in the electronic servicescape. *Supporting elements* of the *interactive features* dimension refer to providing the customers with *real-time interactive support during their electronic service operations*, such as calculators and help icons. The main purpose of the "supporting elements" is to ensure that customers have better possibilities to complete their electronic operations by themselves, be it information acquisition or other electronic transactions.

However, customers may also face more extensive problems in the electronic servicescape, and thus, they might need more than just support. They might need *personal assistance*, which refers to *customers' possibilities to become assisted by contacting the service personnel of a service provider*. Personal assistance can be offered via e-mail, or telephone, or even chat service, and it might be needed in situations in which the customers have run out of ideas how to continue their operations in the electronic environment.

The empirical results reveal that personal assistance, or at least, the possibility for it, is a crucial characteristic of the electronic servicescape especially in insurance context since insurance issues might be complex to the customers. Otherwise, the customers might even end up canceling the electronic operations as a whole. The following citations illustrate this insight:

> P6: ... insurance... is not considered easy... in my opinion it is essential in insurance that there is that [personal] help available in some way when filling in a form, because the issue is something like insurance.

> P3: That can easily be the end of the use. If there's no help and you don't know what you're doing.

The most crucial conceptual sub-dimension reflecting the personal assistance dimension of the electronic servicescape is *versatility*. Versatility refers to *the customers' insights into the presence of various different ways to get assistance*. More precisely, these various ways of the personal assistance in the electronic insurance service environment comprise (not in order of significance): *e-mail, telephone*, and *chat* (Figure 30).

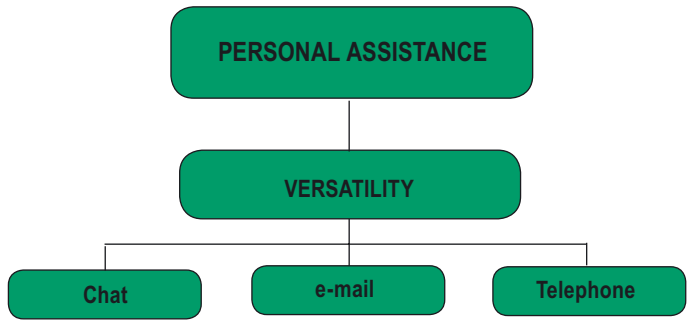

Figure 30. Conceptual nature of "personal assistance"

The empirical results reveal that versatility is particularly important because in that way the customers can choose the most appropriate and suitable way to contact a service provider in the electronic servicescape. Especially *telephone* and *e-mail* are regarded as fea-

sible, and also traditional, ways of contacting the service provider. These arguments are supported by the citations below:

> P6: Preferably in several ways. Help available.

> P10: Actually that previous one was good in a sense that there were different ways of getting in touch with. Either by email or by phone or. Everyone can choose for themselves. And why not have chat also, then it would have everything.

Concerning different forms of contacting the insurance service provider, a *chat service* was actually perceived as a positive novel way to get assistance in electronic insurance service environment by many interviewees. The empirical results indicate that a chat service can be considered as a form of personal assistance that includes features from both telephone and Internet-based communication practices. One respondent indicated, by referring to the strengths of the electronic service environment in general, that by using a chat service the customer can remain faceless while communicating with insurance service personnel of the service provider:

> P6: I think a chat is a good intermediate form between phone and Internet, it's not the same as phoning, but you still get personal service. So, on the other hand you can still be sort of faceless... I think as an idea it's really good just because it's an intermediate form between the Internet and a phone service.

In addition, the empirical results suggest that one of the crucial strengths increasing the usefulness of the chat service is the fact that the information the customer servant delivers to the customer remains on the screen. In this way, the customer can read it as many times as he wants in order to comprehend the message:

> P17: ... that [chat] is a double-faced thing... if it's at all a complicated matter, to understand the answer the customer service person gives, then in a way it would be good to receive the [answer] on the screen as a text, you can read it ten times until you understand it...

On the other hand, *there were also opposite opinions*. One respondent commented that using the chat service requires more from the customer since he has to pay more attention to the structure of the question. Therefore, he perceived the chat service as not being so useful when the customer tries to get an answer to a complex question:

> P18: ... in [the chat] the questions have to be very clearly formulated in order to get an unambiguous answer, but on the phone you can ask again and ask for clarification. It's perhaps a bit more difficult to get an answer in [chat] to some complicated question.

Furthermore, the empirical results reveal that a chat service is still more associated with entertainment services than services such as insurance by the respondents, and thereby, the customers are not used to receiving personal assistance through chat-like services. One respondent also doubted whether or not it is safe to deliver personal information on the Web as the last citation illustrates:

> P15: The chat is so much more unknown, that I've not tried it anywhere myself... So it probably excludes many at that point. It's still such a new thing that [chat].
>
> P14: ...it's probably still more part of the entertainment world, that chat.
>
> P7: In case you dare to reveal your personal information there [chat]. Because you might have to ask things, which you don't necessarily want everyone to know, so it would be some kind of secure connection with a certain person. Not too easy to connect to or even be hacked. Because there are often questions with insurance issues [which] don't need to be general knowledge.

However, *telephone* is still the most preferred way to contact the insurance service provider. In my opinion this most probably refers to the long traditions of getting personal assistance in insurance-related matters over the telephone. In addition, as the empirical results indicate (at least some) people still remain somewhat skeptic towards the functionality of new technology. Therefore, a telephone number is required. These arguments are supported by the following citations:

> P10: No thanks. I want a phone number. To sort out the questions.
>
> P11: I think that [the chat] is quite a good idea, but a phone number could still be available somewhere.
>
> P17: Yes it is and it's true that there really should be a phone number also, because always with these technical things [chat]... in general the first thought is that this is not going to work anyway. Or that you will not be able to reach anybody.

To conclude, if customers face problems which they cannot handle by themselves in the electronic service environment, they need personal assistance. Telephone is the most used way to contact the insurance service provider. However, the empirical results of the study clearly indicate that the chat service clearly has a potential to become a respectable interactive, and electronic, way to contact the (insurance) service provider in the future when the customers just become more familiar with it.

7.4 Structural model of electronic insurance servicescape

In the previous two sub-chapters the essential conceptual groundings for electronic insurance servicescape were introduced and discussed. Until here, the discussion has been in line with earlier literature to some extent, but at this point this study makes a clear distinction. While prior studies suggest distinct characteristics and frameworks for determining the usability of Web sites (e.g. Palmer 2002; De Wulf et al. 2006; Flavián et al. 2006; McKinney et al. 2002), or the quality of electronic services (e.g. Parasuraman et al. 2005; Gounaris et al. 2005; Fassnacht and Koese 2006), *this study takes a step further and examines how these distinct pieces are constructed as an entity indicating the electronic servicescape from structural point of view*. In this regard, it is justified to argue that there has been a clear research gap in discussing the design of the electronic servicescape.

In this sub-chapter the dynamics between the suggested concepts are described and considered as a structural entity to describe the electronic insurance servicescape. In order to organize the discovered conceptual dimensions as an entity, the facilitating question for this phase of the data analysis was set as: "*what do the customers desire to see when they enter into the electronic insurance servicescape*"?

Another essential distinction, while compared to earlier studies, is that *this study possesses a clearer service approach by including service processes into the discussion on the structure of the electronic servicescape*. Prior studies, especially those with a focus on service quality, certainly possess service approach as well but, for instance, in case of electronic service quality studies (e.g. Parasuraman et al. 2005), discussion is restricted to concern attribute level only. Thus, and in addition to depicting the structure of the electronic servicescape, *this study discusses how service transactions are associated with the servicescape*.

In this regard, electronic servicescape is perceived as an environment, in which customers perform service activities. Thus, *electronic servicescape is much more than a description of distinct features by which it is constituted*. It is a place for customers to perform service activities – even though it is not a physical environment.

Before introducing a structure of the electronic insurance servicescape a few introductory remarks are made. One of the most crucial characteristics and differences of the electronic service environment and the physical service environment, if not the most crucial, refers to the lack of (physical) service contact, and thereby, the self-service logic. Based on the pilot studies (see chapters 4.3.1 and 4.3.2), and other earlier research results (see e.g. Ahonen and Salonen 2005), as well as the empirical research conducted during this study I dare to contend that insurance companies have traditionally neglected the issue that electronic services are typically based on *self-service logic*. Instead, insurance service providers have generally concentrated on offering information on their Web sites. Many facets support this insight.

First of all, as can be interpreted from the discussion on the traditional electronic insurance service environment (see chapter 7.1) insurance service providers have traditionally put enormous masses of (written) information on their Web sites. In addition, the text mass has been more or less unstructured, meaning that information is available in a form of continuous text without accentuations or other structuring elements. *Unclear* Web sites caused confusion and negative opinions among the focus interview participants.

Second, the discussion also reveals that visual elements have not been playing an essential role in the electronic insurance servicescape. This is not to say that visual approach has been totally neglected. Certainly there are colors used on the Web sites of the insurance service providers, but as the results discussed in the chapter 7.1 indicate, the used colors are often dark and depressing, and thereby emphasize the complex and matter-of-fact side of insurance – the side that the customers are used to but are not necessarily enthusiastic about it.

Third, interactive features, such as offering support and/or assistance for the customers on the Web are, not only useful, but also particularly important for the customers since their operations in the electronic service environment are based on the self-service logic. However, also here the respondents argued that improvements are wished and welcome in order to enable fluent and continuous operations in the electronic insurance service environment (see chapter 7.1).

Fourth, transactions, such as buying insurance or reporting a claim, have been available for the customers on the Web already for years. However, they have remained somewhat inactively used so far. One cannot say that the insurance companies would not have been trying to get the customers to enter into the electronic servicescape. For instance, in Finland some insurance companies have encouraged their customers to report a claim on the Web by giving the customers a guarantee that the compensation decision will be delivered within 24, or depending on the company 48 hours after the company has received the claims application. This kind of stimulus has increased the use of online claims reporting. Nonetheless, I suggest that *the most remarkable reason for somewhat minor utilization of the electronic insurance transactions refers to the undeveloped and complex servicescape*.

The above presented discussion based on earlier studies as well as the empirical results of this study, describes the prevailing tendency on how the electronic insurance services and the service environment are perceived by the customers particularly well. One of the most crucial objectives of this study is to focus on examining the essential requirements of designing a customer-friendly electronic insurance servicescape. Regarding this, *a structure of electronic servicescape for insurance services* is modeled to indicate how the electronic insurance servicescape appears for the customers. This is done by identifying and describing the essential dynamics between the discovered five conceptual dimensions of the electronic servicescape in the insurance context (visual outlook, information, interactive

features, transactions, and assistance), which are introduced and discussed in chapter 7.3. The structure of electronic insurance servicescape is depicted in Figure 31.

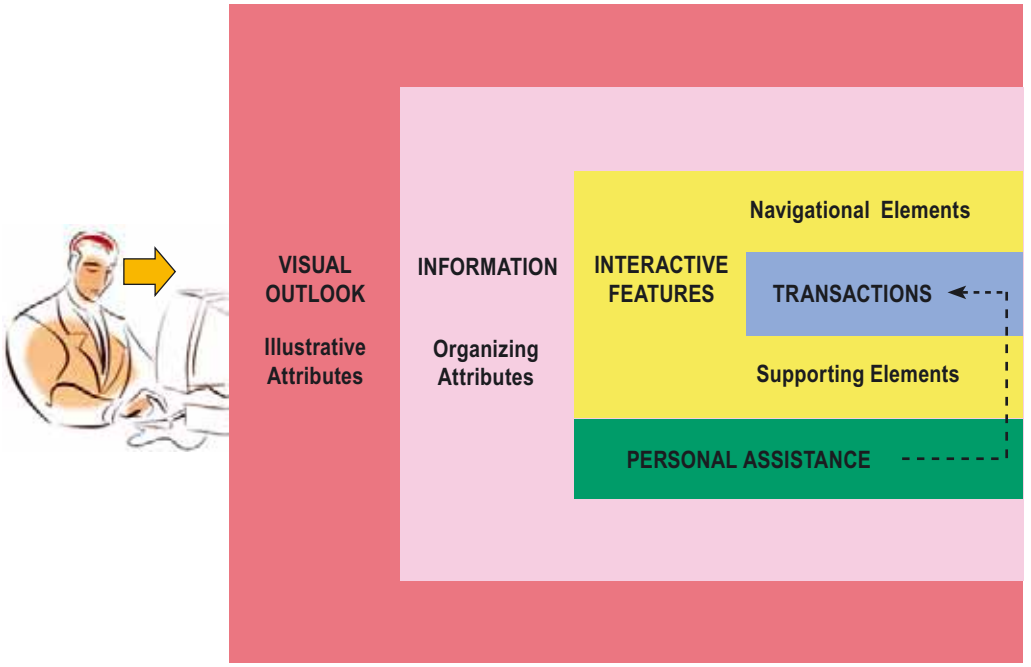

Figure 31. A theoretical model of electronic insurance servicescape

The yellow arrow in Figure 31 illustrates that the electronic insurance servicescape provides an answer to the question: *what the customers desire to see on the screen*. In other words, Figure 31 indicates how the elements of the electronic servicescape are organized as an entity in order to represent the *concrete (but non-physical) evidence* about the service, which customers are observing and evaluating. In the next sub-chapter the structure of the electronic insurance servicescape is discussed more in-detail.

7.4.1 Logic for observing electronic insurance servicescape

The proposed structural model suggests that when a customer enters into the electronic service environment, the elements of *visual outlook* especially in a form of "illustrative attributes", such as pictures, colors, and animations, appear (or should appear) for the customer as the first layer (i.e. the evidence) of the electronic servicescape. This conception is drawn on the basis of the empirical research results indicating that the *"visual outlook"*

embraces all the other dimensions of the electronic servicescape especially through illustrative attributes (e.g. pictures, colors, animations) as illustrated in the Figure 31.

Further, the empirical results propose the *information* as the second layer of the electronic servicescape which, similarly as "visual outlook", *embraces the other dimensions of the servicescape* as is depicted in Figure 31. In addition to the written text presented on the Web sites, the information dimension is characterized by the *organizing attributes*. Through "organizing attributes" the amount and the structure of the information are determined in the electronic service environment as discussed in the chapter 7.3.2.

As Figure 31 illustrates, the information appears through the visual outlook dimension. This statement can be confirmed by referring to the empirical results, which clearly emphasize the crucial role of *illustrative attributes*, such as using colors, in structuring the information on the Web. On the other hand, too many colors should not be used. Otherwise customers may get confused. The following citations support this argument:

> P17: That that they've just been listed, as you said, not even the headings are in any way highlighted, and it's just one chunk.

> P4: I think this still made it very apparent, when one thinks about the first point, "content", that how much does the appearance affect it [content]. Because that left one really is sort of outrageously grey [traditional example]

> P10: ... and it doesn't mess up the first page too much, if it has not been made too colorful.

Moreover, the empirical results supported by the prior research (e.g. Bebunan-Fich 2001; Palmer 2002) indicate that the relationship between the visual outlook and the information is somewhat stronger than it is in case of other dimensions of the electronic servicescape. In the context of this study, this notion especially refers to the use of animations on the Web sites (e.g. the "insurance cover evaluator" service concept), and thereby, the *visualization of the information*. According to the empirical results, customers desire the information to be visualized in order to make the absorbing of information easier and more appealing for them:

> P12: ... playing around, where you end up finally, it's the hard facts that you receive. So even if it's so easy, you just need to throw cats and dogs and women and men and bicycles around, still you get your hands on in [factual data], like right, these [insurance types] you should take and those and those and have you considered this [insurance type] and this...

Although the model indicates, that the visual attributes are involved throughout the electronic servicescape, especially animations are not desired to be utilized all over in the

electronic servicescape. As the discussion on the visual outlook in chapter 7.3.1 indicates, visualizing the information through the animations is suitable especially when the customer is getting himself more familiar with insurance on the Web. However, the focus group interviews reveal that especially playful elements, such as animations, should not be utilized too much in the electronic service environment as the following citation indicates:

> P15: The playfulness has it's limits of course, [like] how far should the playfulness go... it has to stop at some point and from there you only have facts.

An interesting aspect, however, is the future since the empirical results reflect that the use of animations might well be the reality. In the model the utilization of the animations is restricted to concern the information only. Who knows, but at least according to the opinion expressed by the interviewee it might be possible to utilize the animations also in the context of buying as a supporting construction tool:

> P4: But moving certain parts into a basket, why couldn't you use that when building up an insurance where you need different [components], since you're not going to take all [components] necessarily, for example a young person... You could use [the idea of "insurance cover evaluator"] in principle just about anywhere.

As the model indicates, the overall content and the other dimensions of the electronic servicescape (i.e. interactive features, transactions, and personal assistance) are actually observed through "visual outlook" and "information" dimensions by the customers. In principle, the *features of visual outlook* (illustrative attributes) and *information* (organizing attributes) *illustrate and organize the essential content of the electronic servicescape to the customers*.

Further, to contribute to the discussion on service design, *this study introduces a logic according to which the essential service processes are included and depicted in the electronic insurance servicescape*. Concerning "interactive features", the importance of "illustrative attributes" is clearly emerged through the empirical data. In the case of the *navigational elements* the use of colors was perceived as a feasible way of illustration. Similarly, in case of the *supporting elements* the symbols illustrate the essential functionalities for the customers, and therefore, are recommended to be used:

> P7: I think in this kind of thing where you progress from one phase to the next, colors bring clarity about which phase you are in and how many phases might be left, if you intend to finish it.

> P13: Well, at least there are [novel example] enough question marks, so you can get further information.

Furthermore, the empirical results reveal that *navigational elements* are reflected by the information dimension through the *organizing attributes* (structure). One of the respondents suggested that links on the Web sites could be larger in order to facilitate the customers in their electronic operations. In addition, (insurance) service providers should pay attention to the length of the links as the latter citation indicates:

> P6: ... and then the links a little bit bigger... where is the insurance being offered and where can you go get the offer.

> P10: In general in the right one [traditional example] those headings are much too long. If you have to [search], what would you really find under the page. Probably just a long chunk of text.

As depicted in the servicescape model, *personal assistance* appears alongside with the "interactive features" dimension. In this regard, the empirical results indicate future visions according to which, for instance, chat, or maybe even voice connection with picture, might be a convenient way to get real-time personal assistance on the Web in the future:

> P1: ... because at some point the development is probably going in that direction that there will be less and less of [offices] so. So then there would be some other way of getting in touch with [the insurance clerk], for example the chat or a videophone...

In fact, chat or voice and picture connection are the only interactive real-time forms of contacting a service provider in the electronic servicescape. *Phone is certainly real-time and also interactive but not in the electronic servicescape* since the customer has to switch service channels. *E-mail is certainly interactive but not real-time*. Therefore also e-mail cannot be considered as a pure feature of interactive personal assistance.

However, although not fully interactive (as it is interpreted in this context) the empirical results clearly indicate that *e-mail and especially telephone options are still particularly important forms of contact from the customers' point of view*, and thereby, they are desired to be displayed clearly and visibly in the electronic service environment. The following citation supports the above presented insights:

> P18: Well there it's easy... there's "one slash two", so there's probably another page. But that picture of a phone is easily visible so if there's some problem you can call there.

> P5: This is really good because there's that 'Need help' -box. You can send email with it and there are the phone numbers and opening hours and where to call.

Transactions dimension refers to the activities in which the money transfer between the customer and the (insurance) service provider is concerned, such as buying and reporting

a claim. In principle, it is *constituted by* the *visual outlook, information*, and *interactive features dimensions*. In addition, the *personal assistance* dimension is involved if the "supporting elements" of the "interactive features" dimension are not sufficient enough to solve the customers' problems, and the customer experiences a need for contacting a service provider. This is illustrated with the dashed arrow running from the "personal assistance" to the centre of the model (transaction) in the Figure 31.

7.4.2 Conclusion

Finally, it is time to make a few concluding remarks on the basis of the discussion in chapter 7. In addition, the most fundamental principles of the electronic insurance servicescape model depicted in Figure 31 are encapsulated.

The key principle of the electronic insurance servicescape suggested in this study is that *information as well as other content of the electronic servicescape should be made more visual for the customers by using "illustrative attributes", such as lively colors, illustrating pictures, and even animations*. In this regard, this study suggests that the visual outlook is the first layer of the electronic servicescape that the customer observes when entering into it. However, it needs to be noted that as one of the most crucial characteristics of insurance business is creating trust among the customers, "illustrative attributes" should be used appropriately in a way that the nature of insurance would not be jeopardized. In this regard, examples referring to the novel approach on designing electronic insurance service environment (see chapters 4.4 and 7.2) as well as "insurance cover evaluator" service concept (see chapter 5.3) provide feasible guidelines what this could mean in practice.

Moreover, the electronic insurance servicescape model suggests that *service providers should pay attention to organizing information*. Otherwise customers operating through self-service technologies (SSTs) may feel uncomfortable since there is no physical service contact available from whom to ask for advice(s) if the information content cannot be understood. Related to this, one of the most fundamental paradoxes related to designing the electronic insurance servicescape refers to the amount of *information*. As the empirical results reveal there should not be too much information on the Web. Otherwise the customers might get confused as is discussed in chapter 7.1. Nor should too little information be provided since customers might perceive the electronic service environment untrustworthy to some extent, as discussed in the chapter 7.2. In this regard, *visualization of the information may certainly be a feasible solution* as the discussion on, for instance, the "insurance cover evaluator" service concept in chapters 5.3 and 7.3 establishes. This study proposes that "information" is the second layer of the electronic servicescape.

Further, "*interactive features*" play a crucial role in providing the customers with "tools" (i.e. navigational elements) for operating in the electronic servicescape. Also from the perspective of maintaining the customers in the electronic service environment, and avoiding situations in which the customer has to contact a service provider, the interactivity is a particularly important feature of the electronic servicescape in supporting customers' fluent operations (i.e. supportive elements).

