



Paths towards pioneering in service business

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ISBN 978-951-38-7830-6 (soft back ed.)

ISSN 2242-1211 (soft back ed.)

ISBN 978-951-38-7831-3 (URL: <http://www.vtt.fi/publications/index.jsp>)

ISSN 2242-122X (URL: <http://www.vtt.fi/publications/index.jsp>)

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JULKAISIJA – UTGIVARE – PUBLISHER

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[Kehityspolkuja kohti palveluliiketoiminnan edelläkävijyyttä]. **Arto Wallin, Jaana Tähtinen & Maaria Nuutinen (Eds.)**. Espoo 2012. VTT Technology 18. 134 p.

Abstract

Development paths towards pioneering in service business are very complex in nature. These paths are always unique, based on the path that company has previously travelled and options available at a certain point in time. These paths are also continuously evolving because of the organizational learning process and rapidly changing competitive environment.

This report clarifies the complex phenomena of development towards pioneer in service business, giving examples from real life on how the paths emerge and suggesting a new framework for guiding the journey towards pioneering. The study provides four kinds of contribution to the development of successful service business. Firstly, a key enabler for successful service business rests in the transition from a goods-oriented view to a service-oriented view. Transition to service-oriented view means holistic change in companies' everyday thinking, processes, relationships, capabilities, structures, management ideologies and strategies, etc. The adoption of new logic can provide a long-term advantage, thereby opening the path towards pioneering within that particular context. Furthermore, it can open up new ways to value creation by fostering innovations.

Secondly, four case studies, which intermediate between theory and practice, are presented. These case studies offer glimpses of companies' past or on-going paths and demonstrate different ways to enhance development: service research as a shared frame of reference, co-developing services with customers and end-users, involving experts in the development of future service business and building service capability and culture through gradually tackling the main obstacles of change.

Thirdly, five general success factors were recognised. These are: 1) service-orientation in practice, 2) close customer and network relationships, 3) collaborative development of service business and services, 4) processes and methods for management, and 5) all-embracing renewal throughout the organizations. Success in terms of these factors is presumed to enhance development towards pioneering in service business. Some of the enhancing factors can become differentiators if the company can use those to outperform its competitors. Moreover, if proper attention is not paid to these factors, they can begin to hinder the development of service business or even become barriers for development. Therefore, it is extremely important to recognize these general success factors and understand their importance to the success in service business.

Finally, the effort towards pioneering can be further supported by approaching development from four complementary perspectives, which are the: 1) organiza-

tional culture, 2) business model, 3) value network and 4) strategy. Even though development should be as holistic as possible, it is easier to understand the challenge if the phenomenon can be viewed from different perspectives. Together with the success factors, these perspectives formulate the new framework for supporting service business development and finding one's own path towards pioneering in service business.

To sum up, every pioneer goes through its own development path. Sometimes the successful journey through the development path is something that emerges as the result of a normal urge to keep going and surpass the competitors. Sometimes the path is a clear but fading target that motivates change and efforts but is never reached. Even though these paths may look very different up close, the broader view reveals the general success factors on these paths. Understanding and learning from these general success factors provide companies with an excellent starting point for building successful service business. It should be noted that if these success factors are not understood, they can become bottlenecks in the development of service-oriented business. Moreover, excelling in these success factors provides an excellent opportunity for establishing differentiation, thereby enabling the creation of the competitive advantage required to become a pioneer of service business.

Keywords service business, pioneer, service-orientation, development, path

Kehityspolkuja kohti palveluliiketoiminnan edelläkävijyyttä

[Paths towards pioneering in service business]. **Arto Wallin, Jaana Tähtinen & Maaria Nuutinen (Toim.)**. Espoo 2012. VTT Technology 18. 134 s.

Tiivistelmä

Tämä julkaisu kokoaa yhteen Proform-projektissa vuosina 2010–2012 tehdyn tutkimuksen palveluliiketoiminnan edelläkävijyydestä. Projekti keskittyi selvittämään palveluliiketoiminnan edelläkävijyyden osatekijöitä ja kehittämään neljään rinnakkaisprojektiin osallistuneen yrityksen palveluliiketoimintaa. Yhteistä projektin yrityksille oli se, että ne kaikki pyrkivät kehittämään teknologia-intensiivistä palveluliiketoimintaa, jossa palvelu muodostaa arvonluonnin perustan, mutta teknologia on myös olennainen osa palvelua.

Tämän tutkimuksen näkökulmasta yritys on palveluliiketoiminnan edelläkävijä, mikäli se luo, kerää tai jakaa arvoa uudella tavalla siten, että siitä syntyy yritykselle kaupalliseen menestykseen johtavaa kilpailuetua. Avainsana kilpailuedun synnyttämiseen on siten erottuminen kilpailijoista. Erottuminen kilpailijoista ei tässä yhteydessä rajoitu vaan palvelutarjoamaan, vaan erottumisen mahdollistavana tekijänä voi olla esimerkiksi innovatiivisuutta korostava organisaatiokulttuuri tai uudenlainen tapa hyödyntää verkostoja.

Polkuja edelläkävijyyteen on yhtä monia kuin on kulkijoitakin. Jotkut yritykset voivat syntyä edelläkävijöiksi kaupallistamalla uuden idean, joka jo lähtökohtaisesti poikkeaa markkinoilla olevista kilpailevista ratkaisuista. Pitkän historian omaavien tuote- ja teknologiasuuntautuneiden yritysten kehityspolut palveluliiketoiminnan edelläkävijöiksi ovat lähtökohtaisesti paljon haastavampia. Näiden yritysten mahdolliset kehityspolut määräytyvät yritysten aiemmin kulkemasta matkasta ja kullakin ajanhetkellä tarjolla olevista mahdollisuuksista. On myös syytä muistaa, että jokaisen edelläkävijän täytyy löytää oma polkunsä. Seuraamalla toisten polkuja voi tinki menestyä liiketoiminnassa, mutta edelläkävijäksi ne eivät yritystä vie.

Kehittyminen palveluliiketoiminnan edelläkävijäksi on näin ollen usein monimutkainen ja pitkällinen prosessi. Tutkimuksemme tarjoaa matkan varrelle tienviittoja, joita seuraamalla yritykset tietävät pyrkivänsä oikeaan suuntaan. Tärkeintä tässä prosessissa onkin jatkuva pyrkimys parantaa toimintaa vuodesta toiseen, sillä edelläkävijä ei pysähdy ihastelemaan saavutuksia liian pitkäksi aikaa, vaan jatkaa eteenpäin kohti uusia haasteita.

Julkaisussa määritellään aluksi työn taustoja, pääterminologiaa ja tutkimuskäsitteitä. Toinen luku tarjoaa katsauksen työn taustalla oleviin teorioihin ja kolmas luku kuvaa lyhyesti empiirisessä tutkimuksessa käytetyt menetelmät. Neljännessä luvussa pureudutaan syvällisemmin neljään tapaustutkimukseen, joista ensimmäinen kuvaa IBM:n kehitystä palveluliiketoiminnan edelläkävijäksi, ja kolme muuta kuvaavat Tiedon, HiQ:n ja Bronto Skyliftin palveluliiketoiminnan kehittämistä. Viides luku kokoaa yhteen projektissa koottua empiiristä ja teoreettista tietä-

mystä ja muodostaa niiden perusteella palveluliiketoiminnan kehittämistä ohjaavan edelläkävijämallin. Kuudes luku kiteyttää tutkimuksen tärkeimpiä löydöksiä ja tarjoaa lukijoille sekä teoreettisia että liikkeenjohdollisia johtopäätöksiä.

Avainsanat service business, pioneer, service-orientation, development, path

Preface

This report introduces multi-disciplinary research conducted within the ProForm research project, 2010–2012. The main objective of the project was to study service business pioneers and the proactive renewal of provider-customer relationships. Four Finnish companies had their own development projects running parallel to the research project, which linked the research tightly to real-life challenges in the development of service business. In addition, we had a pleasure to collaborate with IBM, which provided a unique viewpoint on our study. We would like to thank all these companies for successful collaboration during the project. We would also like to thank TEKES Serve program for providing funding for the research.

Several authors from VTT and the universities of Oulu and Lapland have been involved in the ProForm project and the writing of this report. In addition to the editors, VTT's project group included Inka Lappalainen, Katri Kallio, Professor Timo Koivumäki and Merja Airola. Oulu Business School provided their in-depth expertise for the project: for example, in relationship marketing and the development of networked business models. Their work was led by Professor Jaana Tähtinen and mainly implemented by Teea Palo and Outi Nuojua. Service design practices, methods and thinking were most valuable expertise provided by the University of Lapland for the project. Their project was steered by Mikko Sääskilahti and conducted by Essi Kuure and Antti Lindström. This report is a result of the collaborative work between all these researchers. We would like to thank all of these authors for fruitful conversations and contributions to the writing work.