However, while operating in the electronic servicescape (e.g. searching for information or making *transactions*) customers may face such extensive problems that *supporting elements* are not enough to solve them. In this regard, *personal assistance*, i.e., the possibility for contacting a service provider should be offered to the customers. Personal assistance should be put visibly available and it should be accessible anytime. Moreover, this study emphasizes that *personal assistance should be versatile*. In this regard, *this study also recommends newer forms of assistance, such as a chat-service, alongside with more traditional contact manners* (e.g. telephone, e-mail).

In this chapter the electronic insurance servicescape was introduced and discussed. The model depicted in Figure 31 describes the *conceptual dimensions and the structure of the electronic servicescape as the customers perceive them*. However, little is yet discussed about the *customer-friendliness* in the light of the empirical results of the study. In the next chapter I will discuss the customer-friendliness approach more thoroughly by introducing the characteristics creating appealing electronic insurance service experiences.

8 THEORY DEVELOPMENT II: APPEALING ELECTRONIC INSURANCE SERVICE EXPERIENCES

Now, when the essential conceptual dimensions and the structure of the electronic servicescape are described one could ask: then what? I agree: then what. The electronic servicescape model provides an answer to the question: "what the customers desire to see when entering into the electronic (insurance) servicescape". However, the electronic servicescape model as such, does not tell much about customer-friendliness which, in this context, refers to the general characteristics affecting customers' intentions to enter into the electronic (insurance) servicescape and operate in it.

Concerning the developed artefact for designing a customer-friendly electronic insurance servicescape introduced in chapter 5.4, the prior theoretical discussions on creating service experiences (e.g. Pine and Gilmore 1998b; Tax and Stuart 2004; Edvardsson et al. 2005; Stuart 2006) from the service management point of view, and technology acceptance of customers (e.g. Davis 1989; Moon and Kim 2001; Chen and Tan 2004) from the IS research point of view are combined. In addition, the theoretical discussion is complemented with empirical evidence referring to the "traditional versus novel typology" (see chapter 4.4) and "insurance cover evaluator" service concept (see chapter 5.3). Thus, the suggested framework indicates the creation of *appealing electronic insurance service experiences* from customers' point of view.

The most fundamental objective of this chapter is to *empirically identify and explain the characteristics for creating appealing electronic insurance service experiences*. This is illustrated in Figure 32. As a guideline for deriving such characteristics from the empirical data the assisting data analysis question was set as: "*what kinds of characteristics indicating the creation of appealing electronic insurance service experiences can be discovered from the empirical interview data?*"

In this regard, three fundamental experience characteristics were discovered. These comprise: *clearness, trustworthiness*, and *attractiveness*. Each of the three characteristics is individually elaborated in chapter 8.1. After that, the dynamics between the concepts

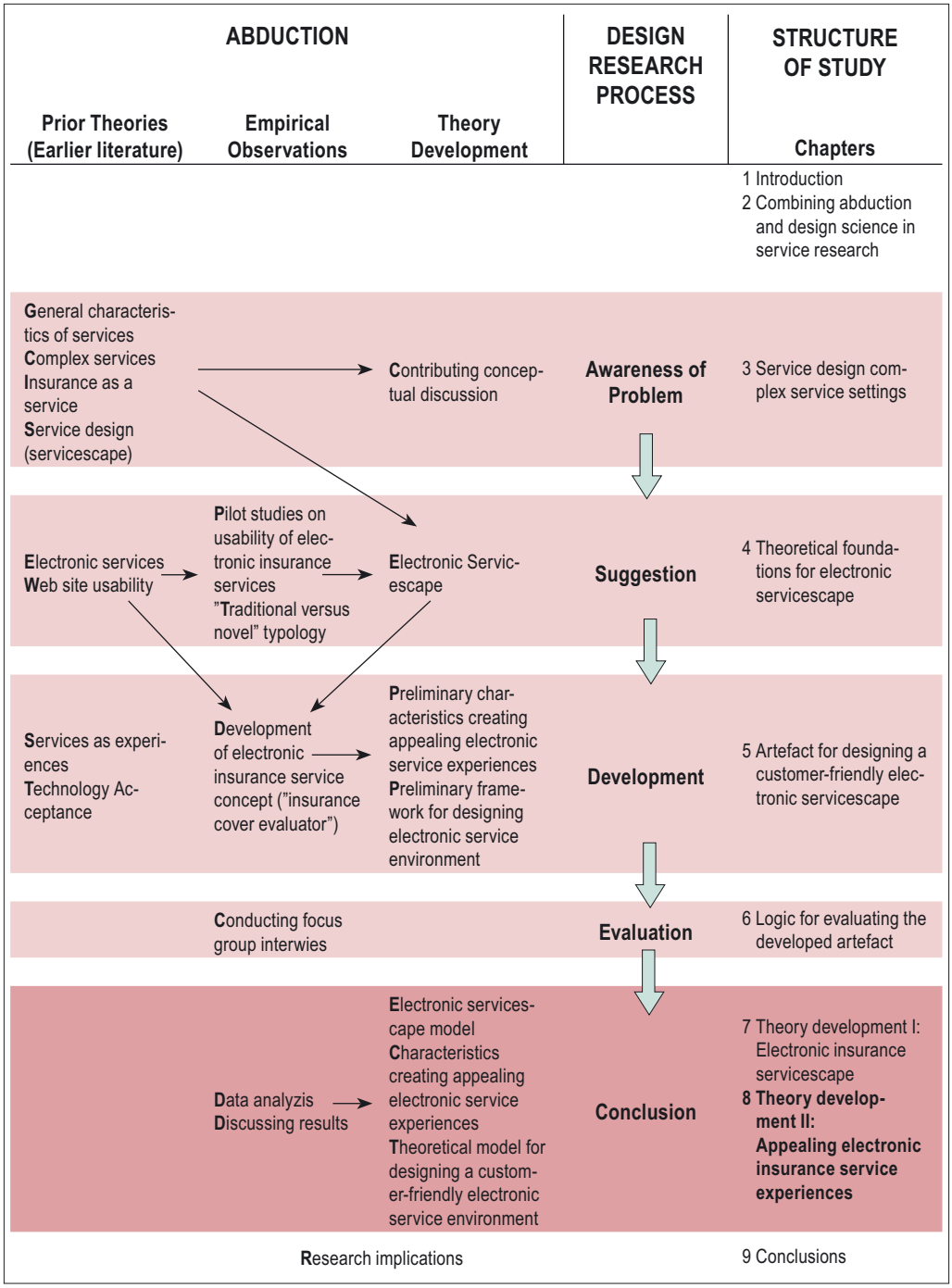

FIGURE 32. OBJECTIVE OF CHAPTER 8

(i.e. causal relationships) are depicted and discussed in chapter 8.2. The entire empirical discussion is concluded in chapter 8.3, in which a model for designing a customer-friendly electronic insurance servicescape is proposed. Finally, as managerial implications are an essential part of the design research methodology chapter 8.4 provides a practical view on applying the model for designing a customer-friendly electronic insurance servicescape to business development purposes.

8.1 Conceptualizing the experience characteristics

The discovered experience characteristics (clearness, trustworthiness, and attractiveness), as well as their sub-categories, are mainly constructed on the basis of empirical data, but also drawing on prior theoretical discussion to describe the phenomena discussed throughout the focus group interviews. Thus, *the discovered concepts, although derived from the empirical data, are also affected by the earlier literature*. However, as the concepts are applied to the context of this study, their characteristics might be discussed differently in the following chapters as they have been discussed in earlier literature.

The second essential point to be emphasized is that the concepts and their sub-categories are mainly developed *through the dimensions of the electronic servicescape*. In the following sections each of the three experience characteristics are individually elaborated.

8.1.1 Clearness

The empirical results of the study suggest *clearness* as one of the most fundamental characteristics of creating appealing electronic insurance service experiences. Clearness is certainly not a totally new concept in the context of Web-based electronic services. However, in earlier studies term "clearness", or clarity (see e.g. Eighmey and McCord 1998), is used to characterize *information quality* (e.g. Eighmey 1997; DeLone and McLean 2003), as well as information relevance (see e.g. McKinney, Yoon, and Zahedi 2002).

In this study a different, more extensive, view on clearness is chosen. Clearness is perceived to have conceptual congruence with *ease of use* concept (see chapter 5.2) to some extent, which is defined as "the degree of which a person believes that using a particular system would be free of effort" (Davis 1989, 320). In this regard, *clearness* is determined as *the extent of the electronic insurance service environment being easy to comprehend and operate* in this study.

As "visual outlook" and "information" dimensions of the electronic insurance servicescape play an essential role in characterizing the nature of clearness, *visual informativeness* is suggested as one of the sub-categories for clearness. Another sub-category refers to easy-to-use nature and fastness of electronic operations, and is therefore conceptualized as *simplicity*. The conceptual nature of clearness, as well as the connections with the dimensions of the electronic servicescape are depicted in Figure 33.

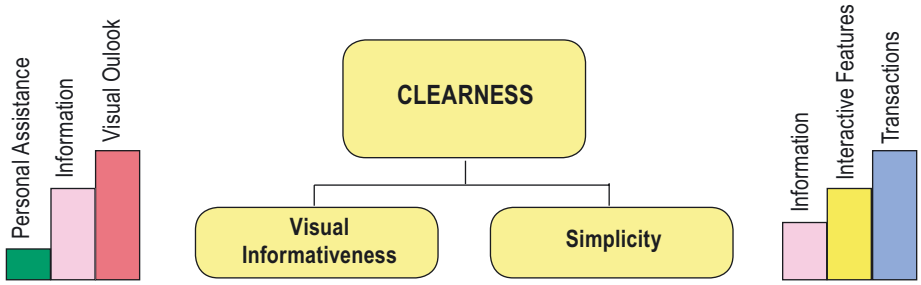

Figure 33. Conceptualizing "clearness" through the dimensions of electronic servicescape

The connections between the sub-categories of the "clearness" and the dimensions of the electronic servicescape are depicted with bar graphics in Figure 33 according to the following logic. *First of all*, the bars indicate, which dimensions of the electronic servicescape are related to which sub-category. As Figure 33 depicts, "visual outlook", "information", and "personal assistance" associate with "visual informativeness". Similarly, "transactions", "interactive features" and "information" associate with "simplicity". Further, in order to improve the illustration and indicate the connections between the categories and the electronic servicescape model, the bars are in the same colors as they appear in the model of electronic insurance servicescape introduced in chapter 7.4 (see Figure 31).

Second, the bars also indicate the extent of how intensively the dimensions of the electronic insurance servicescape are associated with each sub-category. For instance, in case of "visual informativeness" the bar that indicates "visual outlook" dimension is longest. This means that visual outlook dimension of the electronic servicescape is the most crucial indicator of visual informativeness sub-category for "clearness". Similarly, "information" dimension is perceived as the second dimension in terms of indicating the "visual informativeness". At this point it is important to note that the size of the bars is not based on any quantitative measuring, but I am rather trying to simply illustrate the difference of the importance of distinct dimensions of the electronic servicescape in the context of each sub-category.

Visual informativeness

Visual informativeness as a sub-characteristic for clearness refers to *clarifying the electronic service environment with visual elements*. From the perspective of the electronic servicescape, term visual especially refers to the "visual outlook" dimension whereas term *informativeness* refers to the "information" dimension. In this regard, the empirical results reveal that the most crucial dimension of the electronic servicescape characterizing "visual informativeness" is visual outlook (i.e. illustrative attributes). For instance, displaying symbols and icons clearly, and the fact that the displayed symbols are large enough was perceived important by the interviewees:

> P14: ... all of these symbols are pretty clear.
>
> P17: ... those small pictures too, even if they didn't have anything to do with the issue, small pictures somehow make the matter clearer, like for example that there are three points here and there are big headings, which make it clear what is [underneath them].

In addition, used *colors* have a particular impact on making the electronic service environment clear and visual for the customers, although service providers need to be aware of not using too many colors. Also using *charts* on the Web environment was perceived as a feasible solution in terms of clarifying the content by the research participants. The following citations illustrated these insights:

> P7: I think in this kind of thing where you progress from one phase to the next, colors bring clarity about which phase you are in and how many phases might be left, if you intend to finish it.
>
> P15: ... and often things are ruined with too much color.
>
> P17: Those charts are also a fast and easy way to find the information you're looking for. If the information is in a form of a chart, it's always clear.

From the clearness point of view using animations on the Web sites was perceived a felicitous solution in terms of making the (insurance) service environment more comprehensible for the customers. By this I am especially referring to the "insurance cover evaluator" service concept suggesting that *visual informativeness facilitates the absorbing of information that might be otherwise perceived complex by the customers*. The following citations support this insight:

> P7: The thing with these [electronic insurance services] is also that information, what ever it's about, should be in an understandable format, because for an ordinary person the text that is on these sites is often quite difficult.

P12: This is exactly what I meant... that by playing [referring to "insurance cover evaluator"], where you end up, it's still the hard facts that you get in the end.

Information (i.e. organizing attributes) was perceived as the second relevant dimension of the electronic servicescape indicating "visual informativeness". Especially organized structure (i.e. organizing attributes) was perceived as important from the clearness point of view by the interviewees. The empirical results reveal that organized structure might even facilitate and encourage customers in making a buying decision on the Web as the citation below indicates:

P11: ... that's more clear, because it's structured and the presentation is clear that you can understand what these [things] are about. But if you are seriously considering taking out insurance, you do in a way get a clear picture of that.

The other three dimensions of the electronic servicescape model (*interactive features, transactions* and *personal assistance*) also have influence on visual informativeness. However, their influence is somewhat vicarious since all these three dimensions are reflected through visual outlook and information by the interviewees to some extent. For instance, in case of *interactive features* the empirical results suggest that links should be large and visible in order to be easy to find. In addition, long verbal links are not preferable. These insights are supported by the citations below:

P6: ... those links are big and easy to find, like hey, there's the car insurance and so forth. So those big, clear links are good.

P10: In general in that right one [traditional example] those headings are much too long.

Concerning *transactions*, displaying the content of the Web sites clearly and visually was perceived as a particularly important point by the respondents. The empirical results reveal that the customers perceive it important that the length of the process is clearly indicated on the Web. The different phases of the transactions process(es) can be illustrated, for instance, through numbering and descriptive short wordings. In addition, colors and context-related pictures were suggested to facilitate clarifying the content:

P17: ... that the [different phases of transaction] would be numbered and also, what is going to take place there, because on one hand it's good that they have explained what the phases include.

P7: I think in this kind of thing where you progress from one phase to the next, colors bring clarity about which phase you are in and how many phases might be left, if you

intend to finish it... That picture of a key is smart, and that picture of a house because it has to do with the topic... probably there's a car where they discuss car insurance and so forth, so those are nice.

When moving in the electronic service environment it naturally is important that the customers have a possibility to get *personal assistance* if it is needed. Although this matter is easy to be considered by a service provider, it is not, however, self-evident that it is taken care of on the Web. Therefore, it is essential to point out the *importance of clearly and illustratively displaying the contact information for the customers on the Web*:

P9: ... if that page had a phone number on it, it would be good. When I enter that other site [traditional example], the first thing I think about is where to find the contact information so that I can call there. So when there's a simple little link there you can also go searching on the [website] [for example information].

P5: Again, no phone number to call. So what do I do now.

The importance of clearness was already emphasized while characterizing the novel approach on designing the electronic insurance service environment in chapter 7.2. As the discussion above establishes, especially "illustrative attributer" referring to "visual outlook" (e.g. colors, pictures, and animations) as well as organized structure of the content (i.e. "information") play key roles in making the electronic insurance servicescape clear for the customers.

Simplicity

According to the empirical results it is particularly important for the customers that they experience their operations to be easy, fast, and simple in the electronic insurance servicescape. The above mentioned statement derived from the empirical data is conceptualized as *simplicity*, which refers to *the extent of the electronic insurance service operations being fast and simple*. From the perspective of the electronic servicescape, especially the *transactions* and *interactive features* are concerned. This means that *when customers are performing electronic activities such as buying or reporting a claim online, the importance of "simplicity" is emphasized*. However, also searching for information can be considered as an activity. Therefore, "information" dimension of the electronic servicescape is also related to the simplicity as is illustrated in Figure 33.

In addition to *what the customers see on the screen*, they perceived it important that *they know what they are doing*. Thus, the empirical results suggest that the awareness of being able to get through the desired tasks (e.g. electronic transactions) fast and easily is important to the customers. The following citations support the above presented insights:

P3: ... I'd rather do the other one [novel example], it's just somehow... looks easier.

P17: Well, in my opinion also that left one [novel example] much clearer and quicker, looks faster I mean.

P14: I agree completely that that one [novel example] seems easy.

P1 (+ P5): And the clarity. That you know what you're doing.

Moreover, the empirical results suggest that expressing clearly that transaction process is fast to carry out, for instance, by illustrating the length of the *transaction process(es)* on the Web, is a crucial point to the customers. The interviews also stated that if the length and/or the phases of the transaction process are not (clearly) indicated it might be difficult for them to comprehend what they are actually doing (e.g. buying) in the electronic service-escape as the latter citation below indicates:

P17: simple and you do see also that it's quick to fill in the page and that there's only one more page to go. So that detail is important, how many pages are there.

P12: ... however, here you don't know what you're buying...

The possible confusion among the customers caused by, for instance, the above described phenomena might have critical consequences for a (insurance) service provider. The empirical results, namely, reveal that under above described circumstances the whole transaction process, or other activity, might well be cancelled:

P5: Probably if I were filling this in myself I would maybe still fill in these [points] and see what comes next in [the transaction process], but if nothing sensible came then it could be that I would not finish it.

Concerning "information" from the simplicity point of view, the customers desire it to be easily accessible. As the empirical results indicate, in that way it is easier for the customers to comprehend the essential content of what the customer is looking for:

P10: This left one [novel example] at least I get the feeling that it's quicker to get into it, to find what you're looking for, the information.

As becomes clear through the discussion on the simplicity, it mainly refers to the *concrete activities by the customers performed in the electronic service environment*. Accessibility of the information and fastness are more or less general attributes of the electronic service environment. However, *in the context of complex services, such as insurance, the importance of the simplicity is even more emphasized*. On the other hand, it is also a more challenging

task for the insurance service providers to consider since there is a need for delivering a great amount of information to the customers. This refers to the paradox of the appropriate amount of information in the electronic insurance service environment discussed earlier (see chapter 7.3.2).

8.1.2 Trustworthiness

Trust and trustworthiness are extensively discussed concepts in the context of electronic services. To my knowledge, a great share of the prior research on trust in electronic services, or e-commerce, is somewhat related to the extent of trust between the customer and the service provider (e.g. Gounaris, Dimitriadis, and Stathakopoulos 2005; Hwang and Kim 2007), and the other interest groups (e.g. Shankar, Urban, and Sultan 2002).

Also trustworthiness of the information available on the Web sites has been investigated (e.g. Flavián et al. 2006). However, in addition to the trustworthiness of the information, *less attention, if any, is paid to examining the trustworthiness of the electronic servicescape as a whole*. The empirical results of this study clearly indicate that in the context of electronic insurance services *trustworthiness of the self-service natured service environment is a crucial factor affecting how appealing customers perceive the environment*. My opinion is that the importance of trustworthiness in this context certainly refers to the general insight by the customers that insurance business as a whole should create trust. This insight is also supported by the following citation gathered from the empirical data:

> P11: That's why it [offering insurance services on the Internet] is challenging because insurance issues are such that they really demand trust and so forth...

In the scope of the study term *trustworthiness* is defined as the *ability of the electronic insurance servicescape to get the customers convinced to operate in it*. Two conceptual subcategories for determining the nature of "trustworthiness" are derived from the empirical data: *functionality* and *visual informativeness*. The conceptual nature of trustworthiness is depicted in Figure 34.

"Functionality" as a sub-characteristic for trustworthiness refers to "transactions" and "personal assistance" dimensions of the electronic insurance servicescape. Similarly as in case of clearness, "visual informativeness" referring to "visual outlook" and "information" dimensions of the electronic servicescape plays a crucial role in characterizing the trustworthiness.

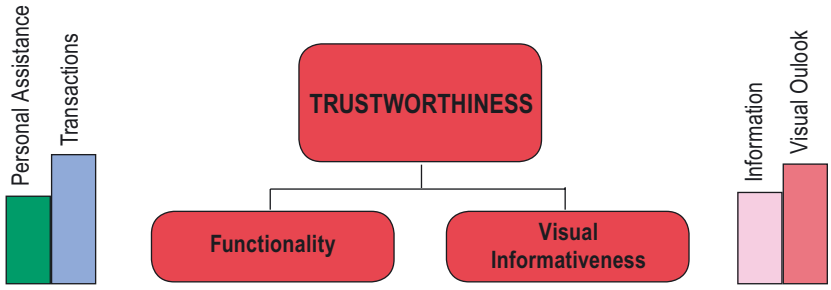

Figure 34. Conceptualizing "trustworthiness" through the dimensions of electronic servicescape

Functionality

One crucial point to the customers operating in the electronic service environment is that *everything works*. Otherwise the customers might lose their trust in electronic services, and thereby, become reluctant to use them. In terms of electronic insurance servicescape, *functionality* in the context of trustworthiness especially refers to *transactions* dimension. The empirical results reveal that unworkable services clearly decrease trustworthiness of the electronic servicescape from the customers' point of view as the following citation indicates:

> P4: ... how do you create trust in the end? Like if you go on the Internet, how is it [trust] created there in the electronic world? ... If in there [electronic service environment] something goes wrong, then the trust is out the window.

Furthermore, the interviewees clearly express that receiving a confirmation of the performed transactions (e.g. buying, reporting a claim) is important in terms of convincing the customer of the functionality of the electronic transactions, and thereby, increasing trustworthiness. More concretely, this means that customers are delivered a clear message that their transaction(s) are noticed by a service provider, and will be processed. In addition, *sending confirmation reflects customer orientation*. These arguments are supported by the citations below:

> P16: In other words, the matter is being processed once you've completed the coupon, like you can trust that when some message comes, it has [electronic transaction] really truly gone forward.

> P18: Well in a way it's about taking it into consideration... so... letting you know like thanks for contacting us and so forth.