Oulu, Finland, February 2012

Arto Wallin

Coordinator
ProForm project

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List of symbols

G-D logic	Goods-dominant logic
ISCC	Industrial service capability and culture
IT	Information technology
RBV	Resource-based view
S-D logic	Service-dominant logic

1. Introduction

Arto Wallin (VTT), Katri Kallio (VTT), Jaana Tähtinen (University of Oulu), Inka Lappalainen (VTT) & Maaria Nuutinen (VTT)

1.1 Background: service business and science

1.1.1 The growing importance of service business

The service sector has dominated the world's advanced economies for years and accounts in many countries for more than 70% of gross domestic product and employment (e.g., Stauss et al. 2008; cf. Spohrer 2008). In this study, we use the concept of service business to refer to both the service sector of industrialized economies as well as services performed in the manufacturing and extractive industries.

Although the significance of the service sector in advanced economies has increased, some industries and companies have remained largely product- and/or technology-oriented in their thinking and processes. The main focus is on delivering new products and technologies to customers. The value creation of these industries and companies has thus been based on products and technologies, with services considered merely as supplements to the product offering.

Ongoing radical transformation of the business and innovation logic of the high-tech (e.g., IT and pharmaceutical) industries has, however, forced companies, especially in Western countries, to rethink their core businesses (cf. Chesbrough 2011). Radical change in the IT industry has mainly been due to globalisation, commoditization, massive open source development and hence cost pressures, which have resulted in a transition of technology-focused business (e.g., production, software development) towards lower-cost countries. These critical challenges have pressured technology-focused IT companies to find new business opportunities, especially in the service business sector. The essential difference between service business and product and technology focused business is that, in the former, service forms the basis of value creation (Tekes 2010).

In order to stay competitive, therefore, companies need to change their focus from commoditized goods to services. More importantly, companies need to

change their entire business logic from *producing goods and services for customers* to *co-creating value with their customers* (Vargo & Lusch 2004, 2008; Heimonen et al. 2010).

1.1.2 Service research as study of service business

The field of service research has attracted more and more scholars and journals in recent years. However, despite calls for one, no independent service science research discipline has yet been established (e.g., Sampson & Froehle 2006; Vargo & Lusch 2004, 2008, 2009). So far, service research is regarded predominantly as a part of management science, particularly marketing, and thus has a somewhat limited contextual focus and lacks a cross-disciplinary approach (Stauss et al. 2008). IBM has offered a vision of a multidisciplinary approach called Services Science, Management and Engineering (SSME) that would apply scientific, management and engineering disciplines to create knowledge and develop solutions to service problems (Stauss et al. 2008; Spohrer 2008). Based on this view, service science is interdisciplinary approach to study, improve, create, scale, and innovate in service (Maglio et al. 2010). Stauss et al. (2008) stress that intense collaboration between academia, higher education, and industry is needed in this effort.

Hence, this study also adopts a multidisciplinary approach to examining pioneering in services business, based on strategic management, leadership, work and organisational psychology, relationship and network approaches, services marketing, service design, business models and value discussions. Moreover, methodologically the research follows an abductive approach, combining the empirical data derived from close collaboration between companies and academia with multidisciplinary theoretical frameworks.

1.2 Focus and objective of the study

This study focuses on *technology-intensive companies* and their efforts to develop their orientation and operations towards service business. In this study, a technology-intensive company refers to a company in which *value creation relates to highly technical products* (e.g., a remote diagnostics of high-tech product) or *processes* (e.g., quality assurance in software development). However, this technology intensity does *not* mean that the company's value creation is based mainly on products or technologies. On the contrary, our focus is on technology-intensive service business, where value creation is either based primarily on services or the companies are on a transformation path towards service business.

The objective of this study is two-fold:

- Firstly, *to investigate the success factors in technology-intensive service business and the development paths towards pioneering in this service business.*

- Secondly, to study organizations' transition from goods-oriented¹ to service-oriented businesses.

1.3 Defining main concepts of the study

In the following we define more specifically the main concepts of this study. Firstly, pioneering in service business is defined. Two closely related but different concepts are then introduced: 1) the *development path* to pioneering in service business, and 2) the *transition (path)* from goods-oriented to service-oriented business.

1.3.1 Pioneer in service business

The Webster's Dictionary (1971) defines a pioneer as '*a person who is among the first to research and develop a new area of knowledge or activity*'. In addition, a pioneer '*prepares a way for others to follow*'. Other definitions² also emphasise aspects of innovation and development of something new. Accordingly, we apply these definitions in the business context and define that in order to be regarded as a *service business pioneer*, a company has to:

1. be among the first to open up a new area of service business, and
2. to achieve success in that new area of business.

Hence, the first requirement is that the service business pioneer creates and/or captures value in a new way. This can be achieved, for example, by developing innovative services (outcome perspective), redeveloping a service system (process perspective) or providing services in new contexts (market perspective). Based on the latter requirement, we argue that a pioneer has, to at least some extent, to be commercially successful in the new service business. Being the first in a new business area, without being able to make it profitable, cannot be the goal of any healthy business in the long-run.

Following from the above, the service business pioneer must be able to differentiate itself from its competitors; it must do something different or in a different way to others in the business area. If this differentiation creates competitive advantage for the company, then company may be able to succeed in the business better than its competitors. The creation of competitive advantage is therefore a key requirement for becoming a pioneer of service business.

¹ Also referred to as product-, technology- or provider-oriented

² Definition of a pioneer: "one who opens up new areas of thought, research or development", or "an innovator or developer of something new" (www.thefreedictionary.com).

1.3.2 Development paths to pioneering

There are numerous ways in which a company can develop into a service business pioneer. However, none of these development paths are the same, and each company must follow its own path. The paths are unique to each company because (Teece et al. 1997):

- 1) Each company has unique and continually changing position in the competitive environment, which is shaped by the historical path it has travelled.
- 2) Each company has different potential development paths towards pioneering in service business based, for example, on its organizational culture, relationships and capabilities.

Even if a company were able to follow the exact same development path as its competitor, it would be merely an imitator not a genuine pioneer.

The drivers of the development and the challenges met along the path are also different and are to great extent dependent on the history of the company. For example, large enterprises with a long successful history in product and technology focused business may face significant challenges in transforming into a service business, as highlighted by the IBM case (see Section 4.1). In contrast, start-up companies without a historical burden are perfectly positioned to be pioneers. To conclude, despite the many differences, there may be the possibility to learn from others' development paths and challenges.

1.3.3 Transition from goods-orientation to service-orientation

The transition from a goods-oriented to a service-oriented view can be considered a key element in the development towards being a service business pioneer. Such a transition requires a holistic change in the company's everyday thinking, processes, business models, competencies, structures, management ideologies, strategies, etc. (see Section 2.2). This change can be characterised as a change in the company's core task, that is, why the company exists, thus challenging deep historically rooted cultural beliefs regarding its purpose, main success factors and the value hierarchy of the employees. As a result of the transition, the customers' business goals should be seamlessly integrated with the provider's business. Instead of delivering value to the customer, all actors (provider, customer, and other value network actors) focus on co-creating value. Hence, the service-oriented view is inherently also customer-oriented (Vargo & Lusch 2008).

The transition involves a fundamental shift in perspective regarding how business is to be conducted – how the company's core task is understood – and creates an excellent foundation for becoming a pioneer in service business. However, making the transition to service-oriented business does not necessarily mean that the company is a pioneer. On the other hand, some companies that are viewed as being service business pioneers (e.g. due to establishing competitive advantage

through radical service innovation) may still have a long way to go in transforming their organizational mind-set to being fully service-oriented (see Sections 2.1 and 2.2). Nevertheless, transforming a company's holistic view towards services (including strategy, business logic and organizational mind-set) can be considered a huge leap towards pioneering in service business.

1.4 Research questions

This study focuses on three main research questions:

1. What are the main success factors of pioneers of technology-intensive service business?
2. What enhances and hinders companies' development towards being a service business pioneer?
3. What transition paths do companies follow in changing from a goods-oriented to a service-oriented business?

1.5 Contents of the study

This study is outlined as follows. The first chapter provides a background for the research and introduces the focus, objectives and research questions. Chapter 2 introduces the various theoretical perspectives that provide the foundations for our multidisciplinary study. Chapter 3 describes research design and methods applied in our research.

If the reader is seeking to learn from real-life stories of service business development, one can jump directly to Chapter 4, which introduces four empirical cases. The first case describes a development path of an internationally recognized pioneer of technology-intensive service business. The other three cases describe specific parts of the development paths taken by three Finnish companies that aim towards pioneering in service business.