In addition to "transactions", *functionality* also associates with *personal assistance* dimension of the electronic insurance servicescape. The empirical results indicate that while customers are operating in the electronic servicescape the awareness of having the option for getting personal assistance if needed may increase trustworthiness. Although telephone was generally perceived as the best option for contacting a service provider, also chat service was suggested to have similar influence on trustworthiness of the electronic insurance servicescape perceived by the customers as is expressed by the following citation:

> P3: ... the chat probably creates quite a lot of trust, because you're able to get in touch with a [customer service person] a little bit... It's a little bit like calling, phone or similar... then it can create trust.

As it can be interpreted from the above presented discussion, functionality of the transactions supported with possibilities to contact the service provided clearly has an increasing effect on trustworthiness of the electronic insurance servicescape perceived by the customers. In more general terms, an interesting, and also new, notion concerning the trustworthiness of the electronic servicescape was that customers perceived that a chat service would create trust. In this regard, it is justified to argue that *"interactive features" as well as "personal assistance" may certainly increase the trustworthiness of the electronic insurance servicescape*.

Visual informativeness

In the context of trustworthiness *visual informativeness* refers to the *ability of visual elements (e.g. colors, pictures, and animations) to create trust towards the electronic servicescape from customers' point of view*. In line with the notion that insurance should create trust, the empirical results show that emphasizing the role of colors and pictures on the Web might decrease customers' trust towards the electronic service environment. This is the case especially when the visual elements are *too lively* and/or somewhat *unsuitable for the context* in which they are used as can be interpreted through the following citation:

> P7: the one on the left [traditional example] is more reliable. Definitely. Because in that [novel example]... they've used animated characters, and that kind of visual material refers more to children's world than to insurance services.

However, visualizing information in a way that it serves the context, as is the case in "insurance cover evaluator" service concept, was not perceived to decrease trust. Instead, lively colors, pictures, and animations support the service content if their main purpose is not to entertain, but rather, better illustrate the electronic servicescape and/or the functionality of the electronic service(s) to the customers:

P7: ... when during the interview there [has] been two examples of sort of playful or game-like style, I mean those pictures in the beginning of dogs and etc. [novel example], took away some credibility, but the visual material in that game ["insurance cover evaluator"] was not like that. Even though they were similar...

P10: ... their ["insurance cover evaluator"] visual look was sort of simplified, it was meant to give information and not to entertain [novel example]...

As became evident in the discussion on the characteristics of *traditional* and *novel* electronic service environments (see chapters 7.1 and 7.2) the amount of information is perceived a crucial issue by the customers. According to the empirical data, a tendency in case of traditional approach seemed to be that there is a lot of information available on the Internet, even too much. On the contrary, novel electronic service environment tends to offer remarkably less information, in some cases even just scarcely enough.

In this regard, the empirical results suggest that the amount of information affects the trustworthiness of the electronic insurance servicescape. Too little amount of information might cause subconscious mistrust, and thereby, decrease customers' trust towards the electronic insurance servicescape as the following citations indicate:

P23: Yes the [traditional example] would be credible, where as that [novel example] is still a bit cheery and what not, and somehow that is more reliable [traditional example] than this one. So in this one [novel example], if you didn't know the company... because there isn't that much text, you might get suspicious subconsciously or something.

P7: Me too, it makes me a bit suspicious, that would I really find [novel example] all the information I need from there after all.

On the other hand, however, too much information might pose a threat that the customers might get lost in the electronic servicescape. In that sense, the empirical results indicate that from the customers' point of view simplified and clear (information) structure might even increase the trustworthiness of the electronic service environment since the customers are aware of where they are located:

P16: But on the other hand this kind of clear and simplified style adds to the credibility more than having a lot of stuff, from which you're supposed to recognize the essential. So from that one [novel example] you can clearly see what they are talking about and you can even understand it. In my opinion that's important from the customer's point of view, that you understand what it's about, so when it goes that far that you're completely lost, it really gets to you.

Visual informativeness, as it is determined in this study, might not necessarily be the first conceptual dimension that comes to the mind while discussing trustworthiness which, however, somewhat refers to seriousness and matter-of-fact nature. Despite this, *the empirical results of this study indicate that even in a serious and matter-of-fact context, such as insurance, trustworthiness may be increased by the visual elements as well as clear and organized structure of the service environment* as is established through the discussion above.

All in all, the discussion on the trustworthiness of the electronic insurance servicescape established that *being trustworthy does not necessarily mean being serious and matter-of-fact*. Trustworthiness might also be gained by increasing livelier, but naturally still functional, elements to the electronic insurance servicescape.

8.1.3 Attractiveness

In electronic service environment in which customers' service operations are based on self-service logic it is important that customers perceive the service environment to be *appealing*. Otherwise, they might lose their interest in operating in it. In the earlier literature on usability as well as electronic services (mainly the quality of electronic services) the above described phenomenon is discussed with terms such as 'aesthetic design' (Yoo and Donthu 2001; Gounaris et al. 2005), 'visual appeal' (Loiacono, Wason, and Goodhue 2000), or 'visually attractive' (McKinney et al. 2002).

As earlier literature embraces a "bits and pieces" type approach by suggesting distinct attributes to characterize the design of the Web sites or the quality of electronic services, this study suggests a more extensive approach on characterizing attractiveness in the context of electronic insurance services. Attractiveness is perceived as one of the most fundamental characteristics of customer-friendly electronic insurance servicescape as a whole. It indicates *the extent of how appealing and convenient the electronic insurance servicescape is perceived by the customers*.

Two sub-categories were discovered to explain the essential nature of attractiveness as it is understood in the context of the study. These sub-categories are: *visual informativeness* and *functionality*. From the perspective of the electronic insurance servicescape dimensions attractiveness is especially reflected through "visual outlook", "information", "transactions", and "personal assistance" (Figure 35).

Following the logic introduced in chapter 8.1.1, the connections between the sub-categories of attractiveness and the dimensions of the electronic servicescape are illustrated with bar graphics in the Figure 35. In addition, the extent of how intensively each dimension of electronic servicescape is associated with the sub-categories of attractiveness is depicted through the height of the bars. However, also here it is important to remember

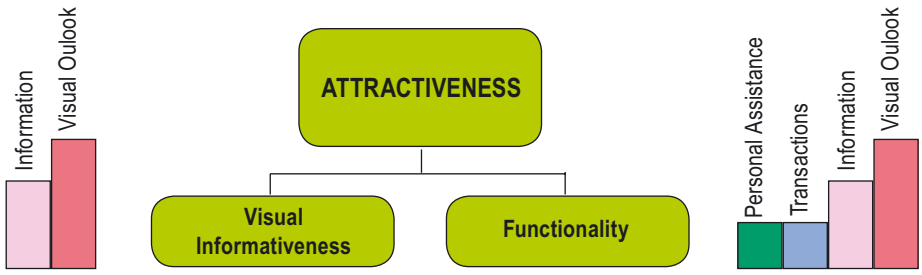

FIGURE 35. CONCEPTUALIZING "ATTRACTIVENESS" THROUGH THE DIMENSIONS OF ELECTRONIC SERVICESCAPE

that the height of the bars is not based on quantitative measuring. The differences in the sizes only roughly illustrate the intensity of the electronic servicescape dimensions on "attractiveness" as a characteristic for creating appealing electronic insurance service experiences.

Visual informativeness

One of the most fundamental nuances of visual informativeness in the context of *attractiveness* refers to a tendency to lighten the electronic service environment. In this regard, visual informativeness in the context of attractiveness indicates *the means of bringing lighter, livelier, and more customer-friendly elements to the electronic service environment*.

Even though a general conception about the nature of insurance business reflects, for instance, conservativeness, and seriousness, the empirical results indicate that (electronic) insurance services do not necessarily have to be boring or deadly serious. Instead, lively, cheerful, and even playful elements can be included in the electronic servicescape as the citations below indicate:

> P11: Makes a boring impression [traditional example], that's true, so those [novel example] are sort of playful looking but still a more pleasant looking site.

> P17:Why do insurance sites need to be heavy and dreary, they can also include some fun.

> P16: Why should there be such masses of text where the language is jargon like in the first box where you started of... couldn't they also in Finland add this kind [novel example], not everything has to be so grave and fervent. Insurance doesn't mean it has to be that way.

The empirical results also reveal that interviewees associated *customer orientation* (i.e. customer-friendliness) of a service provider with "visual informativeness" in the context of attractiveness. In this regard, the "insurance cover evaluator", and "lighter" appearance

in general, were perceived a felicitous approach for bringing insurance matters closer to customers' mindset as can be interpreted through the following citations:

> P4: ... in my opinion that ["insurance cover evaluator"] is quite successful, in a way it pretends that you don't have to read all those things, instead you realize something by doing yourself, as you're moving something [an object or a character] into your insurance. Probably it's easier for people to think that now I'm putting my car into the basket, compared with starting to read about it.
>
> P16: ...you experience insurance as something boring, so this would be one way to bring it closer to the consumer.
>
> P3: For sure anyone who has not used often rather uses the one on the right [novel example]... it's more... popular... it sort of talks to you as a human being... this is more friendly and perhaps more consumer oriented.

Continuing the discussion presented in chapter 7.2 referring to the characteristics of the novel electronic insurance service environment *customer orientation also includes a learning aspect*. In this regard, the empirical results suggest that it is easier and more attractive to introduce insurance matters to, for instance, youngsters and children, with the light, clear, and interesting appearance, and thereby, prepare them for the future already before the need of insurance becomes urgent and acute for them. This argument is established through the following citations:

> P15: ... if I had 10-year-old kids, those pictures [novel example] might work in that I would go through with the kids what insurance is. Here [traditional example] I couldn't get them involved that's for sure. And I experienced just that when my older daughter moved away from home, she didn't have a clue about insurance.
>
> P19: You can, I would think some young, 18-year-old, who is used to using a computer and is moving away from home and is in need of the first insurance, could be that it would be easier for him or her to map out the information playfully on the Internet, instead of having some aunty call this person who's almost still a teenager and would just be talking away, and then on the [phone] he would just go okay, not knowing what he just bought. So at least it helps to comprehend what it is you just insured.

On the other hand, learning about insurance by increasing the visual informativeness of the electronic insurance servicescape to improve its attractiveness, was not perceived to be targeted to young customers only. Instead, the empirical results reveal that older customers, although naturally not all, might be enthusiastic about operating in a more visual electronic insurance servicescape, as well. This argument is established through the following citations:

P17: ... for a [young person] it is definitely easier with such a clear, clear and somewhat more interesting appearance to like, get information, to get interested in insurance.

P16: It discourages me, so it's also not an age question.

P14: Right. As an older person I can say, I'm probably the oldest one here, so I wouldn't read that [traditional example]. Even though I read a lot, but I just wouldn't feel like... I'd rather use that one [novel example].

From the perspective of the electronic servicescape, the connection between the "visual outlook" dimension and attractiveness becomes evident. The interviewees paid attention especially to the role of "illustrative attributes", such as colors and pictures, in improving the attractiveness of the electronic insurance servicescape, and encouraging customers to operate in it. The citations below support these arguments:

P6: ... yes, the right one entices more to read it and to get into it because it's visually more appealing. Colors and so forth.

P14: ... all these symbols are quite clear [novel example]. And you'll find more information from them when you move along... it would be nice to think about building up an insurance coverage together with the family, if you have such a site ["insurance cover evaluator"], even children would have a good time.

In addition to "visual outlook", the empirical results indicate that visual informativeness in the context of attractiveness was strongly reflected by "information" presented on the Web. Especially the role of "organizing attributes" (i.e. volume and structure) was perceived essential by the customers.

Information volume refers to the amount of information available for the customers on the Web environment. The empirical data reveals that too much information was perceived as depressing and unattractive by the interviewees. Instead, short and concise logic in presenting the information was preferred by the interviewees as the last of the following three citations citation establishes:

P10: ... if those pictures were a bit more boring or matter-of-fact, it would definitely top the left one [traditional example] which I wouldn't have the energy to read, it would make me tired right away, I wouldn't even try. Hopeless.

P18: ... if they put a lot of jargon on the first page already, it can discourage you a bit, in looking for information.

P14: ... think very carefully about what to put there. That it's short and sweet and gives an answer to whatever is the issue.

Concerning *information structure*, the empirical results indicate that pure text without any highlighting or organizing elements is not a preferable solution in making the electronic insurance servicescape more attractive from the customers' point of view, in fact, it is just the opposite. In addition, it reminds the customers of the traditional logic of presenting insurance information through masses of text with a small font as is expressed through the following citation:

> P15: ... this one on the left seems more interesting [novel example]. That one [traditional example] is only text whereas this other one, you [novel example] can start searching for more information by yourself step by step. That is [traditional example] boring looking, looks just like the small print, which is normally included in the insurance terms.

All in all, the empirical results show that "visual informativeness" generally increases attractiveness of the electronic insurance servicescape. In addition, it seems to be possible to bring insurance matters closer to customers' mindset, and in that sense, make them more appealing to the customers with the help of "visual informativeness".

Functionality

In addition to referring to trustworthiness, the empirical data indicates that *functionality* of the electronic services can be considered as an essential feature of characterizing the attractiveness of the electronic insurance servicescape as well. From the perspective of the electronic insurance servicescape model, functionality is especially referring to the "transactions" dimension. Thus, *functionality* indicates *the extent of electronic services working properly in order to get customers attracted to use them*.

The empirical results reveal that while performing electronic transactions, (e.g. buying insurance, or reporting a claim) too demanding and complex transaction process, even though functional in terms of technology, may be perceived unattractive by the customers. In that case, customers may be reluctant to continue operating in the electronic servicescape. These insights are supported by the citations below:

> P9: ... does it make sense to make such a form which needs to be filled in in advance if no one is able to do it? If there is too many and too complicated questions, then it's just the same to ask them per email and get the answers at some point.

> P4: This one [novel example] probably gets like ordinary, or just anybody, any person to do it. If it were terribly complicated, you would just look at the first page and go like, okay great.

Increasing visuality of the electronic insurance servicescape is important from the perspective of attractiveness but it alone is not enough. Electronic services should also be functional in order to get the customers attracted in using them as is established through the discussion above. Functionality especially refers to the real electronic transactions such as buying and reporting a claim.

All in all, as the discussion of this sub-chapter suggests, *visual informativeness*, however, seems to *play the most crucial role in making the electronic insurance servicescape (more) appealing and attractive*. In addition, *attractiveness, in turn, plays a very crucial role in creating appealing service experiences in the electronic insurance servicescape*. This argument is elaborated further in the next sub-chapter while the causal relationships between clearness, trustworthiness, and attractiveness are discussed.

8.2 Relationships between the experience characteristics

In the previous sub-chapter the conceptual nature of the characteristics creating appealing electronic insurance service experiences was elaborated. However, I have not yet said much about the dynamics between these characteristics, in other words, how and to what extent they are related to each other.

In this sub-chapter this issue is discussed and the causal relationships between the constructs described (chapter 8.2.1). In addition, the integrating phenomenon between the experience characteristics is introduced and discussed in chapter 8.2.2.

8.2.1 Causal approach

Figure 36 provides an answer to the question raised in the beginning of this chapter order to guide the data processing. In order to refresh the memory the question raised to facilitate the data analysis was: "*what kinds of characteristics indicating the creation of appealing electronic service experiences can be discovered from the empirical interview data?*"

Clearness as a construct is derived from the empirical data as such since the interviewees used terms 'clear', 'unclear', or directly, 'clearness' to a large extent while characterizing the dimensions of the electronic insurance servicescape in chapter 7.3 as well as the descriptive characteristics of traditional and novel electronic insurance service environments in chapters 7.1 and 7.2. In my opinion, *clearness* as a construct is somewhat comprehensible and ordinary to the customers. Therefore, discussing the above mentioned terms while characterizing how the customers perceive the scene on the computer screen

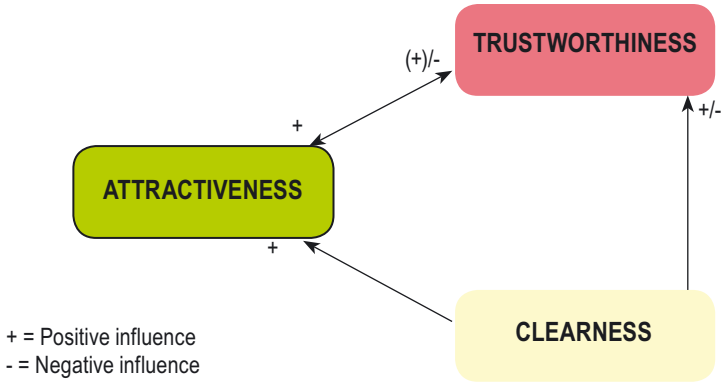

FIGURE 36. CAUSAL RELATIONSHIPS BETWEEN THE EXPERIENCE CHARACTERISTICS

is understandable. However, as stated earlier *clearness is not a totally new concept created through this study, but the conceptual nature of the term "clearness" is approached from a different and novel perspective, which is applicable for the context of the study.*

Similarly as clearness, *trustworthiness* is derived from the data as such. On the other hand, trustworthiness, conceptually referring to the prior literature on electronic services, was one of the preliminary themes for discussions during the interviews (see appendix 4). Therefore it is understandable that customers directly used the term "trustworthiness" in their discussions. However, as is established through the discussion in chapter 8.1.2, *the definition of trustworthiness used in this study differs from the prior definitions*, and thereby, trustworthiness as a concept is approached from a novel, more extensive view point.

Unlike clearness and trustworthiness, *attractiveness* as a construct is not derived from the empirical data as such. In case of clearness the operational key words that facilitated the development of the construct were 'clear' and 'unclear', which both basically directly determine *clearness*. Similarly, in case of trustworthiness the key word was 'trustworthy', which directly determines *trustworthiness*.

Attractiveness is derived from the empirical data by discovering the expressions that indicate the *extent of how appealing the phenomena observed in the electronic servicescape are perceived* to be by the interview participants. In that sense, the key words comprised, for instance: "appealing", and "pleasant" of which neither word-for-word determines attractiveness. However, my opinion is that both terms can clearly be interpreted as characterizing attractiveness as a phenomenon.

Moreover, *attractiveness can be considered as an outcome of clearness and trustworthiness*, to *some extent* as is indicated in the Figure 36. By this I do not mean that attractiveness would be fully determined through clearness and trustworthiness. This argument is also clarified through the discussion on the conceptual characteristics of attractiveness

in chapter 8.1.3. However, from the perspective of the dynamics between the three concepts characterizing the creation of appealing electronic service experiences through the electronic insurance servicescape, *attractiveness is clearly influenced by clearness*, *and trustworthiness*. In the following sections the causal relationships between the discovered three experience characteristics (clearness, trustworthiness, and attractiveness) are discussed.

Clearness and trustworthiness

The empirical results indicate that *clearness increases the extent of trustworthiness of the electronic insurance servicescape* perceived by the interviewees. The impact of trustworthiness on clearness is especially reflected through "visual outlook" and "information" dimensions of the electronic servicescape. This argument is supported by the citation below:

> P16: But on the other hand something that clear and simplified adds more to the credibility that having a huge pile of information, from which you have to find the essential.

On the basis of what is discussed about the characteristics of traditional and novel electronic service environments (see chapters 7.1 and 7.2) it can be argued that *clearness refers more to the novel electronic insurance service environment*. However, the characteristics related to *clearness*, and indicated through the novel approach *may also have decreasing impact on trustworthiness*. For instance, in case of *selling orientation* the empirical data suggests that focusing too strongly on advertising discounted prices of distinct insurance products on the Internet, might decrease trustworthiness perceived by the customers. The following citation illustrates the above said:

> P3: Then there's that last one, "buy now and save 25 %" .... Trust might be quite nonexistent at that point. Like now you save [novel example].

Since clearness may have both positive and negative influence on trustworthiness, the relationship between clearness and trustworthiness is indicated with both + and – symbols in the Figure 36. In addition, the empirical results do not reveal that trustworthiness would have an impact on clearness. Therefore, the arrow between these concepts (Figure 36) goes from clearness to trustworthiness only.

Clearness and attractiveness

As discussed in chapter 8.1.3 attractiveness can be defined as *the extent of how appealing and convenient the electronic insurance service is perceived by the customers*. In this regard,

especially the role of "visual outlook" dimension of the electronic insurance servicescape model is emphasized. The empirical results show that using light and lively colors, instead of heavy and grim colors, on the Web *increases clearness* perceived by the customers, as well as *attractiveness*. In addition, visualizing information in general, for instance, through "insurance cover evaluator" -like solution *may increase attractiveness as well as clearness*. The following insights of the interviewees support these arguments:

> P16: ... [how] negative effect this kind of greyness or other depressing tones have, which then in a way emphasize the heaviness that's connected to it... so the heavy issue could be made lighter with visual aspects and the right colors.
>
> P17: So that it doesn't look too heavy.
>
> P14: I think this ["insurance cover evaluator"] was clear, the basic starting point that they tried to create. To define the insurance need for a family, what kind of insurance cover is recommended. For that this was really excellent. It was simple, you just needed to throw the pieces into the right places and you had your answer, what kind of insurance coverage you should have or your family should have.

The positive influence of clearness on attractiveness was also reflected through "information" and "interactive features" dimensions of the electronic insurance servicescape. In this regard, the empirical results propose that *better clearness* (e.g. finding the desired piece of information or transaction, knowing where you are, and what you are doing) *also increases attractiveness* perceived by the customers. This argument gets support from the citation below:

> P4: And then exactly the fact, that as far as possible, there shouldn't be anything extra on the page, so that you don't need to filter everything first, things you don't need... that it only has the essential, so for example those big headings on the right side [novel example], in a way you don't have to look at anything else where as this other one [traditional example], you pretty much have to look at all of the [text].

Referring to what is discussed above, the empirical data suggests that the causal relationship between clearness and attractiveness is established. Thus, the positive influence of clearness on attractiveness is indicated with + symbol in the Figure 36. However, the empirical results do not seem to support that attractiveness would affect clearness. Therefore, the arrow between the concepts goes from clearness to attractiveness only. Hence, further research is needed to be able to better explain the relationship between attractiveness and clearness.

Attractiveness and trustworthiness

Concerning *the relationship between attractiveness and trustworthiness*, the empirical data indicates that *both have an impact on each other*. As to the impact of trustworthiness on attractiveness, the empirical results, however, indicate that the relationship is not so directly related to the dimensions of the electronic servicescape. Instead, it *refers more to a brand and image of a service provider*. This phenomenon is discussed also in the earlier literature (see e.g. Gounaris et al. 2005; Hwang and Kim 2007). The empirical results indicate that *when the brand of the service provider is well-known and trustworthy, it could increase the attractiveness* of services offered in the electronic servicescape. This argument is established through the following citation:

> P18: ... I felt that if the one on the left [novel example] would be a well known brand, it would make a trustworthy impression. If it were a company which you didn't know properly, it might be slightly suspicious somehow, because there are all kinds of vague sites.

On the contrary, the empirical data proposes that attractiveness has an impact on trustworthiness, although the empirical results do not support the insight that attractiveness would simply increase customers' perceived trustworthiness towards the electronic service environment. However, the following statement of a focus group respondent indicates that when it is clearly noticeable to the customers that a service provider has put effort to designing electronic services and service environment, it increases customers' trustworthiness towards the electronic services and electronic service environment:

> P14: ... sells or, or awakens some trust that they've made [novel example] an effort compared to that one [traditional example] that just listed a long list of things.

Further, rather than indicating positive impact, the empirical results suggest somewhat neutral impact of attractiveness on trustworthiness of the electronic insurance servicescape. By neutral impact I am referring to, for instance, the interviewees' insights into the "insurance cover evaluator" service concept from the attractiveness point of view. In this regard, the empirical results propose that constructing a service or services in the electronic servicescape to be more appealing and lighter (i.e. attractive), although might not increase trustworthiness, does not at least decrease the trustworthiness of the customers towards the electronic insurance servicescape. The citations below support these arguments:

> P7: In my opinion this format [doesn't] reduce the trustworthiness because this ["insurance cover evaluator"] is after all a sort of an information search service. So in my opinion the trustworthiness doesn't suffer, at least not in this format.

> P12: Yes. But probably many people get the first impression, that what an earth is this ["insurance cover evaluator"], a doll house game, but then when you see what information you get after playing around, it's real facts after all.

On the other hand, naturally not all the customers are enthusiastic about operating with somewhat playful elements when insurance issues are concerned. Again referring to the "insurance cover evaluator", the empirical results reveal that *attractiveness*, as it is discussed in the context of the study, *might have a negative impact on the trustworthiness* the customers feel towards the electronic insurance services as well as the overall electronic servicescape. As the former citation below illustrates, the information delivered through the "insurance cover evaluator" might be perceived as reliable and convincing but the "playful" way by which the information is produced might be perceived disturbing by the customers, and thereby, this chain of events might *decrease the degree of trustworthiness*. The latter citation reflects the same phenomenon but from the perspective of selling-orientation referring to novel approach on designing electronic insurance service environment which was discussed in chapter 7.2:

> P3: I trust the information. But somehow that ["insurance cover evaluator"] still eats away at the credibility. Like when you're placing [people] to an apartment building.

> P1: Well, that also gives the impression, that that right one [novel example] is a selling kind, that there's almost no information there, it's just like take it from here, you get it easy and it's irrelevant what these contain as long as someone wants it.

All in all, trustworthiness has a positive impact on attractiveness, which is indicated with + symbol in the Figure 36. However, the impact of attractiveness on trustworthiness of the electronic insurance service environment is rather neutral than positive, which is indicated with + symbol surrounded by brackets in the Figure 36. Attractiveness might also have a negative impact on trustworthiness, which is indicated with – symbol in the Figure 36.

To conclude the discussion on the dynamics between the experience characteristics (i.e. clearness, trustworthiness, and attractiveness), it can be argued that all the three discovered concepts have an essential explanatory role in characterizing the creation of appealing electronic insurance service experiences from the customers' point of view. However, referring to the empirical data and the above presented discussion it is justified to suggest that *attractiveness can be perceived as the most fundamental concept for creating appealing electronic insurance service experiences, since the other two concepts are determined by it to some extent*. Further, following the prior literature, attractiveness embraces the aspects referring to pleasure (and playfulness). In the next chapter the above presented discussion

is elaborated further to describe the integrative phenomenon between the discovered experience characteristics.

8.2.2 Integrative approach

On the basis of the discussions on conceptualizing the experience characteristics in chapter 8.1, a phenomenon connecting all the three characteristics can be identified. In this regard, the empirical data indicates that *visual informativeness* is a common conceptual sub-category for all the three discovered experience characteristics. Thus, this study suggests that *visual informativeness is a crucial phenomenon in explaining the customer-friendliness approach on designing electronic insurance servicescape* (Figure 37).

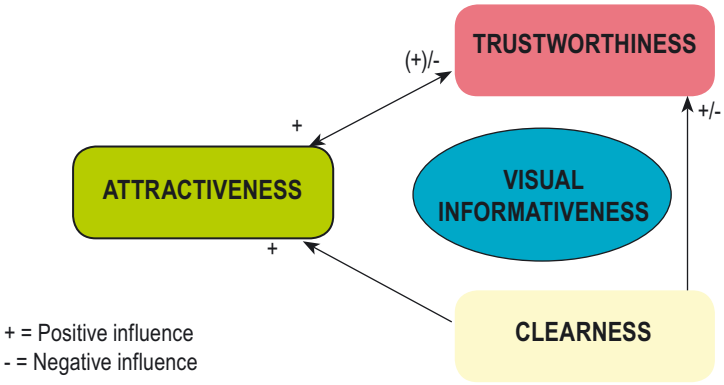

Figure 37. Integrative phenomenon for the experience characteristics

Several arguments supporting the essential role of visual informativeness as the general explanatory characteristic depicting customers' insights into the design of a customer-friendly electronic insurance servicescape can be established on the basis of the empirical data. *First of all*, the discussions on the descriptive characteristics of traditional and novel electronic service environments (see chapters 7.1 and 7.2) reveal that even though large amount of information in the electronic service environment creates trust, and thereby is preferred by the customers, it also creates confusion among the customers.

In this regard, *visual informativeness* may provide a felicitous solution for presenting the information in a more appealing (visual) form, and thereby decrease the amount of written information to some extent, but still maintaining the trustworthiness and informativeness of the service environment. The "insurance cover evaluator" service concept

is referred to as a concrete example of the phenomenon in the focus groups. These arguments are supported by the following citation:

> P18: And then I thought that if you don't know exactly, what kinds of insurance products there are, you could take the test ["insurance cover evaluator"] so that you could find out, if there is some insurance you should take which you're not even aware of [and since] you don't necessarily find it from the insurance company's site or notice that you should have that.

Second, processing insurance information, which is often perceived complex and abstract in the electronic servicescape, is most probably even more difficult for inexperienced customers who are unfamiliar with insurance matters. These kinds of customers may comprise, for instance, young adults about to start their lives away from their childhood homes as well as older people unfamiliar with using computers and/or the Internet. In addition, youngsters still living with their parents but about to move out in few years are potential customers in the future. The empirical data revealed that *visual informativeness might be a solution for making insurance matters more comprehensible for inexperienced customers as well as getting them more interested in insurance-related matters*. The citations below give support to these arguments:

> P17: that educational aspect brought to my mind, that any young person who hasn't gotten insurance yet, or is just about to take out insurance, well of course [it's] of course easier with that kind of clear and more interesting appearance to get information easily, to get interested in insurance.

> P15: ... But young people are not terribly interested in the whole business of insurance. They don't know anything about insurance. So this ["insurance cover evaluator"] would be excellent for some ninth graders in an educational sense. This would interest them [more] than if that kind of a form would be put in front of them. I'm sure they would get interested.

> P16: Exactly for those kids who are about to leave home, so in a way getting ready also for these types of things, these ["insurance cover evaluator"] are really important things.

Third, the empirical data reveals that the *visual informativeness also generally makes it easier, more interesting, and more appealing to make oneself familiar with insurance-related issues*. In addition, the empirical results indicate that *visualizing information is a sign of better customer orientation of a service provider*. These arguments are illustrated and supported by the citations below:

P12: ... Yes. But probably many people get the first impression, that what an earth is this ["insurance cover evaluator"], a doll house game, but then when you see what information you get after playing around, it's real facts after all. That it really leads to, in quotation marks, to the issue and hard facts in a nice and pleasant way.

P10: Yes this ["insurance cover evaluator"] as a way of presenting things is sort of contact friendly, one could say that it's pleasant to look through them, you feel like you have enough energy to go there and look. And even read these tips. So not bad at all.

P16: ... you experience insurance issues as boring, so this would be one way of taking some, to bring them a bit closer to the consumer.

And fourth, as the empirical results suggest visualization is preferred to be limited to informative services such as searching for information, and introductive and descriptive services (e.g. "insurance cover evaluator"). Otherwise, it might have a decreasing impact on trustworthiness of (a) electronic insurance service(s) and the electronic insurance servicescape as a whole. However, it was also visioned by an interviewee that in the future visualizing does not necessarily have to be limited to concern informative services only, but visual logic might possibly be utilized for facilitating the making of transactions, such as buying insurance, to some extent:

P4: ... that you're moving things into a basket, why not use such a ["insurance cover evaluator" logic] could be used in a way to built a certain insurance and you need different [components], since you will not take all of them anyway [components] necessarily. Some young person does [not] necessarily take the liability insurance to the home insurance... so you can different components, you have for example a row of buttons here, and then you like move them to the [shopping basket]. That's the same idea [simplified]. Can basically be used anywhere.

All in all, the empirical data indicates that visualization is a especially feasible solution in making the insurance information more appealing for the customers. However, looking into the future, the empirical data also proposes that visualization might be utilized more extensively also in designing electronic insurance servicescape in the future, for instance, as a facilitating element in the purchasing process.

8.3 A theoretical model for designing a customer-friendly electronic insurance servicescape

Now I have come to the phase in which the analyzing process of the collected empirical research data (i.e. focus group interviews) is almost completed. Since I am dealing with qualitative data I cannot argue that the analysis will be unambiguously completed. Instead, I would rather propose that the analysis of the empirical data is comprehensively processed by following the selected theoretical and empirical guidelines of the study.

In this sub-chapter the discussion on the empirical evaluation of the developed artefact is concluded by integrating the most crucial results of the empirical research. By this I am referring to the *electronic insurance servicescape model* and *characteristics creating appealing electronic insurance service experiences*. Electronic insurance servicescape illustrates the composition of the electronic service environment from structural point of view, and the three service experience characteristics indicate customers' viewpoint to the design of a customer-friendly electronic servicescape. By combining the structural view point with customers' experiences, *a theoretical model for designing a customer-friendly electronic insurance servicescape* is suggested as the most fundamental theory development result of this study (Figure 38).

In the model the blue clouds indicate that the discovered concepts are (mainly) derived through the electronic servicescape model. The blue clouds also illustrate the inclusion of customer-friendliness approach in the design of the electronic insurance servicescape as a whole by indicating what kinds of experiences the electronic servicescape provokes among customers.

From a conceptual point of view Bitner (1992) has suggested that '*servicescape*' refers to *the service environment in which the service is experienced by a customer, and/or in which the customer and the service provider interact*. Even though I agree with Bitner in finding her discussion particularly applicable for determining the structural elements of the physical service environment, the composition of the service environment indicating how the distinct elements are related to each other and constructed as an entity, does not become clear.

In addition to discovering the conceptual dimensions of servicescape in the electronic insurance service context, this study suggests how the distinct dimensions of electronic servicescape are structured as an entity. In this regard, *electronic insurance servicescape* introduced in chapter 7.4 *refers to the scene, which customers desire to see on the (computer) screen* indicating *the structure of electronic service environment*.

Further, the characteristics creating appealing electronic insurance service experiences (clearness, trustworthiness, and attractiveness) introduced in chapter 8.1 (see also Figure 38) *reflect the insights of the customers about what kinds of phenomena increase their inten-*

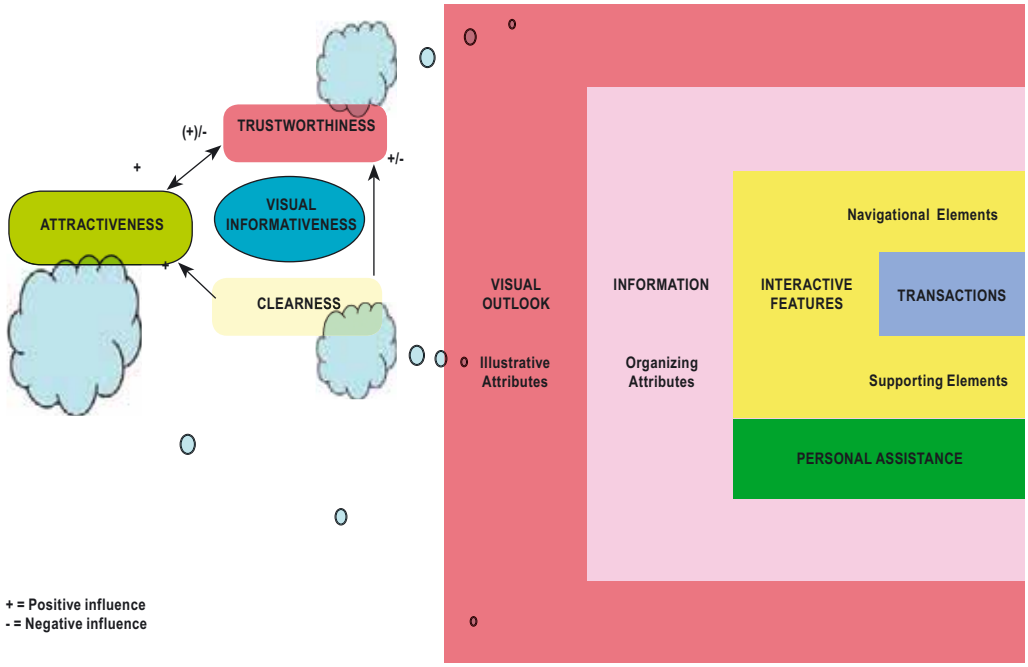

FIGURE 38. A THEORETICAL MODEL FOR DESIGNING A CUSTOMER-FRIENDLY ELECTRONIC INSURANCE SERVICESCAPE

tions to operate in the electronic insurance servicescape. In this regard, the most crucial role of the suggested experience characteristics is on extensively depicting *how the electronic insurance servicescape can be designed in a customer-friendly way* (i.e. by reflecting customers' insights and needs).

To conclude, one of the most fundamental arguments of my study is that *it is possible to make a service previously perceived as complex and confusing by the customers (e.g. insurance) more appealing and comprehensible*. This argument refers especially to visualizing the information (e.g. "insurance cover evaluator"), and more generally, including livelier, and more illustrative elements, which are closer to a customers' mindset in the design of the electronic insurance servicescape.

However, as every customer is different, and since my study is more or less qualitative in its nature, I am not stating that this argument could be generalized to concern all the customers operating in the electronic insurance service environment. Instead, *I argue that by following the logic of visualizing the information customers that are motivated to operate in electronic service environment* (also those who are inexperienced with electronic insurance services), *are provided with better chances to get themselves more familiar with insurance matters in the service environment based on the self-service logic, in a more appealing and comprehensible way*.

As the discussion on electronic insurance servicescape and the discovered experience characteristics has been mainly referring to theoretical and empirical research approaches, it is also essential to consider a practical side of the matter. In this regard, managerial implications on applying the results of this study are provided in the next sub-chapter to encapsulate the essential practical message of the study.

8.4 Managerial implications on applying electronic insurance servicescape

In the beginning of the study (chapter 2.2) the fundamental objectives of academic research were discussed. In this regard, prior literature has noted that in addition to being valid, academic research should we *relevant* (e.g. Van Aken 2005). Earlier research also addresses that academic research should also contribute to practical purposes (e.g. Susman and Evered 1978; Benbasat and Zmud 1999). In line with this, design science paradigm possesses a particularly strong intention to apply research results to the practical purposes (e.g. Arnott 2006). In my opinion, business studies should also possess a practical approach, in addition to an academic approach. Thus, the research results would be easier to apply to business purposes. Moreover, the results would be of a greater value in general.

Referring to the above said, I shall discuss how the most crucial empirical results of this study can be better applied to practical business purposes. More precisely, in the following sections I will provide a concise step-by-step guideline for interpreting a theoretical model for designing a customer-friendly electronic insurance servicescape introduced in chapter 8.3.

So, how to get started and how does it work? First of all, the structure of the electronic insurance servicescape that is depicted on the right side of the model acts as a starting point. From managerial point of view, it indicates *what dimensions should be included in the servicescape and how they are related to each other*. In addition, the structure of the servicescape illustrates what the customers desire to see when they enter into the electronic service environment.

In this regard, "visual outlook" is the first layer that the customer faces in the electronic servicescape. Visual outlook is the most crucial dimension of the servicescape and should be considered in relation to all other dimensions. At this point service managers (or designers) should consider what kinds of "illustrative attributes" (e.g. colors, pictures, animations) are appropriate to be used.

"Information" is the second layer of the electronic insurance servicescape. In addition to "visual outlook" it can be considered as the second most crucial dimension of the elec-

tronic insurance servicescape. At this point service manager's (designer's) task is to consider how the information provided to the customers in the electronic servicescape should be organized in terms of quantity (amount of information) and structure. This is particularly important in the insurance context since insurance-related information is based on juridical clauses to some extent, and thereby, the information content may be difficult to understand for the customers. In this regard, this study suggests that *visualizing the information, as it is done in the "insurance cover evaluator" service concept, is a feasible solution*.

Third layer of the electronic insurance servicescape is "interactive features" that incorporates "navigational elements" and "supporting elements" as sub dimensions. From customers' point of view it is particularly important that they are provided with the needed resources for interactive communication with a service environment based on self-service logic. Concerning "navigational elements" it should be considered how the links and paths should be constructed in the electronic servicescape in order to be as illustrative and comprehensible as possible. In addition, interactive "supporting elements", such as help menus, should be attached to the electronic services, and electronic servicescape as a whole, to ensure the fluent and supported electronic self-service operations.

Even if the comprehensive navigational and supporting elements would be available, a customer, while operating in the electronic servicescape (e.g. searching for information or making transactions), may face such extensive problems that he has to contact a service provider. Hence, *a possibility to versatile real-time "personal assistance" should be constantly available*. Phone and e-mail are preferred as contacting manners by the customers, but this study also recommends a chat service as a customer-friendly and real-time way to contact a service provider. Moreover, *contact options should be presented clearly and visibly*.

Concerning "transactions", most of the above discussed recommendations are encapsulated here. Transaction processes should be clear, illustrative, and supported. In addition, options for personal assistance should be constantly and visibly available.

The experience characteristics complement the structural remarks of the electronic insurance servicescape by indicating a "customer's voice" in the designing work. In this regard, I think it is quite obvious that electronic service environment should generally be *clear, trustworthy*, and *attractive*.

What was unforeseeable, and new to the insurance business, was that *visual informativeness associates with all the three experience characteristics to some extent, also trustworthiness. Thus, it is suggested as the most fundamental integrative phenomenon between them*. And, here comes another "surprise" that service managers (designers) within insurance field should consider: *emphasizing attractiveness, if executed in an appropriate way (e.g. "insurance cover evaluator"), does not mean that trustworthiness would suffer*. In this sense, service managers just need courage and innovativeness to think "outside of the box" while designing and developing electronic insurance services and servicescapes in the future.

9 CONCLUSIONS

In this study a phenomenon referring to designing a customer-friendly electronic servicescape in the context of complex services, has been explored. In this regard, insurance services were examined as an example of complex services. In terms of scientific paradigms this study embraces a multidisciplinary perspective by *merging service management and IS research paradigms into managing electronic services*. From service management point of view, service design, especially designing service environment (i.e. service facility design) is embraced. However, since the phenomenon is examined in electronic environment, research on information systems (IS) was found relevant to be included in the scope of the study. Especially *Web site usability* and *technology acceptance* of customers were found applicable theoretical approaches for the study.

Taking the methodological perspective, this *study combines the principles of abduction and design research*. Abductive logic indicates the crucial approach of the study on scientific reasoning (e.g. Kovács and Spens 2005), while design research principles describe the sequential and systematic (methodological) steps of conducting the study (March and Smith 1995).

General discussion on the essential phenomena within service management field is established in chapter 3. Chapter 4 extends the discussion to concern electronic service environment. The general nature of electronic services as well as the nature of electronic insurance services is conceptually determined. In order to characterize the electronic service environment, earlier research on Web site usability. Further, the general Web site usability discussion is applied to electronic insurance service context by conducting two pilot studies. On this basis *a preliminary framework for characterizing electronic servicescape* is proposed.

In chapter 5, taking the customer-friendliness perspective, discussions on service experiences from service management point of view, and customers' technology acceptance from IS research point of view were combined, and supported with empirical evidence referring to the "traditional versus novel typology" (chapter 4.4) and the developed "insurance cover evaluator" service concept (chapter 5.3). On this basis, the developed artefact (*preliminary framework for designing a customer-friendly electronic insurance servicescape*) was introduced.

The functionality of the developed artefact was then empirically evaluated. In this regard, the essential evaluation methods were introduced and discussed in chapter 6. The developed artefact was evaluated by using focus group interview technique as a data collection method. Data analysis was conducted by applying the principles Grounded Theory (GT) coding procedure (e.g. Strauss and Corbin 1990).

On the basis of prior theoretical discussion, preliminary empirical observations (i.e. pilot studies and the development of the "insurance cover evaluator"), and the primary empirical data (focus group interviews) the crucial empirical findings are generaetd. First of all, *a structural model of electronic insurance servicescape* (chapter 7) indicates the essential conceptual dimensions and the structure of the electronic insurance service environment. The dynamics between the dimensions are depicted through the model as well.