The description of specific development paths is followed by more general findings about the service business success factors in Chapter 5. This chapter is illustrated by findings from interviews about pioneering in service business, thereby providing practical propositions for managers and practitioners aiming to develop service business. The chapter also introduces the emerging framework which assists in developing service business. Finally, Chapter 6 concludes the report in the form of discussion about the theoretical, methodological and managerial implications.

2. Theoretical insights to pioneering in service business

This chapter introduces the main theoretical bases used to studying the development towards pioneering in service business and the transition paths that companies follow when holistically transitioning towards a service-oriented business approach. Section 2.1 introduces a service-dominant logic aimed at providing common ground for the following sections. As Figure 1 illustrates, the other theoretical aspects (sections 2.2–2.6) are independent perspectives which only partially overlap. Our aim is to develop a more comprehensive overall understanding by combining these different perspectives, although, in some cases, multidisciplinary perspectives may be conflicting. This chapter therefore introduces each of the underlying perspectives, and in the later chapters our objective is to create a shared understanding of pioneering in service business.

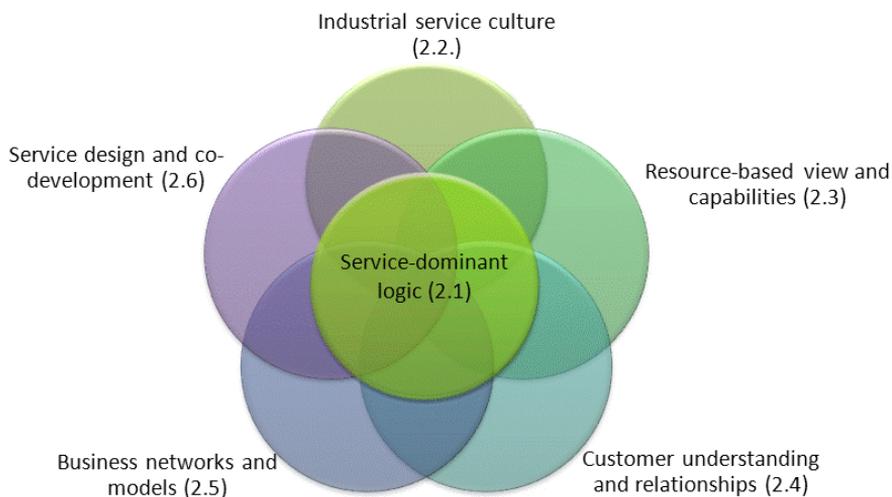


Figure 1. Different lenses for studying pioneering in service business.

2.1 Service-dominant logic

Katri Kallio (VTT)

An interesting new theory lead by Stephen Vargo and Robert Lusch (2004; 2008b; Vargo, 2009) – service-dominant logic (S-D logic) – has emerged within service marketing and gained rapid attention and popularity in recent years.

According to Vargo and Lusch (2004, p. 15), the models on which much of our understanding of economics and marketing are based were developed largely during the nineteenth century, a time when the focus was on efficiencies in the production of tangible output, which was fundamental to the Industrial Revolution. The unit of analysis was the unit of output, or the product (good). However, Vargo and Lusch state that this thinking is no longer sufficient as times have changed. The orientation is shifting away from tangibles and toward intangibles, such as skills, information and knowledge, and towards interactivity, connectivity and ongoing relationships.

Vargo and Lusch (2004, p. 15) also state that the academic focus is shifting 'from the thing exchanged to one on the process of exchange' and that science has moved the focus towards dynamics, evolutionary development, and the emergence of complex adaptive systems. The appropriate unit of exchange is therefore no longer the static and discrete tangible good, but more the application of competencies or specialized human knowledge and skills for and to the benefit of the receiver. These competencies and skills are intangible, continuous and dynamic. Vargo and Lusch (2004; 2008b; Vargo & Akaka, 2009) anticipate that the emerging service-dominant logic they have developed will have a substantial role in marketing and has the potential to replace the traditional and still greatly predominant goods-dominant paradigm. In their view, the service-dominant logic could be used as the foundation for 1) a paradigm shift in marketing, 2) a revised theory of the firm, 3) a reorientation of economic theory, and 4) a reorientation for a theory of society.