Second, the "customer's voice" is added to the structural model by suggesting *the conceptual characteristics for indicating the creation of appealing electronic insurance service experiences* in chapter 8. These comprise: clearness, trustworthiness, and attractiveness. In addition, the dynamics and the integrative phenomenon ("visual informativeness") between the discovered concepts are described.

And third, integrating the structural model of the electronic insurance servicescape and electronic insurance service experience characteristics, *a theoretical model for designing a customer-friendly electronic insurance servicescape* is suggested in chapter 8.3. This model actually encapsulates the empirical fingings of the study.

The study is concluded in the next sub-chapters. In chapter 9.1 the study is evaluated according to the criteria denoted by earlier literature. The implications and contributions of the study are discussed from theoretical (chapter 9.2), methodological (chapter 9.3), and practical (chapter 9.4) view points. Finally, directions for future research are suggested and visioned in chapter 9.5.

9.1 Assessing the study

Evaluating the study and its results is an essential part of a research report since it indicates the extent of how well the goals set for the study by a researcher are met after all. Earlier literature has suggested several general attributes through which the value of the study can be assessed. In this regard, *reliability* and *validity* (e.g. Koskinen et al. 2005; Denzin and Lincoln 1994; Fossey et al. 2002; Patton 2002; Franklin and Lowry 2001) as well as *generalizability* and *credibility* (e.g. Patton 2002; Bagozzi and Foxall; Gortner and Schultz 1988) seem to be among the most acknowledged attributes for assessing the quality of the study.

Following the insights of Koskinen et al. (2005, 254–255) *validity* refers to the extent to which research results indicate what they are supposed to indicate, and *reliability* refers to the fact that research results remain unchanged independent of the interpretation of distinct researchers. Within qualitative paradigm validity, as Janesick 1994, 216) felicitously has stated, refers especially to 'explaining' by indicating the extent of "whether the given explanation fits a given description". *Generalizability* indicates that research results can be utilized in many various contexts (e.g. Bagozzi and Foxall 1995; Gortner and Schultz 1988). Following the insights of Patton (2002) *credibility* generally refers to the objectivity of the research data, used methods, and a researcher himself.

Moreover, within the field of management research Gummesson (1991) has introduced a criterion framework for assessing qualitative studies. Gummesson's framework contains nine quality criteria which comprise (p. 160–162; 183–185):

1. A research project should be conducted in a manner that allows *the readers to draw their own conclusions*
2. Researchers should present their *paradigm*
3. The research should possess *credibility*
4. The researcher should have adequate *access*
5. A statement should be made regarding the *validity* of the research
6. The research should make a *contribution*
7. The research process should be *dynamic*
8. The researcher should have *commitment* and *integrity*
9. The *researcher's personality* is of crucial importance

Gummesson's (1991) framework is certainly appropriate for assessing qualitative studies within the field of management and marketing scholars. Since design science paradigm is embraced, in addition to qualitative approach, and thereby, the study also possesses a clear practical focus, I find Gummesson's framework somewhat loose, and thereby, inapplicable to be used for evaluating this study as such. However, the framework and other criteria discussed above provide useful guidelines for finding the appropriate logic for evaluating this study.

Concerning the criteria suggested by Gummesson (1991), he agrees with other literature when it comes to *validity*, and *credibility*. Validity can be considered as an applicable attribute for evaluating both qualitative and quantitative studies. Thus, I find it appropriate to be discussed also in this study. Similarly, credibility is considered a crucial criterion in the context of this study. In addition to these, presenting a paradigm, presenting contributions, and researcher's personality suggested in Gummesson's framework are found particularly useful from the perspective of this study.

Presenting a paradigm is of utmost importance in all types of academic studies since researcher's understanding of prior theoretical discussion within the area he is involved in, is argued. Thus, it is considered appropriate to be discussed in this study since it justifies the need for the study. Also *presenting contributions* of the study is particularly essential. By arguing the contributions of the study a researcher establishes how his study increases knowledge on the investigated phenomenon. Within business studies, discussing contributions from various perspectives is particularly crucial while assessing the study. Therefore, contributions of the study are paid an extensive attention to. When it comes to discussing *researcher's personality*, my opinion is that in studies that have their main focus on qualitative approach it is essential to consider that the researcher's voice is noticeable since many choices, especially concerning empirical data analysis, are made subjectively by a researcher.

Concerning other criteria, reliability and generalizability are particularly applicable attributes for assessing quantitative studies since they are often based on producing numerical data as a result. Thus, accurate and verified conclusions can easily be drawn. However, qualitative studies are usually based on subjective interpretation of (a) researcher(s), and research samples are typically small.

This is the case also in this study. First of all, the subjective influence on the interpretation of the results is confessed. Second, research sample of the primary empirical data (i.e. focus group interviews) is small. Thus, limitations of the study from reliability and generalizability view points are recognized. Although the purpose of this study is not on contending that the gained results are generalizable to all service contexts, I find it, however, useful to discuss whether the results of this study are *generalizable* to some extent. However, for the reasons mentioned above reliability is found somewhat irrelevant attribute for assessing this study as a whole.

Since this study embraces a design science paradigm, it is essential to consider its nature also in the end of the study. In this regard, I suggest an additional criterion to be used while assessing this study since it embraces design science paradigm. Within that area, prior literature has emphasized the importance of *relevance* in academic studies (e.g. Van Aken 2005) indicating that research results should also benefit the practical business community. Thus, I suggest relevance as an applicable and important criterion for assessing the study of this type.

Based on the argumentation presented above, I suggest that *seven criteria* are especially valuable *for evaluating* a study within the field of business research that embraces a design science paradigm. These criteria comprise: validity, credibility, presenting a paradigm, generalizability, researcher's personality, relevance, and presenting contributions. In the following sections the study is assessed according to these criteria.

Concerning the *validity* of the research from the general point of view, my opinion is that describing the essential phenomena of the research by thoroughly conceptualizing and illustrating them in the research report ensures and also improves validity. Further, it can be stated that through the qualitative research paradigm a possibility for conceptualizations and characterization is usually better than in studies embracing quantitative research logic since all the concepts appearing in the (multi-item) measurement scales cannot be thoroughly explained to the research participants, which increases a possibility for misunderstandings. In this regard, my opinion is that qualitative studies usually possess a greater ability in producing deeper understanding on the investigated phenomenon than quantitative studies (see also Patton 2002, 14).

In this study, comprehensive conceptualization and modeling of the investigated phenomenon is performed to ensure deeper understanding. In order to ensure the validity of the empirical research setting, visual (image-based) data (e.g. Mason 2005) is used to depict the investigated phenomenon to the focus group participants. The empirical data is reported by using citations, which clearly and directly indicate the nature of the data. In addition, tables and illustrative figures are used to improve the richness of the description. Moreover, I argue that abductive logic enhances the validity of the study since it is based on continuous dialogue between theoretical and empirical worlds, and thus, theoretical and empirical discussions are constantly in line with each other from the beginning to the end.

From *credibility* point of view, the correctness of the data is ensured by using direct citations derived from the empirical data as well as tables and illustrative figures to enhance the transparency of the data for the readers. Further, not only the opinions of the interview participants congruent with the approach of the study were presented while discussing the results. Also contradictory opinions are revealed for readers throughout the discussion on the empirical results as established in chapters 7 and 8.

According to earlier literature, *triangulation* improves the credibility of a study (see e.g. Janesick 1994). In this regard, data triangulation, method triangulation and theory triangulation are performed in this study. Concerning data triangulation, three different types of data were used to carry out this study. First, (qualitative) usability evaluation data was collected to conduct the pilot studies reported in chapters 4.3.1, and 4.3.2. Second, (quantitative) survey was organized to evaluate the "insurance cover evaluator" service concept (chapter 5.3), and thereby, provide this study with valuable preliminary knowledge on applying playful and enjoyable elements to electronic insurance service context. And third, focus groups were arranged to collect the primary empirical data of the study. Referring to the above said both qualitative and quantitative methods are used (method triangulation). From theoretical point of view a multidisciplinary approach combining

the discussion from the fields of service management and IS research. In this sense, theoretical triangulation is practiced.

Presenting a paradigm refers to clearly discussing the selection of theories and models essential to the study as well as describing the pre-understanding of the researcher. In general terms, the paradigm of this research is presented by comprehensively discussing the earlier literature complemented by empirical observations. On this basis, the research gap this study aims to fill for its part, is clearly articulated and established. Concerning conceptual and theoretical discussions, I have attempted to clearly and constantly indicate the choices that had been made as well as the reasons for making the choices (e.g. why a certain concept, framework, model, or theory is preferred).

From *generalizability* point of view, the results of qualitative studies may not necessarily be as generalizable as the results of quantitative studies since the samples are small and the data analysis is reflected by a subjective interpretation by a researcher to some extent. Despite these limitations to the generalizability I argue that the empirical results of this study can be generalized to concern other services than insurance as well. I justify my argument through two insights.

First, the complex nature of insurance services sets more requirements to the electronic service environment in terms of ease of use. Thus, the characteristics of electronic insurance service environment should be considered even more carefully than in some other contexts to make the environment easy and appealing to use for the customers. In this regard, I argue that the basic nature of "a structural model of electronic insurance servicescape" as well as "a theoretical model for designing a customer-friendly electronic insurance servicescape" can be well generalized to other service contexts possessing simpler nature. And second, the suggested experience characteristics (clearness, trustworthiness, and attractiveness) are general concepts, which may be perceived differently depending on a situation, and a customer. Hence, I argue that the experience characteristics as well as the model for designing a customer-friendly electronic insurance servicescape can be generalized in other service branches as a general guideline by which a service experience is individually determined by the customers.

In my opinion, discussing *researcher's personality* in the research process is peculiar to a great share of qualitative studies to some extent since data analysis is often characterized by subjective interpretation by the researcher. In addition, reflecting the personality of the researcher is also a matter of reporting technique. In my study, I have tried to comprehensively express my personal opinions on conceptual, theoretical, methodological, and other relevant decisions made throughout the study in a way that the *researcher's voice* is revealed to readers.

Concerning *relevance* of the study, I suggest that it shall be assessed from two different approaches which comprise: *practical relevance*, and *relevance to society*. First, and more

concretely, design science paradigm possessing a clear practical focus, in addition to academic focus, aims to develop and construct artifacts (concepts, models, frameworks, and instantiations) to solve an organizational problems (e.g. March and Smith 1995; Hevner et al. 2004). In this regard, managerial implications play an essential role while evaluating the development work. This characteristic is recognized also, and thereby, concrete managerial implications on applying the developed artifact (i.e. a theoretical model for designing a customer-friendly electronic insurance servicescape) are provided (chapter 8.4). In this regard, it is justified to state that this study and its results are relevant from the practical point of view. Second, since the electronization of services as well as other kinds of activities and the general use of electronic services will certainly increase in the future, I argue that this study is also relevant from a societal viewpoint.

As Gummesson (1991) states, a research should make (a) *contribution(s)* by increasing knowledge from theoretical, methodological, and practical view points, as well as by dealing with relevant problems. As theoretical, methodological, and practical contributions are extensively discussed in their own sub-chapters below, they are not elaborated here. In addition, relevance is discussed above as an individual criterion since I found it particularly useful and important approach for studies possessing design science paradigm.

To conclude, I argue that the most fundamental objectives set for this study in the beginning are reached. The evaluation discussion above supports this insight. In the next three sub-chapters the most essential implications of this study are discussed followed by visioning the future research paths with which the study is concluded.

9.2 Theoretical contributions

From a theoretical point of view, the study makes many remarkable contributions to earlier research. Although a multidisciplinary approach combining the fields of service management and IS research is possessed in the study, the streams of service management and IS research are first considered distinctively to make the presentation clearer for readers. After that, the discussion from the multidisciplinary point of view is presented according to the logic of the study.

Within the field of service management research, this study contributes to the both conceptual and theoretical discussion in several ways. First of all, this study takes part in the discussion on the applicability and relevance of IHIP framework to characterize the nature of services. In this regard, recent research has showed vigorous critique on the issue by arguing that IHIP framework cannot be generalized to concern all types of services in all types of situations (e.g. Lovelock and Gummesson 2004; Edvardsson et al. 2005).

In addition, the whole ideology behind the IHIP framework emphasizing how services differ from goods is claimed old-fashioned. Instead, a new kind of approach called "service-dominant logic" (S-D) is discussed as a novel tendency to approach the overall service discussion (e.g. Vargo and Lusch 2004; Edvardsson et al. 2005; Lusch et al. 2007). It addresses that (service) value is co-created in collaboration with a customer and a service provider. In addition, value is seen to be determined by a customer while consuming a service (value-in-use).

I agree with the above discussion on considering S-D logic as the most recent stream of service discussion in general level. In this sense, S-D logic could have been a usable theoretical approach also for this study at least from the perspectives of depicting service characteristics as well as characterizing service experiences to possess customer-friendliness approach.

Despite this, IHIP framework is defended in this study by establishing that while discussing services *IHIP framework should not be forgotten*, even though new tendencies emphasizing more customers' role in characterizing service features, justifiably have gained ground in general service discussion. Instead, this study suggests that the *IHIP framework is a feasible and comprehensible approach in characterizing the essential nature of electronic services in general (as well as electronic insurance services) from managerial point of view*. Moreover, in the context of complex services which are somewhat abstract for customers, such as insurance, I argue that IHIP framework provides favorable (theoretical) prerequisites for discussing the nature of services at a general level. However, it is confessed that in order to specify the discussion to concern a certain service provider, time, or field of service, S-D logic, as well as value-in-use approach, provide appropriate guidelines for further discussion.

Further, as this study establishes IHIP ideology does necessarily not have to be considered from the perspective of differentiating services from goods only. Instead, this study argues that the ideology may be used, for instance to acquiring a preliminary understanding on service types which are somewhat narrowly discussed in the earlier literature. In this regard, the *characteristics of complex services and insurance* have been only scarcely discussed in the extant service literature. *This study puts effort to extensively characterizing and determining the essential nature of complex services and (electronic) insurance services*. Insurance services are characterized in general, but the main attention is paid especially to characterizing the nature of electronic insurance services. In this sense, IHIP model is applied. In addition, a cube model by Järvinen et al. (2003) originally developed to classifying different types of financial services from strategic point of view is used as a basis for constructing a classification model for electronic services (see chapter 4.1.4). Finally, the nature of electronic insurance services is also specified from the perspective of service

experience discussion by using the *experience realms* model by Pine and Gilmore (1998 b) (see chapter 5.1).

From service design point of view the extant literature is contributed by *refining the conceptual discussion on distinguishing between service development, NSD, service innovations, and service design*, which are often discussed somewhat vaguely in earlier literature as is established through the discussion in chapter 3.2.1. Moreover, referring to earlier research on service design and service development, the *importance of designing the service environment* (i.e. service facility design and servicescape) to increase the attractiveness of the overall service experience perceived by customers, has been a somewhat neglected area of discussion even though it is stated to be a particularly important aspect from customers' point of view (e.g. Bitner 1992; Ramaswamy 1996; Fizsimmons and Fizsimmons 2006). Agreeing with this, the study contributes to the above mentioned research gap by thoroughly discussing the design of electronic service environment in the context of complex services, such as insurance, and thereby, increasing both theoretical and practical understanding on such phenomenon.

Service experiences and experiences are also discussed somewhat interchangeably in the service literature (e.g. Carbone and Haeckel 1994; Johnson et al. 2000; Edvardsson et al. 2005). This discussion is contributed by pinpointing the essential differences between service experiences and experiences from conceptual point of view. In this regard, *conceptual discussion on services, experiences, and service experiences is sharpened*. In addition, emphasizing the creation of creating experiences to customers is suggested to indicate customer-friendliness of a service provider to some extent.

On the other hand, "customer-friendliness" as a phenomenon could have been discussed by referring to value-in-use approach, instead of service experiences approach. However, as the artifact developed through the study (i.e. a theoretical model for designing a customer-friendly electronic insurance servicescape) is a model, not a real-time service solution, it cannot yet be "consumed". Service experience approach was preferred since it, as it is discussed in this study, indicates customers' impulsive, but not necessarily so concrete and exact, insights, which provide guidelines for the actual development work in the future.

From the perspective of IS research, contributions are made especially within the field of Web site usability. In this study, the earlier discussion on the attributes through which the usability of the Web sites can be evaluated is applied to electronic insurance service context in which usability and ease of use of the service environment is even more important than in some other service fields due to the complex nature of insurance as a service. In this regard, *four features (content, appearance, navigation, and interactivity/assistance) are established to be appropriate while evaluating the usability of complex electronic services such as insurance*.

Concerning customer's technology acceptance (TAM), recent studies in the Web context have addressed the essential role of playfulness and pleasure in encouraging users (i.e. customers) to operate in the electronic environment (e.g. Moon and Kim 2001; DeWulf et al. 2006; Huang 2005). T*his study agrees with the above discussed and argues that pleasure and ease of use should be considered as applicable features determining customers' intentions to use electronic insurance services*. This argument gets support from empirical observations (e.g. "insurance cover evaluator") on designing electronic insurance services (see chapters 5.3, 7, and 8).

As was stated in the beginning of this sub-chapter and as the discussion above establishes, this study does not only contribute to a single stream of research. Instead, the investigated phenomenon is approached from a multidisciplinary perspective. As one of the fundamental theoretical implications of this study I argue that possessing a multidisciplinary approach enriches the overall discussion of the study since more perspectives to an investigated phenomenon are considered and discussed. In this study service management discipline and IS research discipline are integrated to indicate *managing electronic services*. This is not a brand new concept and this study is certainly not the first study in which service discussion and IS discussion are performed in parallel. However, this study strengthens the conception that *from research point of view it is not necessarily useful to draw lines between the distinct research disciplines that are too strict*, just the opposite.

From multidisciplinary perspective, the study makes several contributions. First of all, prior theories previously discussed mainly in the context of physical services are refined and applied to electronic service context. In this regard, this study suggests that electronic servicescape can be characterized by combining the logic of the servicescape introduced by Bitner (1992) in the context of physical services with the attributes indicating Web site usability. On the basis of empirical investigation on this statement is established, and *a structural model of electronic insurance servicescape is developed*. The model characterizes the essential conceptual dimensions and the structure of the electronic insurance service environment.

Second, this study contributes to the theoretical discussion on *appealing electronic service experiences* especially in the context of complex services, such as insurance. In this regard, it is suggested that electronic service experiences can be theoretically depicted by combining earlier discussion on service experiences (e.g. Johnson et al. 2000; Stuart and Tax 2004; Edvardsson et al. 2005) and technology acceptance of the customers in the Web context (e.g. Moon and Kim 2001; DeWulf et al. 2006) the customer-friendliness approach is incorporated. As a result of empirical investigation, *the crucial concepts characterizing the creation of appealing electronic insurance service experiences (clearness, trustworthiness, and attractiveness) are established*. Ultimately, *a theoretical model for designing a customer-friendly electronic insurance servicescape provides a holistic theoretical view on*

service design in electronic environment. This can actually be considered as one of the most fundamental theoretical contributions within the field of managing (i.e. designing) electronic services.

Referring to the above said, earlier research on usability as well as on information quality (e.g. DeLone and McLean 2003; McKinney et al. 2002) and quality of electronic services (e.g. Parasuraman et al. 2005; Gounaris et al. 2005; Fassnacht and Koese 2006) has suggested several distinct characteristics and a few frameworks for describing the nature of electronic services. To my knowledge, peculiar to most of these types of studies is that they are conducted by constructing a multiple-item (quantitative) scale for measuring the validity and generalizability of the selected attributes derived from prior theories. However, these types of studies do not tell much about how the concepts are associated with each other from a structural point of view, and how the electronic service environment is constructed as a whole. Nor is customer-friendliness discussed from the structural and more holistic perspective.

Encapsulating the discussion on theoretical implications, this study extensively contributes to the service design discussion from a structural point of view where there has been a clear research gap. The customer-friendly structure of electronic servicescape in the insurance context is established by describing *how the different (conceptual) elements are constructed as an entity, and how customers' insights (i.e. service experiences) can be incorporated into the design of the electronic servicescape*.

9.3 Methodological contributions

Concerning methodological point of view, the most fundamental contributions refer to combining design science paradigm and abductive logic for the purpose of service research. *Abductive logic* as a research approach is, to some extent, utilized by researchers within service management and marketing studies (e.g. Holmlund 1997; Järvelin 2002; Heinonen 2004b; Antikainen 2007). However, it is not as common approach as deductive logic or inductive logic, which can be considered as the most extensively used approaches in service management and marketing disciplines. *Design research approach*, in turn, reflecting the design science paradigm is mainly used as a logic for describing the research process in studies on IS research. However, earlier research (e.g. van Aken 2005; 2004) has suggested that design research logic can be employed in the field of management and organization studies as well. This study argues that *design research methodology is also applicable for service research, as is established in the following sections*.

In general terms, combining abductive logic and design science paradigm can be considered a functional solution since abduction is suggested to be included in the design research approach (e.g. Vaishnavi and Kuechler 2004). Furthermore, the purpose of this study was to develop and model a novel approach on designing a customer-friendly electronic insurance service environment by also taking the needs of the practical (insurance) business life into account. Thus, it can be stated that the objective is in line with both design science paradigm that aims at producing more applied and practically-oriented (scientific) information (van Aken 2005, 20) and abductive logic emphasizing creativity and new insights (e.g. Kovács and Spens 2005).

Referring to the above said, this study makes an essential contribution by illustrating a novel logic for approaching research phenomena within the field of managing electronic services. The logic followed in this study is found favorable and useful to be employed especially in studies that focus on designing and developing a new product and/or service solutions. The "tight and evolving" research setting (e.g. Dubois and Gadde 2002) allows constant dialogue between prior theories and empirical observations, and on the other hand, creative use of different research approaches and methods throughout the study. In my opinion, creativity is, however, one of the most crucial capabilities in order to be able to "generate something new".

Further, earlier literature has addressed that (practical) relevance should be considered as an important feature of studies within business area (van Aken 2005) in order to be able to benefit the business purposes as well. In line with this, design science paradigm is established to possess a clear orientation on solving practical problems (e.g. Hevner et al. 2004). From methodological point of view this study establishes that design science paradigm, even though mainly used in IS research context so far, is a particularly applicable approach to be used also in business research context to increase the relevancy of the study, and thereby, benefit the larger audience.

This study also contributes to the discussion on assessing the study. In this regard, seven criteria for assessing the study that possesses design science paradigm in the context of business studies are suggested. These comprise: validity, credibility, presenting a paradigm, generalizability, researcher's personality, relevance, and presenting contributions. To my knowledge, design science paradigm as such is new to service research field, and therefore, there are no existing guidelines for assessing the quality of this type of study. Thus, it is justified to argue that, this study can be seen as a pioneering work on providing groundings for future research.

Moreover, *this study introduces an innovative logic for structuring the research report*. A logic often described and discussed in books on research methodology contains *introduction, theory part, methodology part, empirical research and results part*, and *conclusion* (e.g. Rudestam and Newton 1992; Glatthorn 1998). In this regard, the structure of the

research report is somewhat deviant since structuring the content of the report is mainly based on the five phases of design research paradigm (awareness of problem, suggestion, development, evaluation, and conclusion). Although the structure of the report is different all the essential areas of a research report are still included.

Concerning the empirical research setting this study contributes to the discussion on focus groups by depicting a creative logic to include image-based approach (e.g. Mason 2005) in the focus group interview method. In that way it is aimed at being able to better describe the research setting to interview participants. Further, by ensuring the research participants' comprehensive understanding of the investigated phenomenon also improves the validity of research. Thus, this study establishes that image-based approach is useful especially for qualitative studies in which the data collection is conducted in interaction with research participants.

Finally, the last notion refers to the ways the developed models are presented in academic research reports. To my experience, a traditional and somewhat general way to construct a theoretical model is referring to "arrows and boxes" style. However, following one of the main themes of this study, namely visualization, the message I would like to deliver through my study is that *also theoretical models can be visualized*. They do not necessarily have to be "playing with boxes, lines, and arrows" only in order to be credible and informative. Naturally opinions are many, but I suggest that *visualization may even make the models and figures more comprehensible*.

9.4 Practical contributions

Presenting practical contributions is established as an essential part of studies following design science paradigm. This study possesses a clear practical focus since it, in addition to theoretical objectives, aims at providing practical guidelines for the future development of electronic insurance services and the design of electronic insurance service environment. In this regard, I argue that the essential results of this study can be realistically utilized also for practical business purposes. The concrete guidelines on applying the empirical findings of the study (structural model of electronic insurance servicescape, and a theoretical model for designing a customer-friendly electronic insurance servicescape) are already discussed in chapter 8.4. Therefore, I will not discuss these guidelines again but I shall take a more general approach on considering the practical implications of this study especially to the insurance sector.

According to my personal experience and the conducted research on Finnish insurance markets, it can be stated that Finnish insurance markets generally still rather follow

the traditional matter-of-fact and somewhat conservative approach on offering electronic insurance services as well as designing the electronic insurance service environment. This has been the dominant logic since the rise of the electronic insurance services. However, in other bigger markets (e.g. UK, and Germany) the characteristics referring to the novel approach, such as using lively colors and (animated) pictures, have already emerged to a larger extent for some few years.

As stated in the introduction chapter, Finnish insurance companies have already been adding entertaining elements to their advertisement and marketing. Few larger companies have also taken preliminary steps towards a novel approach in designing their electronic services. For instance, Pohjola, the second biggest non-life insurance company in Finland (also one participator in both eInsurance projects) launched "insurance selector" electronic service concept on the Internet for consumers in July 2006. At this point, it is essential to note that the logic of "insurance selector" concept by Pohjola is based on "insurance cover evaluator" service concept developed in the first eInsurance project and extensively discussed in this study as an example of visualizing information in the electronic insurance service environment.

Referring to the above discussed, it is justified to state that, although indirectly, this study and the research activities conducted through it also have influence on the birth of the "insurance selector" service concept. In fact, I argue that the "*insurance selector*" by Pohjola can be considered as the *first Finnish electronic insurance service concept in which "visual informativeness" is utilized*. According to the people working at the Pohjola the customer feed back on the "insurance selector" has been particularly positive. Thus, a novel approach on designing electronic insurance services and electronic insurance servicescape established in this study also has practical evidence in terms of functionality.

Moreover, TR model (e.g. Parasuraman and Colby 2001) provides a justification for emphasizing ease of use as well as elements referring to pleasure (and playfulness) in designing the electronic (insurance) service environment. Following the principles of the model in practice, the discomfort of customers in being unable to use electronic services due to their complexity might cause customers to feel embarrassed and incapable. Thus, their reluctance towards using the electronic services might be increased. As the empirical results of this study indicate, electronic service environment is, on the other hand, perceived as a comfortable service option since customers can be faceless while trying to absorb insurance-related information as well as making electronic transactions (e.g. buying or making a claims report) often experienced as complex. In this regard, *increasing visuality of the electronic insurance service environment certainly is a feasible solution for service designers* since it brings insurance matters closer to customers' mindset.

Along with the duration of the both eInsurance projects people from the insurance business field claimed that their time and (financial) resources are simply insufficient to

conduct any theoretical research for the basis of operational work on developing their (electronic) services. In this regard, this study provides the insurance sector with a feasible conceptual and theoretical guidelines for practical development work of a customer-friendly electronic service environment. By this I am referring to *the structural model of the electronic servicescape, and a theoretical model for designing a customer-friendly electronic insurance servicescape environment*. I argue that these two models provide useful guidelines for the use of the service designers within insurance field as is discussed in chapter 8.4.

To conclude, this study establishes that a matter-of-fact and conservative approach on offering electronic insurance services as well as designing the electronic insurance service environment is not the only option. In fact, it seems to be an outdated approach as such since it lacks customer orientation. Instead, novel approach emphasizing livelier and somewhat lighter elements in designing (e.g. using colors, pictures, animations etc.) of the electronic insurance services and service environment, but still maintaining the trustworthy nature of insurance, is a solution for increasing customer-friendliness since the physical service contact is missing, and the customers have to rely on their own skills. This is the most fundamental practical message I want to deliver to the insurance field through my work.

Ultimately, through my study I wish to encourage people working among the development of electronic services in insurance companies to take bigger and more confident steps towards a novel approach on designing electronic insurance services and service environment, and thereby, make electronic insurance service environment more comprehensible and appealing to the customers. After all, service managers should recognize that customers are the ones who determine the value of a service in today's world.

9.5 Future research directions

The representatives of the positivistic research paradigm often question the value of qualitative research in terms of the usefulness of the results since they are often not generalizable. As stated above, positivistic researchers usually test the already existing theories through developed hypotheses. However, somebody has to develop the theories to be later tested with the means of positivistic (quantitative) research. In this study, the essential conceptual understanding on the investigated phenomenon was reached, and several theoretical models were developed.

After a comprehensive development of conceptual and theoretical discussion, frameworks and models, one interesting option for the future research would be to test the

developed concepts theoretical models indicating the structure of electronic (insurance) service environment with quantitative methods. Quantitative research might provide cues for refining the developed models as well as confirming the used concepts and the dynamics between them as also expressed in chapter 8.2.

In addition, testing the applicability of the models in other context would possibly give more value for the development work. For instance, business insurance sector would be a relevant and also natural research target since the business logic clearly varies from the consumer business logic. It would be interesting to examine whether a service solution developed for a consumer segment would be applicable in business customer sector to some extent. Further, throughout the study I have been discussing insurance as a complex service. However, on the basis of the results of the study I cannot argue that they are, without any exceptions, generalizable to concern all the complex services, such as other financial services. Thus, it would be interesting to examine more carefully the applicability of the results in other complex service contexts as well as in other service contexts in general.

From usability point of view it would be interesting to test the applicability of the proposed framework for evaluating the usability of electronic insurance services (see chapter 4.5) in other contexts. In addition, further research is recommended to confirm and refine the proposed attributes.

Along with the increasing rate of using electronic insurance services, an interesting research topic would be what kinds of services can be transferred to electronic environment in general, and what types of services still require personal service contact. Referring to this, another interesting point is whether or not visualization has influence on service providers' capabilities being able to offer newer types of electronic insurance services for the customers. For instance, the results of this study indicate that visualization, although mainly referring to informative service in this study, might as well be utilized for other types of services, such as online buying.

From service design point of view further research is needed to contribute to the design of electronic service environment. By this I am not referring to "bits and pieces" approach by only identifying the distinct characteristics for Web site usability of the quality of electronic services. Instead, a more holistic view is needed to be able to perceive the electronic service environment as an entity.

Further, this study suggests a model for designing a customer-friendly electronic insurance service environment by combining discussions on service design ('servicescape'), Web site usability, service experiences, and customers' technology acceptance. From structural point of view earlier literature on servicescape and Web site usability is discussed. From customer-friendliness point of view, discussions on service experiences and technology acceptance of customers are combined. In this regard, further research (both qualitative

and quantitative) is recommended to examine the relationships established in the above mentioned model.

As customer's role in co-creating and determining the value of service is emphasized in the recent service discussion (service-dominant logic) it would be interesting and useful to investigate the design of electronic servicescapes through this approach in the future as well. However, I suggest that employing S-D logic would be more useful if there were existing real services, which could be examined. However, there is no doubt that such services will not be reality in the near future. At least I strongly believe so.

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APPENDICES

APPENDIX 1.

eInsurance research project entity in a nutshell

In order to describe the background and circumstances under which the development activities were conducted, a research project called "eInsurance" through which the "insurance cover evaluator" was developed, is introduced and shortly discussed in this section. As the name of the project already reveals, the focus of "eInsurance" project was on examining electronic insurance business and electronic insurance services.

The original idea for the "eInsurance" research project was raised during the spring 2002 by two persons (Raija Järvinen and Anne-Mari Järvelin) who, at the time, were acting as professors at the University of Tampere. I got involved in the planning of eInsurance project in autumn 2002, and later worked as a project manager and researcher in the project.

The reasons for starting the project were many. First, there was, and still is, a clear lack of research in utilization of electronic service environment (e.g. the Internet) within the field of insurance business. Second, there was also lack of publications about electronic insurance service solutions. Third, representatives from Finnish insurance sector indicated a clear need for practical knowledge about the utilization of the Internet as a service channel for insurance service purposes. Therefore, negotiations with insurance companies were really fluent and uncomplicated, and it was easy to get them interested in participating in the project. Also the representatives of software business shared the same interest, and were delighted to join the consortium. In other words, starting the joint research project was of the interests of all the parties from both academic world and business field, and thereby, building up a strong multi-competent consortium was relatively easy.

The original idea for "eInsurance" project was to investigate electronic insurance business from three distinct perspectives: risk management, business strategies, and law (juridical issues). However, building up the research team and acquiring enough research resources (i.e. researchers) turned out to be too challenging a task within the time limits that were set for the project. Mainly therefore, but also due to other reasons, such as new research partners entering the project (e.g. VTT Technical Research Centre of Finland), the main focus of the project was restructured and simplified. The new structure emphasized electronic services (not e-Business) and service concept development more but the focus was also technology utilization-oriented. The main objective of the project was formulated as: "*to create new concept utilizing new technology for electronic insurance business*" (Ahonen and Salonen 2005, 5).

"eInsurance" project got a positive funding decision from Tekes (Finnish Funding Agency for Technology and Innovation) in June 2003, and the project was executed during April 2003 and December 2004. "eInsurance" was conducted through research consortium constituted by two research partners, four corporate (business) partners, and the Federation of Finnish Insurance Companies (SVK). The research partners were University of Tampere (e-Business Research Center) and VTT Technical Research Centre of Finland). The corporate partners comprised two Finland's largest non-life insurance companies (If P&C Insurance Company Ltd. and Pohjola Group plc), and two software companies (Profit Software and Emillion). Profit Software is one of the Finland's leading software developers for insurance industry. Emillion is a small IT-house located in Espoo (Finland) which focuses on identity management in online corporate partnerships.

During the duration of the "eInsurance" project I was working as researcher and responsible project coordinator. In the project my personal research area comprised examining the insights of business-to-business customers, but also business-to-consumer customers, into the current state and the future of electronic insurance services. Since then, the focus of my personal research has shifted to consumer segment, as reflected by this dissertation.

The first eInsurance project generated a follow-up project titled "eInsurance – Novel Electronic Insurance Service". The second project was conducted during June 2005 and March 2007. In the "eInsurance2" project the idea of "insurance cover evaluator" was developed further. As a concrete development result service concept called "Safety Advisor" was introduced. In addition, "insurance cover evaluator" and "Safety Advisor" were combined as an integrated service concept named "Safety and Insurance Advisor". However, as the empirical research data in this study is referring to "insurance cover evaluator", and it was collected before the overall concept was introduced in March 2007, "insurance cover evaluator" service concept is used as an empirical example of developing electronic insurance services in the context of the study. On the other hand, since the identical logic is followed in both service concepts, and thereby also in the integrated service concept, describing the "insurance cover evaluator" can be considered as sufficient empirical example of the conducted development work.

Various results, in addition to the above mentioned service concepts, were gained through "eInsurance" projects. For instance, more than 20 scientific publications were published during the eInsurance projects. I will not go into details about the content of the publications but the research areas discussed in the articles comprised, for instance: service management and marketing, electronic services, risk management, technology management, human-computer-interaction (HCI) user-centered design, and jurisprudence.

As Tekes, during the past four or five years, has started to emphasize also research projects, which are not fully technology-oriented, also projects that are more business-oriented have nowadays potential to be funded by Tekes. The "eInsurance" project entity, especially the first project back in 2003, was, if not the first, but at least among the first research projects focusing on financial services sector. In addition, it was the first research project funded by Tekes ever conducted at the Tampere School of Business Administration (nowadays: School of Economics and Business Administration at University of Tampere). Thereby, it is justified to state that at the time "eInsurance" was a pioneering research project within its area of research.

APPENDIX 2. Conference article on the first pilot study

The Effect of Physical Distribution Channels on Online Distribution Channels in the Insurance Industry – An Examination of Electronic Insurance Services on the Internet

Richard WINDISCHHOFER[1], Aki AHONEN [2]
[1]Mag.r er.soc.oec. (Soc-Econ.), Researcher, Tampere School of Business Administration, richard.windischhofer@uta.fi
[2] M.Sc. (Econ.), Researcher, Tampere School of Business Administration, aki.ahonen@uta.fi, Tel: +358 3 215 7617, fax: +358 3 215 7214, Corresponding Author

ABSTRACT
This exploratory study investigates whether different types of insurance providers have different levels of ability to provide insurance products and services online. This question is approached by evaluating the usability of the Web sites of 25 insurance firms selected from the UK, the US, Germany, and Finland. Our findings suggest that the performance in Web site usability is little affected by the company's earlier distribution channel strategy. Instead, we suggest that the firm's country of operations is more relevant for the overall usability of Web sites. We also found that pure online insurance companies are more selling-oriented and traditional insurance companies are more service-oriented. Companies whose core business is not related to insurance showed the highest selling orientation in insurance services, but lack the understanding that insurance business is a comprehensive service.
Keywords: Insurance, Usability, Distribution Channels, Internet

1. INTRODUCTION

The development of trade of insurance products and services via Internet has been rather modest, when compared to other financial sectors, such as retail banking. Insurance companies, as well as private insurance customers have remained sceptical about the Internet as an effective distribution channel. One major reason for this attitude is the nature of Insurance business itself, which is rather different from banking business. In retail banking, a large share of the service mainly consists of the bank providing the customer with a platform for conducting rather frequent assisted or unassisted financial transactions, for which the Internet seems well suited.

In insurance, transactions after the initial purchase are rather seldom because what consumers are purchasing is more like a feeling of security in case of unfortunate events and therefore the largest share of the service is of intangible nature, which needs no frequent transactions [7]. Further, insurance transactions (e.g. product purchase, managing insurance policies, claim filing) are complex because rather large and detailed information is exchanged, often requiring interactive, personalized expert advice, which is difficult to provide through Internet [1;6].

Hence, the Internet has been mainly utilized for offering non-life insurance products (e.g. travel, car, home, and legal insurance) because product complexity is somewhat lower and transaction frequency is higher than for life insurance products. This research paper is focusing on evaluating the usability of non-life insurance firm's Internet Web sites.

For the purpose of this research, insurance firms have been categorized into three different types:

1) *Traditional insurance providers* – insurance firms such as Prudential (UK) and Allianz (GER), which have a traditionally strong physical distribution channel but which offer services now online as well.
2) *Online insurance providers* – pure online Insurance firms, which have been created only for the purpose to provide their products and services through the Internet, such as Esure (UK), or have been before the Internet only selling through telephone, such as Direct Line (UK). These firms do not own physical distribution channels.
3) *Idiosyncratic insurance providers* – providers of online insurance, which have grown out of mail-order firms, such as Karstadt Quelle (GER) or consumer goods retailers, such as Tesco (UK), which recently diversified into financial and insurance services. Firms of type 3 never owned a physical sales channel (at least not for insurance products and services) – but might have experience in selling other products online.

2. OBJECTIVES

Our main objective was to investigate whether Insurance firms with different distribution types approach the Internet as distribution channel differently.

We assumed that this difference is reflected in the usability of their Internet pages. Our main assumption was that traditional insurance firms (type 1) with a long culture of physical distribution channels possess weaker capabilities to offer their products and services through Internet than pure online insurance firms[1] (type 2), and which might be expressed in lower usability of their Web sites.

Idiosyncratic insurance providers (type 3) were included in our analysis to investigate whether they outperform type 1 and type 2 companies and whether they have a new approach to online insurance, from which the insurance industry could benefit.

Last, we assumed that traditional insurance firms would be more focused on providing comprehensive insurance service and that idiosyncratic insurance providers would be more selling – oriented.

[1] Weak Internet performance can also be the result of the firm's conscious strategic choice to focus on the physical distribution channel rather than the online channel.

The 25 companies we have chosen originate from the United States (US), the United Kingdom (UK), Germany (GER), and Finland[2] (FIN).

3. DISTRIBUTION CHANNELS

Distribution channels[3] continuously evolve and change in order to serve their markets best [11]. The Internet can be regarded as the most recent innovation that brought change to the distribution strategies for insurance products and services. While earlier, most insurance products and services were offered through physical sales channels such as by agents and brokers[4], the Internet has enabled insurance firms to offer especially non-life insurance products to consumers in alternative ways.

Therefore, numerous insurance firms have adopted a multi-channel strategy by offering their products and services simultaneously through their existing channels of sales agents or brokers, telephone sales, and the Internet. These multi-channel strategies reflect the general change of customer's purchasing patterns and reflect in particular a trend of customer's preference for multi-channel sourcing of products or services [2]. Cespedes and Corey [2, p. 75] point out "Customers may wish to buy a product through different channels at different points in time depending [...] how urgent a particular order is, or whether the purchase is an initial buy, a routine buy, or a modified rebuy". Travel insurances for example, are often taken out urgently before the start of a journey, and because they are of low product complexity, customers often perceive it as more convenient to purchase them via Internet.

In addition, the customer's choice of distribution channel is affected by his or her prior product knowledge and the frequency the product is purchased with. We assume that customers with prior knowledge about insurance products are more likely to purchase insurance through channels that do not offer face-to-face assistance. In order to provide access to Internet-based

[2] In Finland are no types 2 and 3 firms. The traditional insurers If and Pohjola are included to benchmark them with the international level of online insurance.

[3] Distribution channels can be defined as "networks consisting of interdependent actors involved in the process of making a product or service available for consumption or use" [11, p. 2].

[4] Insurance trade has been conducted for some decades now also through mail order, and telephone distribution but the share of these distribution methods relative to the overall trade volume of insurance products and services remains insignificant.

insurance not just to expert-like consumers but to a wider range of consumers, Internet Web sites need to feature high customer friendliness and usability that is compensating for the missing face-to-face contact physical channels are offering.

3.1 Resource-based perspective on channels

When firms perform certain business activities, they develop task-specific capabilities [9; 13; 3]. When entering a new set of tasks (such as a traditional insurance firm starting to offer its products and services via Internet; or a groceries retailer diversifying into insurance services), firms need to develop a new set of capabilities that allows them to perform well in the new tasks. Therefore, we assume that Insurance firms with different distribution channel histories and business activities have acquired different sets of capabilities, which might affect the company's ability to provide insurance Web sites with high usability.

4. USABILITY

The usability of information systems has become an important research subject in recent years, also concerning the usability of Web sites. From the consumer's perspective, usable products feature aspects of health, safety, efficiency, and enjoyment [10]. Further studies about usability include learnability, efficiency, memorability, errors, satisfaction [8], and aesthetics [5]. Van Laan and Julian [12, p. 6] define usability as "the practice of taking human physical and psychological requirements into account when designing programs and documents". In their opinion, the purpose of usability is to improve products and services and make them more intuitive for the user.

Hence, the goal of Web site usability is to provide what potential users would consider to be a successful experience [5]. According to Hennemann [4, p. 133], "Usability exists when the design of the system matches what the intended end users need and want, i.e. when systems operate in the way users expect them to work".

A corporate Web site with low usability may require users to find alternative methods to contact the company in order to do business, or to choose a competitor. Therefore, corporate Web sites are an important part of an organization's communication and distribution strategy and Web site usability represents a key success factor for companies that offer their products and services to consumers via Internet.

4.1 Variables of Web site usability

Approaching the concept of usability from the consumer's point of view, we have chosen from literature [2; 4; 5; 8; 10] 12 usability variables for our analysis of insurance Web sites. These usability variables comprise:

- *Efficiency* - Does the user save time by using the Web site?
- *Security* - Is data transfer through this Web site secure?
- *Informativeness* – What is the amount and quality of information displayed?
- *Aesthetics* - Does the Web site look "likable"?
- *Clearness* - Is the information clearly displayed?
- *Learnability* - Is it easy to learn to use the Web site?
- *Memorability* - Can the user find its place quickly after glancing away?
- *Supplementary services* - What additional useful services could the consumer get on this Web site?
- *Interactivity* - Can the user communicate with a company representative for example through chat or a 24h telephone help line?
- *Enjoyability* - Is it enjoyable to use this Web site?
- *Intuitiveness* - Is the firm able to imagine what its users want?
- *Assistance* - Does the Web site offer the user assistance?