2.1.1 Foundational premises of service-dominant logic

Vargo and Lusch (2004, 2008b, Vargo, 2009) define the concept of 'service' as the application of competencies for the benefit of another entity. They prefer the singular term 'service', which describes a process, as distinct from the plural 'services', which implies 'intangible goods'. In addition, they see service as involving at least two entities, one applying competence and another integrating the applied competencies with other resources and determining benefit (these are called service systems). They further see that in this way value is always co-created and is unique since the customer always creates the value based on his/her own context. They seek to shift the focus from 'operand resources' (value in property, nouns) to 'operant resources' (value in use, verbs). The foundational premises of S-D logic are summarized in following (Vargo 2009):

- FP1. Service is the fundamental basis of exchange.
- FP2. Indirect exchange masks the fundamental basis of exchange.
- FP3. Goods are distribution mechanisms for service provision (goods are appliances for delivery).
- FP4. Operant resources (knowledge, skills) are a fundamental source of competitive advantage.
- FP5. All economies are service economies (and all business are service business by this definition).
- FP6. The customer is always a co-creator of value.
- FP7. The enterprise cannot deliver value, but only offer value propositions.
- FP8. A service-centred view is inherently customer-oriented and relational.
- FP9. All social and economic actors are resource integrators.
- FP10. Value is always uniquely and phenomenologically determined by the beneficiary.

The main difference between S-D logic and G-D logic is that whereas goods-dominant logic pays attention to tangible output and discrete transactions, service-dominant logic emphasizes knowledge and skills, exchange processes, and relationships and enables a broader view of value creation. However, the service-dominant logic is presented on a fairly theoretical and conceptual level. Consequently, it gives relatively few guidelines or tools as to how to conduct the logic in a real life company setting and what kinds of challenges the new mindset may present, particularly in terms of customer relations.

S-D logic has raised vivid discussion among service researchers. It has also been suggested to be developed further as a customer–dominant logic by linking it with the so-called Nordic School of Services propounded by, for example, Christian Grönroos and Evert Gummesson.

2.1.2 From service-dominant logic towards customer-dominant logic

Heinonen et al. (2010) suggest that the next challenge for companies and developers is to move forward from service-dominant logic towards a customer-dominant logic. They argue that the goods and service-dominant logics are both provider-dominant and that merely involving customers in value creation is not sufficient; rather the customer's logic (practices, experiences and active participation) should represent the starting point for the company's marketing and business logic (strategic mindset). This is shown in the Table 1.

Heinonen et al. (2010) also propose placing the customer at the centre and focusing on what the customers do with the services in order to accomplish their own goals, rather than focusing on the service, the provider/producer, interaction

2. Theoretical insights to pioneering in service business

or the system. Whereas the service-dominant logic focuses on the *co-creation of value in the process* (value is realized by the customer as the customer co-creates value with other actors), in the customer-dominant logic a more radical view of *involving the service provider in the customer's life* is suggested. Overall, the theory development of the customer-dominant logic is more practice-based than the S-D logic.

Table 1. Provider-dominant vs. customer-dominant service logic (Heinonen et al. 2010).

	<i>Provider-dominant logic</i>	<i>Customer-dominant logic</i>
Co-creation		
Involvement	Customer involved in co-creation	Company involved in customer activities
Control	Company controls co-creation	Customer controls values creation
Value-in-use		
Visibility	Focus on visible interactions	Also considers invisible and mental actions
Customer experience		
Scope	Formed within the service	Emerges in customers' life
Character	Extraordinary and special	Also mundane and everyday

As Heinonen et al. (2010) point out, placing the customer at the focal centre is not in itself a new concept. In innovation management literature, placing the needs of the customer as the starting point for development of the companies has been emphasized for over a decade (e.g., Hoover et al. 2001; Kim & Mauborgne 1999).

The literature thus suggests that many companies continue to apply a goods-oriented mindset that does not represent the current thinking in marketing. To be able to take advantage of the service- or customer-dominant logics and gear the processes of a company to support pioneering in that area, a transition in thinking and action is needed. Next, we will focus on how this transition can be implemented.

2.2 Transition from a product-oriented to a service-oriented culture

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The challenge of developing service business has been characterised as a continuum and transition from product provider to service provider, which requires a comprehensive shift from product-based innovation and business logics to service- and customer value-based logics (e.g., Chase 1981; Oliva & Kallenberg 2003; Gebauer & Friedli 2005). Although new approaches, such as a service-dominant logic in service management (or customer-dominant logic, see, e.g., Heinonen et al. 2009; Grönroos 2008) and service science, are receiving considerable encouragement and discussion, the implementation of these new ideas in practice is slow (Gummesson et al. 2010). One of the key reasons why companies struggle to adopt such new logics relates to the profound nature of the needed change in companies' everyday thinking, processes, business models, competencies, structures, management ideologies etc. It is not enough that the marketing team or top management changes its perspective, the whole organisation needs to follow suit. The needed change can be characterised as a shift in the company's mind-set towards a service-oriented culture.