5. RESEARCH METHODS

For this exploratory analysis, a total of 25 insurance companies from altogether four different countries were chosen and categorized into traditional (type 1), online (type 2) and idiosyncratic (type 3) insurance providers. The usability of these companies' Web sites was evaluated by using our list of 12 (unweighed) usability variables. First, a questionnaire containing 40 questions relating to one or more of the 12 variables was designed. Then, both authors independently evaluated all Web sites. To reduce the subjectivity of our results, five persons from the insurance field were analysing 3 randomly selected Web sites each.

Subsequently, the authors evaluated qualitatively each Web site again for approximately 30 minutes, discussing features of the Web sites, testing processes, and evaluating the Web sites again by using the 12 usability variables. The qualitative analysis was necessary because the small sample size and survey group could not lead us to reliable quantitatively derived results, even

though they were in accordance with our qualitatively derived findings.

6. PRESENTATION OF FINDINGS

The 25 companies we analysed can be distinguished into four different groups, with overall performance measures of "good", "fair", "poor", and "very poor". Our assumption that the firm's channel history would be relevant for performance in the online channel could only be confirmed for certain key variables, but not for overall usability, because the results within each type (type 1, type 2, and type 3) were too diverse. Compared by geographic origin, we only found a significant proximity of results within the group of UK insurance firms. Therefore, the results are presented in four tables that are based on the company's individual performance instead of their membership to either a distribution type or their membership to a certain country.

6.1 Web sites with "good" overall usability

As depicted in table 1, the leading group of insurance firms consists mainly of traditional firms, which come from two countries only, namely, the UK and Finland. These companies performed rather well in all usability criteria, especially in the categories of supplementary services, aesthetics, security, informativeness, and efficiency.

Table 1 Web sites with "good" overall usability

	If	NFU Mutual	Asda	More Than	Prudential	Pohjola	Esure
Country	FIN	UK	UK	UK	UK	FIN	UK
Company Type	1	1	3	2	1	1	2
Efficiency	+	++	+	+	+	+	+
Security	+	+	++	++	+	+	++
Informativeness	++	+	+	-	+	++	+
Aesthetics	++	++	++	+	+	+	++
Clearness	++	+	+	+	+	+	+
Learnability	+	+	+	+	+	+	+
Memorability	+	+	+	+	+	+	++
Supplementary Services	++	++	++	+	++	++	+
Interactivity	-	-	-	-	-	-	-
Enjoyability	+	+	+	+	+	+	+
Intuitiveness	++	+	-	-	+	+	-
Assistance	+	-	+	+	+	-	-

Legend: ++ good; + fair; - poor; - - very poor

Table 1 shows that in the criteria of interactivity, the leading firms performed poorly (like the rest the other groups). Features that increase the interactivity of a Web site need to be available to users whenever they might need them. However, most of the leading firms provided their users with telephone help lines open only during office hours. Because websites are open to users 24 hours a day and seven days a week, we believe assistance tools such as telephone help lines (only considered interactive if open 24 hours a day, seven days a week) and online chat (users can ask questions to a company representative via chat) should be available 24x7 as well.

6.2 Web sites with "fair" overall usability

Table 2 refers to the second group, which performed "fairly" in our analysis. The firms belonging to this group comprise three pure online insurance providers and one traditional insurance firm. The interactivity scores of most firms in this group were better than in the leading group, but because they either have poor informativeness, clearness, or just a rather "fair" overall performance, these firms had to be ranked in second place.

Table 2 Web sites with "fair" overall usability

	Cosmos Direct	Norwich Union Direct	Gerling	Esurance
Country	GER	UK	GER	USA
Company Type	2	2	1	2
Efficiency	+	+	+	+
Security	+	+	-	++
Informativeness	--	+	-	+
Aesthetics	+	+	+	-
Clearness	+	-	+	-
Learnability	+	+	+	+
Memorability	+	-	+	+
Supplementary Services	++	+	++	+
Interactivity	+	+	-	+
Enjoyability	+	+	+	+
Intuitiveness	-	+	++	-
Assistance	+	+	-	+

Legend: ++ good; + fair; - poor; - - very poor

Norwich Union Direct was a rather interesting case. The Web site performed very balanced because of its "fair" scores in almost all categories, especially impor-

tant being the categories of interactivity, assistance, and intuitiveness, which were an obstacle for most other firms of our analysis, even for those belonging to the leading group. However, two of the categories, where we consider good usability already as industry standard, namely, clearness and memorability, Norwich Union Direct scored only "poorly".

6.3 Web sites with "poor" overall usability

As depicted in table 3, this group consists of all distribution channel types. Within this group, we find the two traditional insurance firms from the US, and one online insurance from the UK, the US, and Germany. The idiosyncratic firms (type 3) are represented by the two UK groceries retailers Sainsbury's and Tesco.

Table 3 Web sites with "poor" overall usability

	AIG	GMAC Online	Direct Line	Sainsbury's	HUK 24	Allstate	Tesco
Country	USA	USA	UK	UK	GER	USA	UK
Company Type	1	2	2	3	2	1	3
Efficiency	-	-	+	-	+	+	+
Security	++	+	+	+	+	++	+
Informativeness	--	-	-	+	-	-	--
Aesthetics	+	+	+	++	-	-	+
Clearness	+	+	+	-	+	-	+
Learnability	+	+	+	+	+	+	+
Memorability	-	+	+	+	+	-	-
Supplementary Services	+	+	+	++	+	+	++
Interactivity	++	+	-	-	--	+	-
Enjoyability	+	+	+	+	+	-	+
Intuitiveness	-	-	-	-	+	-	--
Assistance	++	+	-	-	--	+	+

Legend: ++ good; + fair; - poor; - - very poor

Interestingly, the traditional-type insurance company AIG (US) scored very poorly in informativeness (because the amount and quality of information displayed is insufficient), but scored well in interactivity and assistance because it provides chat service and 24 hour telephone help line.

6.4 Web sites with "very poor" overall usability

The last category is comprised only of US- and German firms. Considering the distribution types, the group consists of three idiosyncratic firms, two online insurers, and the German traditional insurance firm Allianz.

The firms within this group scored poorly or even very poorly on several categories, especially informativeness, interactivity, and efficiency. As a result, enjoyability and intuitiveness (the company's ability to imagine customer's needs) was poor or very poor. However, most companies offered a fair level of assistance to their users (except Allianz).

The three idiosyncratic firms were placed into this category because they scored very poorly in informativeness, interactivity, and intuitiveness, which are important categories for comprehensive insurance service. These companies' ability was only sufficient for providing somewhat clear Web sites, but still, we perceived the enjoyability of their Web sites still as rather poor. Concerning the two online insurance providers in this category, their low ability to create usability in their (only) distribution channel makes us question their ability to survive as a business in long – term.

Table 4 Web sites with "very poor" overall usability

	Costco Insurance	Karstadt Quelle	Tchibo	Response Insurance	Allianz	Europa
Country	USA	GER	GER	USA	GER	GER
Company Type	3	3	3	2	1	2
Efficiency	-	+	--	-	-	-
Security	+	+	+	--	-	-
Informativeness	--	--	--	--	-	--
Aesthetics	+	--	-	+	+	-
Clearness	-	+	+	+	-	+
Learnability	+	+	+	+	-	+
Memorability	+	-	+	+	-	-
Supplementary Services	++	++	++	--	+	+
Interactivity	-	-	-	-	-	-
Enjoyability	-	-	--	-	-	-
Intuitiveness	--	-	--	-	-	-
Assistance	+	+	+	+	-	+

Legend: ++ good; + fair; - poor; - - very poor

The reason why Allianz (one of the largest European insurers) was not able to score better in the usability of their Web site might be, that the firm focuses extremely on their network of sales agents and tries to direct users through their Web site to local insurance offices (hence, Web users get only assistance for finding a sales office). However, the poor scores in all criteria (except aesthet-

ics and supplementary services) indicate that the firm is lacking the basic understanding that even if the Web site is not meant as distribution channel, the usability of Internet pages should be as high as possible.

7. DISCUSSION

For most usability criteria, the firm's distribution type might not be relevant. Instead, the country and market in which the firm is operating might play a greater role because insurance markets have their particular features.

The German market is based on physical distribution dominated by insurance firms' own agents but also has a relatively high share of distribution through brokers. The UK and US markets are dominated by a broker-based distribution system and therefore insurance firms in these markets have less hierarchical control over their distribution channels, which could mean more freedom to think about the Internet as an opportunity for offering insurance products and services. However, while the physical insurance distribution systems in the UK and US are rather similar, the usability of Web sites is significantly higher for UK firms.

We suggest considering the United Kingdom as the leading market for online insurance. Good Web site usability is not the exception in the UK, but is rather becoming a precondition to participate in the market.

Interestingly, one of the idiosyncratic firms, the UK groceries retailer Asda, was ranked among the top companies. More generally, the clearness of the type 3 firms' Web sites might be a result of their understanding how to sell products (of usually low complexity) to their consumers online, but to us it seems as if this clearness results more from the general lack of insurance-related information and services on these Web sites. Therefore, we conclude that most of the type 3 firms are lacking the insurance-related service thinking that is necessary for providing comprehensive insurance service.

The findings for type 2 firms (pure online insurance providers) suggest that they are rather selling oriented, but provide sufficient information about their products and services. Using the Web sites of the UK pure online insurance providers was quite enjoyable and entertaining, which showed that they were able to think outside the box of the rather conservative insurance business.

All type 2 companies have some affiliation with a traditional insurance firm. The majority of type 2 firms has been established by traditional insurance firms but is operating under an independent brand while others operate independently but use the brand of the parent company (e.g. Norwich Union Direct, daughter of Norwich Union). We assume that significant knowledge and expertise was transferred from the traditional to the online insurance providers, which helped them to gain a comprehensive understanding of insurance business rather quickly, considering their short history.

About type 1 companies, we assumed the ability to think "online" to be weaker than for pure online insurers. Surprisingly, most companies of the leading group were the traditional insurance companies (UK and FIN only). One explanation for the high competence of online thinking of these type 1 firms could be their ability of recognizing the needs of their customers, and that they operate in markets where the sophistication of services provided through Internet is rather high in general. However, the assistance on their Web sites was rather poor. One reason for it could be these firms' tradition to provide interactive services face-to-face through the physical distribution channel.

As depicted in table 5, our assumption that traditional insurance companies provide more comprehensive service on their Web sites than pure online- and idiosyncratic companies was confirmed. In most cases the service offering of traditional firms comprised managing insurance policies online, filing claims online and buying certain non-life insurance products.

Table 5 Selling and service orientation

	Type 1	Type 2	Type 3
Selling Orientation	Low	Medium	High
Service Orientation	High	Medium	Low

Five out of six type 3 firms were focused on selling insurances and provided no service such as filing claims online or managing insurance policies; neither was offered comprehensive information about insurance products. Therefore, they were categorized in table 5 as the most selling oriented and least service oriented firms.

Pure online insurance firms were in medium position, most firms showing a balance of service- and selling orientation. However, these firms need to improve interactivity, informativeness, and assistance.

8. CONCLUSION

Online offerings of insurance products and services need to become a more successful and customer friendly experience. While most insurance providers' Web sites fulfil good standards in clearness and security of data transfer, three critical success factors for Internet

pages can be identified, where good usability has not become industry standard, yet.

First, the most obvious lack of online insurance offerings is the low level of interactivity. Insurance firms should provide their Internet users with interactive services, such as online chat, and a 24x7 telephone help line that assists consumers in using the Web sites. We believe the level of online and telephone assistance needs to be raised significantly because consumers need to feel comfortable and be certain that when using online insurance, they will still have the chance to communicate with a real person, if needed.

Second, the lack of informativeness concerns every firm either because information quality, access, or font sizes are insufficient. Many firms do not offer any form of information in-between superficial product key features and insurance policy terms, leaving the consumer with no suitable marketing material that would offer information that is thorough enough but also easy to comprehend.

Third, in order to provide customer-friendly online insurance, customers should not just be able to purchase insurance on the Web but also to access their insurance policies online, and to file their insurance claims online, which up to date only few firms allow.

Almost all the examined companies had at least some of the usability features executed very well but none of the companies fulfilled *all* of the criteria for good Web site usability. Our final conclusion holds true for most examined companies: the direction is right but more effort to develop comprehensive online insurance service is still needed.

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APPENDIX 3. Conference article on the second pilot study

The Web Performance of Different Types of Online Insurance Providers – A Wake up Call to Traditional Insurance Providers

Aki Ahonen[1],
Richard Windischhofer[2]
[1] Tampere School of Business Administration, aki.ahonen@uta.fi,
Tel: +358 3 215 7617, fax: +358 3 215 7214, Corresponding Author
[2] Tampere School of Business Administration, richard.windischhofer@uta.fi

ABSTRACT

The skill of successfully utilizing the Internet as distribution channel for non-life insurance products is examined by comparing the web site usability of three different types of insurance providers from the UK. A long-established, traditional insurance company is benchmarked with a pure online insurer and a groceries retailer that diversified into online insurance. The study is conducted from the consumer's perspective by using expert evaluation techniques and a grounded theory approach. The findings suggest that the newer types of insurance providers outperform the traditional type and therefore represent a significant competitive threat to the insurance industry as we know it today. The theoretical findings suggest that frameworks for analysing web site usability are highly sensitive to context, and in the case of insurance services, *appearance* of the web site and *assistance* to the consumer while using the web site are evaluation criteria that are more important than expected and need to be included when analyzing non-life insurance web sites.

Keywords: E-Business Models and Enterprise E-services Architectures, Usability, Distribution Channels, Internet.

1 INTRODUCTION

The Internet is becoming an ever more important channel for business-to-consumer insurance services worldwide. Insurance companies have put their efforts especially to developing electronic insurance services for non-life insurance. Comparing non-life insurance, such as home, car, travel, and legal insurance, to the life insurance business, at least two characteristics are facilitating the development of electronic services within non-life insurance. First, products are less complex which makes the absence of personal contact in service encounters somewhat less critical and second, transaction frequencies are higher. Since business-to-consumer (B2C) customers also perceive the online service channel as essential alternative to offline channels at least in the non-life context [1], insurance companies are eagerly learning how to better utilize the Internet for insurance products and services. Thus, the strategy of insurance companies has been to get B2C customers engaged in the electronic insurance service environment.

Unclear or confusing service offerings might cause customers to switch providers, especially on the Internet, where consumers can compare prices and conditions rather easily from their desk at home. Therefore, one of the most essential conditions for getting customers committed to a particular insurance provider and to electronic insurance services in general, is to have a B2C interface with good usability and hence, to have a web site that consumers perceive as pleasant to use and to be at.

Along with the rise of the Internet as a service channel, the competitors within the insurance industry have become more versatile. In addition to the electronic service offering from long-existing traditional insurance companies, newer types of service providers have appeared in recent years, for example in the United Kingdom, the United States, and Germany, where groceries retailers, mail-order businesses, and pure online

insurance companies have started selling insurance online [20].

These different types of online insurance providers are competing in the same market and often for the same customers. Hence, the question is whether long-established, traditional insurance companies are well-suited to meet the new competition from novel types of insurance providers, or whether the traditional firms have disadvantages, for example due to their previous way of doing business and the resulting set of competencies. We assume that succeeding on the Internet demands a set of competencies which is more likely to be found at the new entrants, such as pure online insurance providers or retailers with previous Internet experience. However, the new competitors might have shortcomings in their skills to provide insurance services and products because of a lack of experience in such business activities. This context of traditional insurance providers competing in a new environment and new insurance providers competing in a more familiar environment provides an interesting research setting and provides opportunities to benchmark the competitor's capabilities with each other.

In order to benchmark these different types of insurance companies, the web performances of three different types of insurance companies from the UK are examined. The UK was chosen as the empirical setting for the present study because of the versatility of different types of insurance providers serving B2C customers. In addition as to the quality of their web sites the UK can be considered overall as the most advanced market for electronic insurance services at this time [20]. Therefore, the UK also provides a useful benchmark for other insurance markets. The categorization of the insurance companies is based on a previous study [20] about the effect of existing physical distribution channels on online distribution channels in the insurance industry.

The three categories are:

1) *Traditional insurance providers* - insurance firms such as Prudential (UK), which have a traditionally strong physical distribution channel but which offer services now online as well.
2) *Online insurance providers* - pure online Insurance firms, with the sole purpose to provide their products and services through the Internet, such as Esure (UK). These firms do not use physical distribution channels.
3) *Idiosyncratic insurance providers* - providers of online insurance, which have grown out of mail-order firms, or consumer goods retailers, such as Tesco (UK). Tesco recently diversified into financial and insurance services. Firms of type 3 never owned a physical sales channel (at least not for insurance products and services) – but might have experience in selling other products offline and/or online.

The reason for choosing these three particular companies was that each of them represented the best performer in their category [20], and therefore they provide interesting benchmarks for their domestic competitors and international markets as well.

The objective of this study was to evaluate the usability of web sites of the three types of companies in order to a) find out what customers perceive as critical issues for the usability of insurance web sites, and b) whether the newer types of insurance providers (type 2 and 3) have an advantage on the Internet compared to the traditional insurance firms, and what that could mean for the competitiveness of traditional insurance providers.

We therefore assume that a large extent of the firm's skills and abilities to utilize the Internet as novel sales channel is reflected in the usability of its Internet pages. In addition to evaluating the differences in performance levels, the goal also was to assess whether the companies have a new approach to online insurance, and how these companies - and the insurance industry in general - could benefit from that approach.

2 THEORETICAL FRAMEWORK

In this chapter the main theoretical elements of the study are discussed. Theoretical framework of the paper is constructed by combining the aspects of distribution channel theory, resource-based strategy, and usability theory.

2.1 Distribution Channels

Distribution channels can be defined as "networks consisting of interdependent actors involved in the process of making a product or service available for consumption or use" [16, p. 2]. **Distribution channels** continuously evolve and change in order to serve their markets best [16]. The Internet can be regarded as the most recent innovation that brought change to the distribution strategies for insurance products and services. While earlier, most insurance products and services were offered through physical sales channels such as by agents and brokers, the Internet is a new alternative for

insurance firms to offer especially non-life insurance products to consumers.

Therefore, numerous insurance firms have adopted a multi-channel strategy by offering their products and services simultaneously through their existing channels of sales agents or brokers, telephone sales, and the Internet. These multi-channel strategies reflect the general change of consumer's purchasing patterns and reflect in particular a trend of consumer's preference for multi-channel sourcing of products or services [3]. Cespedes and Corey [3, p. 75] point out "Customers may wish to buy a product through different channels at different points in time depending [...] how urgent a particular order is, or whether the purchase is an initial buy, a routine buy, or a modified rebuy". Travel insurance for example, is often taken out urgently before the start of a journey, and because it is of low product complexity, customers often perceive it as more convenient to purchase it via the Internet.

In addition, the consumer's choice of distribution channel is affected by prior product knowledge and the frequency the product is purchased with. Consumers with prior knowledge about insurance products can be expected to be more likely to purchase insurance through channels that do not offer face-to-face assistance. In order to provide access to Internet-based insurance not just to expert-like consumers but to a wider range of consumers, web sites need to feature high customer friendliness and usability that is compensating for the missing face-to-face contact physical channels are offering.

2.2 A Resource-Based Perspective on Channels

When firms perform business activities, they develop task-specific capabilities [13; 19; 5] and when entering a new set of tasks, a new set of capabilities needs to develop that allows the firm to perform well in the new tasks.

Therefore, engaging in a new type of distribution such as the Internet, demands the company to develop new tasks and task-specific capabilities, such as how to present its products on the web site (content and appearance), to enable customers to find the information easily (navigation), and to provide customers with the right support, in case they need a sales person to talk to (assistance).

Because traditional insurance companies have been conducting their business for many decades through physical sales channels it might be more difficult for them to succeed on the Internet because it demands a set of skills including not just knowing *what content* needs to be displayed on the web site, but also *in what manner* this has to be done. Naturally, this requires a new set of skills and thinking when entering a sales channel that is fundamentally different compared to previous channels. In addition, the company might find it difficult to decide on its Internet strategy because existing channels might perceive the new channel to have the potential of cannibalizing existing channels, although it can also be perceived as complementing them.

Pure online insurance providers are usually backed by well-established companies due to the complexity of the Insurance business and large amount of capital that is involved. Therefore, the pure online insurance firm does have insurance expertise at its disposal and is not a newcomer to the insurance business *per se*. However, the company usually is a newcomer to the Internet and therefore it needs to develop the set of skills that are required for this particular sales channel. From a strategic perspective, being a pure online insurance provider should enable the firm to focus on its core competence and concentrate on developing the necessary skills.

The third type of companies diversified into the insurance business through opening a new Internet channel in addition to their already existing online channels. Here, the company is a newcomer to the insurance business, and therefore needs to develop the skills to provide that kind of business, often in cooperation with established insurance firms and by hiring staff from the industry. However, the advantage the company has is that it possesses a certain set of skills that enabled it to provide other products and service through the Internet successfully, already. Therefore, the understanding of the Internet as a sales channel might be more sophisticated for such a company, which could lead to a significant competitive advantage if the company gains sufficient understanding of the insurance business as well.

2.3 Usability

The goal of web site usability is to provide what potential users would consider to be a successful experience [6]. According to Hennemann [6, p. 133], "Usability exists when the design of the system matches what the intended end users need and want, i.e. when systems operate in the way users expect them to work".

A corporate web site with low usability may require users to find alternative methods to contact the company in order to do business, or to even choose a competitor. Therefore, corporate web sites are an im-

portant part of an organization's communication and distribution strategy and web site usability represents a key success factor for companies that offer their products and services to consumers via Internet.

Therefore, especially among IT professionals the usability of information systems and web sites in particular, has become an important issue in recent years but academic literature has not given sufficient attention to the subject, yet [2].

Usability studies that use the consumer's perspective include aspects such as health, safety, efficiency, and enjoyment [14]. Further studies about usability include learnability, efficiency, memorability, errors, satisfaction [10], and aesthetics [6]. Van Laan and Julian [17, p. 6] define usability as "the practice of taking human physical and psychological requirements into account when designing programs and documents". In their opinion, the purpose of usability is to improve products and services and make them more intuitive for the user.

Several authors have developed lists of criteria for assessing the usability of commercial web sites [6; 10; 14] but web site evaluations need to be acknowledged as rather context specific, and therefore, usability criteria often differ based on the nature of products and services that are provided through the web site.

Due to the high complexity of products within insurance industry – even for non-life insurances such as car, home, travel, and legal insurances – the lists of usability criteria from previous studies [6; 10; 14] need to be re-evaluated. To pay attention to the context of insurance products and services, a list of twelve usability criteria can be suggested [20], including the following criteria:

- *Efficiency* - Does the user save time by using the web site?
- *Security* - Is data transfer through this web site secure?
- *Informativeness* – What is the amount and quality of information displayed?
- *Aesthetics* - Does the web site look "likable"?
- *Clearness* - Is the information clearly displayed?
- *Learnability* - Is it easy to learn to use the web site?
- *Memorability* - Can the user find its place quickly after glancing away?
- *Supplementary services* - What additional useful services could the consumer get on this web site?
- *Interactivity* - Can the user communicate with a company representative for example through chat or a 24h telephone help line?
- *Enjoyability* - Is it enjoyable to use this web site?
- *Intuitiveness* - Is the firm able to imagine what its users want?
- *Assistance* - Does the web site offer the user assistance?

While this list of twelve usability criteria has proven helpful for evaluating the usability of online insurance web sites, an alternative, more cumulative model is deployed in this study, proposed by Scharl and Bauer [14], which includes as evaluation criteria *content* (presentation of the information), *navigation* (navigational clues), and *interactivity* (nature of the interaction between the user and the site).

Criteria for Evaluating Commercial Web Information Systems
Content
Navigation
Interactivity

Figure 1 Criteria for evaluating commercial web sites [14]

3 METHODOLOGY

The research methods and the execution of the empirical research are discussed separately in order to provide a better insight into the research design and to contribute to the improvement of usability research methods. Here, a novel way of analysing usability is introduced through using a combination of heuristic evaluation [11; 12] and grounded theory approach [4].

3.1 Research Methods

When it comes to evaluating the usability of web sites, an important distinction between the objective ease of use and the perceived ease of use needs to be made [18]. While the objective usability is determined by the systems' usability features, the perceived usability also depends on the individuals' proficiency with the system. Hence, this study approaches usability from the consumer's perspective.

This study focused on the perceived usability, because although usability research methods are used, our main focus is on service business research within electronic insurance environment. The three selected insurance companies' web sites are evaluated with the help of a group of 28 students. The perceived usability is assessed by following an expert evaluation (i.e. heu-

ristic evaluation) technique [12; 11], meaning, that the students are evaluating the web sites themselves by inspecting user interfaces with a set of guidelines or questions [11]. The key elements of the heuristic evaluation technique are combined with the usability evaluation framework by Scharl and Bauer [15] and adapted to the insurance context.

As to the quality of the results the aim was to get as competent responses as possible but, on the other hand, the responses should also represent the opinions of consumers. Therefore, the participants were chosen from a group of university business students with insurance sciences as their major subject.

For data analysis, the data was transferred to a software program designed to handle qualitative, non-numerical, unstructured data, called NVIVO. With the help of this program, a grounded theory approach [4] was applied to derive usability categories. The grounded theory method allowed us to keep flexible during the analysis and let the relevant usability categories emerge from the data in inductive steps rather than approaching the subject with predetermined assumptions.

3.2 Research Execution

The empirical data was collected in two phases. The first evaluation round was conducted in November 2004 with nine, and the second in February 2005, with 19 students.

Before the students started the evaluation process they were briefly instructed about the content and process of the empirical study. The phases and tasks were completed one at a time. The progress of the evaluation is depicted in figure 2.

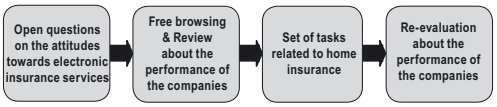

Figure 2 Evaluation process

First, they were asked to shortly answer to six open questions in order to express their opinions on offering electronic insurance services in general.

Second, they had altogether 45 minutes time to get themselves familiar with the web sites of the three insurance companies. After the browsing phase students were instructed to write a one-page review about the three companies and a conclusion where they also indicated how they rank the companies according to their own preference.

Third, after the students had completed writing the review they were given a set of three specific tasks related to home insurance. This phase also meant that they were not just browsing anymore but were challenged to go deeper into the web site and actually try to work with it. Their tasks comprised: 1) finding general information, 2) finding a specific piece of information related to compensation in damage situation, and 3) to retrieve an online quote for a home insurance product. While processing with the tasks the students were evaluating the functionality of the web sites for each of the three companies at a time.

Fourth, the students were asked to reflect on the review and ranking they had written in phase two, and to consider whether their opinions had changed after they had to execute the tasks. In addition, the students were asked to reflect on the six open questions they answered in phase one. In order to investigate how the students perceive the usability and functionality of the web sites, their opinions had to be captured *before* and *after* they had tested the actual functionality.

All 28 students evaluated the performance of all three companies, resulting to altogether 84 evaluations that were included in the empirical data. For all phases, data circulation was used to increase the reliability of the study, meaning, that in order to ensure that every company will be equally evaluated, three different evaluation orders were formed so that every company was evaluated as first, as second and as third by, approximately, 12 students.

4 PRESENTATION OF FINDINGS

In order to emphasize both practical and scientific results of the research this section is divided to present theoretical and practical results separately.

4.1 Theoretical Findings

While Scharl and Bauers' [14] categorization is meaningful for a general evaluation of commercial web sites, for online insurance services it needs to be extended by two more categories, namely, aesthetics and assistance.

The reason for extending the existing list of criteria by the appearance criterion is that half of the empirical data that related to the presentation of content was in fact related to aesthetic aspects, such as colour and design. The other half referred to the information or contents itself, meaning, how the company presented product information and the like.

Especially insurance product information - which is often perceived by customers as difficult to comprehend - requires a distinction between the substance that a document contains and the way this substance is displayed.

Assistance is added to the list of criteria because seventy percent of students indicated they would have needed to call the insurance company or enter an online chat at least at one point during the process. About half of these seventy percent would have needed to do so even though they felt they completed the task successfully, for example to make sure they executed the task correctly, chose the right product, or whether the system calculated the correct price.

In figure 3, a list of criteria is proposed for analysing the usability of web sites based on Scharl and Bauer [14] but extended by the two insurance context-specific criteria, namely, appearance and assistance. To a large extent, this list of criteria is a result of the grounded theory method that was chosen in order to let the relevant categories emerge from the data instead of testing pre-defined expectations.

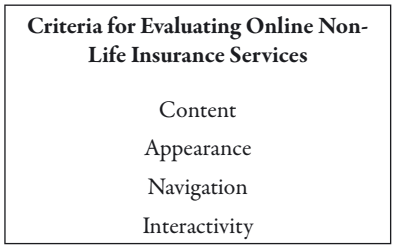

Figure 3 Criteria for Evaluating Online Non-Life Insurance Services

Through proposing a list that includes not only content, navigation, and interactivity, but also appearance and assistance, the requirements of a certain context, namely, the non-life insurance industry are acknowledged because a web site is a platform for presenting a company, which, as part of an industry, shares certain characteristics with firms that are engaged in similar activities. Therefore, the applicability of such a list of criteria is usually limited the context of a particular industry or product group.

The following definitions for the items on the list of criteria are proposed. *Content* refers to the amount and nature of information, including the choice of words. *Appearance* refers to the aesthetic appeal of the web site, its colours, and clarity of design and structure. *Navigation* refers to the ease of navigating, browsing, searching, and accessing information on the web site. Interactivity and assistance are defined in a rather context specific way. Therefore, *interactivity* refers to the tools that can be used on the web site, such as calculators. *Assistance* refers to the help and advice services that can be used if needed, through telephone and online chat, preferably available 24 hours a day.

4.2 Empirical Findings

The opinions of the students are presented in tables 1 and 2 through citing critical episodes, which means reporting those events capturing a problem, misunderstanding, or difficulty in the user's interaction with the web site [2]. For making the comparison between the companies easier the citations are sorted by company. Referring to the theoretical framework, the citations are also divided into five categories: content, appearance, navigation, interactivity, and assistance.

Table 1 Critical episodes and evaluation parameters after the browsing phase but before the task execution phase

Company	Criteria	Critical Episodes
Prudential	Content	the site was extensive, a lot of information and functions
	Appearance	matter-of-fact and conservative looking layout, trustworthy, caring
	Navigation	clear, moving around is logical and it is easy to go back to the previous screen
	Interactivity	good calculators on the pages; the "quick search" is good
	Assistance	the contact information is displayed well
Esure	Content	there is right amount of text so that you feel you can read it through
	Appearance	it didn't feel at all like insurance business, the pictures were funny
	Navigation	start page is very clear and you surely find the information you want to find
	Interactivity	the calculators and other tools are well-defined and comprehensible
	Assistance	there is advice available if needed
Tesco	Content	the product supply of Tesco is fairly good
	Appearance	the animated pictures decrease the credibility and trustworthiness
	Navigation	the pages are easy to use and I didn't get lost once
	Interactivity	there is no sitemap or quick search on the start page
	Assistance	if you have any questions, there is advice available

Table 2 Critical episodes and evaluation parameters after the task execution phase

Company	Criteria	Critical Episodes
Prudential	Content	pages are rather unclear because there is an incredible amount of different information
	Appearance	matter-of-fact and conservative looking layout, maybe a bit boring
	Navigation	menus were not clear and visible enough, which makes it hard to move on the pages
	Interactivity	the calculator could work just as well without your personal contact information
	Assistance	the questions which begin the product section are quite horrifying but help is available
Esure	Content	easy to open the headlines but from there on the information was scarce
	Appearance	it opened my eyes that insurance doesn't have to be stiff to make a good impression
	Navigation	I can only move back and forth in filling out information but not get to general menus
	Interactivity	the suitcases on the upper bar let you how close to the end you are
	Assistance	I would call to make sure, because my case is maybe a special case
Tesco	Content	there is sufficient information on the products
	Appearance	modern, up-to-date, new and fresh; important how to present things visually on the net
	Navigation	easy to move on the pages and I didn't get lost, the "quick search" is very practical
	Interactivity	they make it easier for the customer to reach a decision by offering calculators
	Assistance	I would call to make sure the sales representative calculates the same price as I did

The most essential findings from the phase *before the students had tested the actual functionality* are presented in table 1 and summarized as critical episodes. In this phase the results indicate that Esure was generally perceived as the best company, Prudential was perceived to have a more traditional and trustworthy image of the insurance business, and Tesco was perceived as non-insurance-like and even immature in terms of insurance business.

The most essential findings *after the students had tested the actual functionality* are depicted in table 2. The tasks changed the opinions of the students quite dramatically. The traditional insurance approach (Prudential) was now characterized by complexity and information overload and was outperformed by what was perceived as fresh non-insurance-like approach (Esure and Tesco).

5 DISCUSSION

When comparing the results of the student's pre-task opinions and post-task opinions, a significant change can be observed that is also expressed in the ranking of insurance providers, illustrated in figure 4.

The pillars in figure 4 indicate that Esure maintained a position on the top from the beginning to the end, although it lost some of its appeal after the second evaluation. Tesco was perceived as the least favourable company after the first ranking but in the end it was ranked as the top performer, being even slightly better than Esure.

Looking at the reasons why Tesco improved, students claimed that the amount of information was sufficient and showed a matter-of-fact approach to insurance information that was pleasant to experience because of the joyful web site appearance. The clear site structure and design also enhanced the navigability of the web site, which made it possible to easily search and access the information needed.

Prudential was seen as trustworthy and matter-of-fact, traditional insurance service provider in the beginning. However, those very characteristics typical to traditional insurance business were criticised after the students had to execute the tasks, and Prudential's web site became perceived as to be "too traditional" or the layout being even "boring", and that too much information is available which makes the site "complex".

It also needs to be stressed that many test persons felt indifferent about whether there was not enough information *per se*, or whether it just was not accessible in the right way. Here, the lack of product information or lack in its accessibility can decrease the trust in a web site. Prudential's site structure that was originally praised, was perceived as unclear and confusing after the tasks, and as a result of that, students claimed the site to be very difficult to navigate.

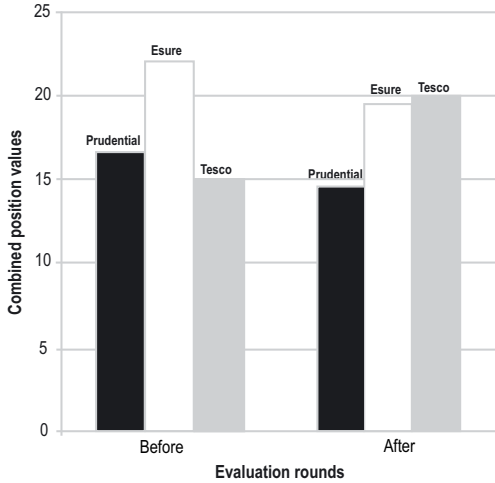

Figure 4 Ranking of firms before and after the task phase

In Esure's case, many students complained that besides the clear site structure and pleasant appearance, the amount of information was insufficient. Here, it was interesting that the small font size made the information hard to read, which created discomfort among most of the test persons. Hence, the fact that information was hard to find or perceived as insufficient largely comes from the company's choice of too small font size on the pages behind the front page.

One of the key issues that need to be addressed for improving the usability of web sites is the content. The content significantly affects the ability to navigate on a web site. Sites with good content but too small font-size for example drop in their usability significantly, even if they have a clear structure, such as Esure had.

Aesthetic elements, such as color and clear design are important issues as well especially when giving a first impression to the consumer. In addition, color and design are key attributes for making content accessible and making a site easy to navigate.

Solid appearance, such as sophisticated looks, structure and colors, is important for the image an insurance company needs to convey, but lack of clearness in design can cause the customer to get lost on the web site, as has happened in Prudential's case. In addition, Prudential's trustworthy image that was conveyed orig-

inally, conflicted with the consumer's perceived lack of information and difficulties with getting access to it, making them feel lost and perceive the company as not transparent enough.

Ease of navigation and sufficient information has been the key of Tesco's success. While its image is non-traditional and can be perceived as immature by some consumers, insurance information is matter-of-fact and easy to access, showing that Tesco has skills in presenting the essential features of an insurance product.

From a theoretical perspective, the findings indicate that the task-specific capabilities these three insurance providers developed through their rather different business activities affect their ability to create a user-friendly web site, and provide online insurance successfully. Therefore, a distinction needs to be made between different competitive advantages in the context of online insurances.

Prudential represents a traditional, long-established insurance company, which, through its business activities, has developed a certain set of skills and capabilities that allows the company to serve customers with its comprehensive knowledge about the insurance business. This knowledge, however, leads in the absence of experience with the Internet to a bureaucratic approach to information and content, which especially affects the navigability of the web site.

More traditional insurance firms also have to manage the Internet parallel to their physical channels. Here, the awareness can prevail that the Internet is an opportunity since it can complement other channels, but there could also be a channel conflict because the Internet might also be perceived as to cannibalize, and therefore take away business that would otherwise be made through physical channels. Therefore, conflicts about the distribution and redistribution of resources within the company and among the channels might reduce the necessary attention from the online channel that it needs to outperform other competitors, for whom it is more natural to have electronic sales channels, such as Esure and Tesco.

Esure can be assumed to have the best preconditions for a successful online insurance business from a usability perspective, because its sole focus on insurance business and the Internet as distribution channel allows the company to concentrate its resources and build up core competencies. The opportunity to start fresh and build an insurance web site where insurance information is displayed in a customer-friendly way, as well as with a fresh appearance and good understanding of the importance of clear web design, certainly gives the company an advantage over its more traditional competitor, Prudential. However, the resources of Esure as a niche player are more limited and its larger competitors do have advantages in economies of scale and scope.

Tesco certainly represented a surprise after it was able to slightly outperform Esure and clearly outperform Prudential not only in appearance and navigability, but also in content, assistance, and interactivity. Tesco, with its successful online business for groceries and non-food retail goods has diversified into financial services successfully, through using its widely recognized brand and its experience with electronic channels. Therefore, it provides a good example for a company which is not only able to transfer and utilize its capabilities related to online channels from one product category to the other, but it also demonstrated that it is able to acquire new, industry-specific knowledge for distributing insurance products and services.

6 CONCLUSION

The key characteristics of insurance business, such as the complexity and abstract nature of products set significant challenges to the development of electronic insurance services. Thus, such usability issues as appearance, clearness, appropriate amount of information, and assistance should be considered even more than in some other service fields.

To summarize the results of our study, some general tendencies related to the web site usability of insurance companies need to be brought up.

First, insurance as a business is based on transferring information and a feeling of security to customers. Thus, it is important to provide an amount of information to the customer that is both – comprehensive and comprehensible. Therefore, providing all information possible cannot be the answer because it easily leads, especially in the insurance business, to information-overload because of the complex nature of the product and the terminology that is involved. Regarding web site usability, providing too much information also makes it difficult to create clear content and design on the web site which significantly affects navigability and, too much information can make customers feel confused and overwhelmed.

Second, lively and non-insurance like layout especially at Tesco's pages was perceived as a rather positive approach to insurance business. Insurance as a business should also create trust between the insurance company and the customer and therefore, a matter-of-fact approach on the web sites has, at least so far, remained

widely applied within the insurance field. This study suggests that in addition to the traditional insurance-like approach, there are also other approaches to successful delivery of electronic insurance services, as demonstrated by Tesco. However, service providers should recognize the thin line between a very upbeat or lively look that might give an immature impression and a "refreshing but still matter-of-fact" approach in developing the future electronic insurance services.

Third, small things matter. In environments with relatively large amounts of information necessary and available, clear, visible paths that enhance the access to information are crucial. However, through small details in web site design, consumers can easily get confused or lost, or might not be able to retrieve the information they need, at all. For example, in case of Esure some test persons that originally ranked Esure as best company became confused during the task phase when new information always opened in separate windows, which lead to a more negative evaluation for the company. In this case, Esure, the company with originally the clearest design still managed to confuse its users through a detail, which could have been avoided.

The change in opinions after the students had in fact used the electronic services was one of the most interesting findings of our study, and one of the key themes of this paper. The user's perceptions from browsing the web site or actually performing tasks show a clear difference between superficial ease-of-use and real usability.

Finally, as already pointed out the results clearly indicate that insurance business does not necessarily have to be characterized by complexity and conservativeness. Insurance service can also be offered by following a different kind of logic based on simplicity and easy-to-use as, especially, Tesco, with its roots in the retailing business has proven.

Traditional insurance companies can learn their lessons from non-traditional insurance providers, such as Tesco, and these new competitors have the potential to become a threat to the traditional insurance business. In the light of previous research [20] and this study, we propose developing the electronic insurance service concept by benchmarking the traditional insurance companies with the non-traditional ones. This might also foster the insurance industry's understanding of how to make customers more committed to using electronic insurance services.

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APPENDIX 4. Interview guide

Short Introduction:

First name?

Where do you live?

How often do you use a computer and/or the Internet (continuously in my work/daily/weekly/monthly/rarely/never)

Have you used electronic insurance services?
If yes, which services?

Electronic insurance services – General:

What do you think about non-life insurances (home, car, travel, medical expenses) being offered in the Internet?

What is your opinion on electronic insurance transactions in general?

”Ease of use”:

What do the following pairs of photos, connected to the ease of use and simplicity of Internet-insurance services, evoke?
Content
Appearance
Navigation
Interactivity/assistance

”Playfulness”:

What do you think about utilizing entertainment and playfulness in context with insurance services?

”Trustworthiness”:

The concept *trustworthy* is often connected with insurance services. In your opinion, does utilizing ease of use, entertainment and playfulness in context with insurance affect the trustworthiness of the services?

APPENDIX 5. List of interview participants

	Name	Occupation	Age
”Insurance science students” (P 1–6) February 2, 2006	Anna-Mari Orpana	Student (insurance science)	22
	Taina Puisto	Student (insurance science)	27
	Joni Ylen	Student (insurance science)	25
	Olli Suominen	Student (insurance science)	23
	Toni Liemaa	Student (insurance science)	25
	Hanna Salo	Student (insurance science)	23
“Academics and Managers/ Experts” (P 7–12) March 23, 2006	Pauli Kontio	Software analyst	27
	Jaana Haatainen	Academic assistant	29
	Tommi Rissanen	Project Manager	33
	Liisa Teerenhovi	Coordinator (export manager)	52
	Helinä Laine	Enterpreneur	59
	Mauri Pimiä	Planning manager	58
“Non-academics and Officers/ workers” (P 13–18) March 27, 2006	Timo Koskinen	Caretaker	44
	Juha Laine	Student	26
	Ulla Lahtinen	Nurse	49
	Matti Paavola	Filed manager	60
	Petri Porra	Prepress operator	38
	Maarit Uotila-Ahokas	Office secretary	55
“Idiosyncratic group” (P 19–23) February 8, 2007	Kalle Narinen	Software analyst/Consultant	30
	Jyrki Kotiniitty	Plant worker	30
	Piia Ikonen	Assistant group controller	32
	Susanna Lundström	Student (social sciences)	25
	Petri Saarinen	Student (insurance science)	23

P = Participant

For the sake of privacy the participants in each group are arranged in random order. Thus, P1 does not indicate the first participant in “Insurance science students” group, or P 12 the last participant in “Academics and Managers/experts” group.