The service culture concept is broadly used in the traditional customer service industry, such as in hotels and restaurants, tourism, the retail trade and health care. Typically, the service culture concept refers to the attitudes and behaviours that are present in a customer-service situation. There are several reasons why this kind of definition may not be applicable in this context. Firstly, the services are, especially in industrial contexts, 'business-to-business'. Secondly, they are often strongly based on technical competence and expertise. Thirdly, the problem of organisational culture relates not only to the customer relationship but to the whole mindset of the organisation.

Within organisational culture research, there are two conflicting paradigms: culture as a metaphor and culture as a factor (Seeck 2008). The latter considers culture as something that can be changed in accordance with the aims of a single group – for example, managers. There is a strong push to develop tools for changing and managing culture within this latter paradigm, whereas the former – culture as a metaphor – aims to explain the organisation through psychological and social processes. Reiman and Oedewald (2002, 2004) have developed an approach that is strongly aimed at providing practical benefits while also striving to describe the organisation. The approach does not strive to affect the culture directly by means of managerial programmes, but rather to increase the organisation's awareness of its present culture and its positive and negative features, as these have a bearing on the organisation's practical objectives. Reiman and Oedewald (2002, 2004) draw a direct parallel between the organisational culture and the organisation's core task.

2.2.1 The transition as a change in core task – organisational culture perspective

The transition from a product-based business logic to a service and customer value-based logic requires corresponding changes in the organisational culture. In practice, this means that the deep and partly unconsciously held perceptions of the organisation's core task should change within the personnel. Core task refers to the requirements that an organisation must fulfil in order to succeed in its operating environment (cf. Norros 2004; Norros & Nuutinen 2002). We understand organisational culture as being 'a solution created by an organisation for the demands set by the core task' (Reiman & Oedewald 2002, p. 27). It is the organisation's learned way of responding to the different demands of its core task during its history (Oedewald & Reiman 2003). As the core task perceptions also have a central role in work motivation and work performance (Nuutinen 2005a; Nuutinen 2006), changes in them play an important role in both the emergence and realisation of more radical service or customer-dominant strategies (Nuutinen & Lappalainen 2012). Nuutinen and Lappalainen (2010) recognise five key areas of change that can affect the core task demands in the transition towards a service and customer value-based logic: 1) business environment and competition, 2) business and earning logic, 3) customer demands and relationships, 4) internal and external co-operation, and 5) management strategy and style.

The importance of organisational or corporate culture in the transition and service business development of manufacturing companies has been noted by several authors (Gebauer & Friedli 2005; Gebauer & Fleisch 2007; Mathieu 2001; Gebauer et al. 2010). Mathieu (2001), for example, also relates cultural change to renewing a company's mission and basic values. There is empirical support for the notion that service orientation in corporate culture is positively associated with overall performance (Gebauer et al. 2010). An old product-oriented organisational culture can significantly slow the realisation of a new service strategy, as it acts as a hidden brake on what is considered important and worthy of effort. Although the importance of culture in the transition is evident, it appears to be difficult on one hand to define the service culture phenomenon and on the other hand to have an impact on it.

Thus, there is a need to make more explicit the complex dynamics of organisational culture in the transition of companies from a product-oriented to a customer value- and service-oriented culture. Nuutinen and Lappalainen (2010; 2009, 2012) have developed a conceptual framework and procedure (Industrial Service Culture and Capability (ISCC)) for industrial companies that aims to create a shared understanding of the complex, on-going change and to manage it more purposefully. Originally, the ISCC approach was developed for machine and technical device manufacturing companies, but recently it has also been applied and studied in other industries, such as technical trade and information technology (see Nuutinen & Lappalainen 2012; 2009; Kallio et al. 2011; Valjakka et al. 2011). Across industries in general, companies have faced the same kind of transition from product-

and technology-based to customer value-based innovations, although the specific demands and manifestations vary between industries and companies. The conceptual framework of the ISCC approach from the industrial culture perspective will be briefly described in the following subsections.

2.2.2 Concepts of industrial service culture and capability

The ISCC approach is built on two main concepts: industrial service culture and capability (Nuutinen & Lappalainen 2012). We define *industrial service culture* as a company's learned way of responding to *perceived* changes in core task requirements when striving to develop its service business. Industrial service culture manifests itself in:

- Service capability (how the demands of a new service-related core task are recognised and taken into account)
- Experienced and ideal values within the work community and customers
- Work-motivational and professional identity development-related factors: a sense of meaningfulness, a match between requirements and available resources, and the sense of having control over one's work.

Industrial service capability consists of four elements that represent the visible side of the service culture:

1. Understanding service business
2. Service business management practices
3. Development practices of service business and services
4. Customer relationship.

The theoretical background of the ISCC approach is multidisciplinary, being affected by such schools of thought as Organisational Capabilities (e.g., Teece et al. 1997; Schreyögg & Kliesch-Eberl 2007); Innovation research (e.g., Chesbrough 2011; Mele et al. 2010), Service Management (e.g., Normann 2002; Gebauer & Friedli 2005; Gebauer et al. 2006; Gebauer & Fleisch 2007; Oliva & Kallenberg 2003); New Service Development (Edvardsson & Olsson 1996) and Service Marketing (Vargo & Lusch 2008 ; Grönroos 2008). However, the novelty comes from *applying work and organisational psychology perspectives in studying service business transformation*. The main concepts are based on the related frameworks of Contextual Analysis of Organizational Culture (Reiman & Oedewald 2002; Reiman 2007), Core Task Analysis (e.g., Norros 2004; Nuutinen 2005b; Norros and Nuutinen 2002) and Expert Identity (Nuutinen 2006, 2005a).

2.2.3 Transition in five main elements of service culture

In order to be able to support change and guide the transition process, we should have an idea of what kind of change is needed in the different elements of service

2. Theoretical insights to pioneering in service business

culture. On the basis of the literature and their earlier studies on industrial service capability and culture (Nuutinen 2005b; Nuutinen & Ilomäki 2008; Nuutinen & Lappalainen 2009), Nuutinen and Lappalainen (2010, 2012) have formulated a tentative proposition for the kinds of general transformations that are needed in each element. These are illustrated in Figure 2.

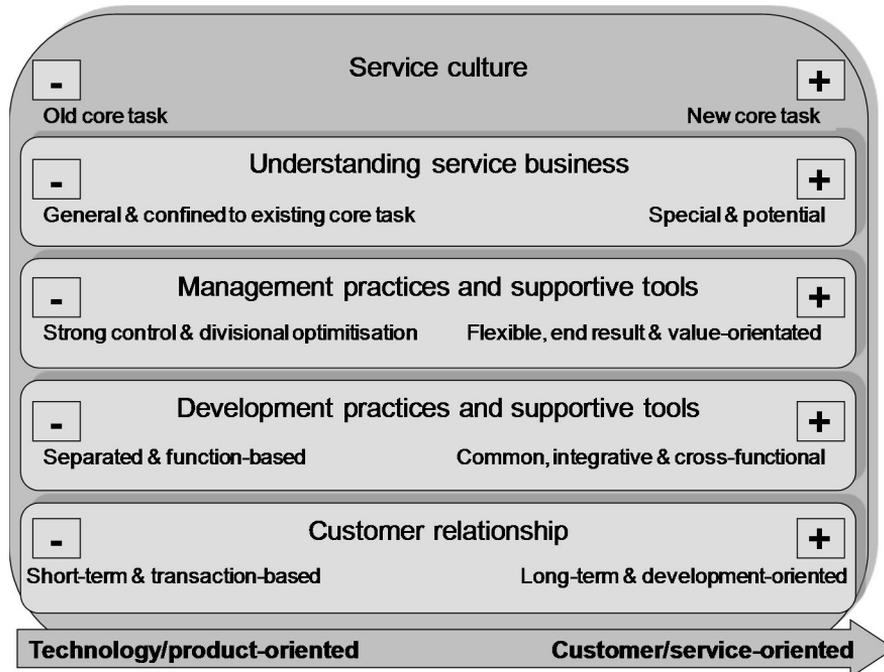


Figure 2. The transformations in the elements of the organisational service culture and capability framework (cf. Nuutinen & Lappalainen 2010).

In the **industrial service culture**, the transformation is defined from an old product-(selling-)oriented core task, to a new, more customer- and service-oriented core task (Nuutinen & Lappalainen 2012). In the former the service is seen as a support function, while in the latter it is seen as a central part of creating value with customers and as a catalyst for growth. As defined above, the service culture manifests itself in service capability, experienced and ideal values within the work community, and customers as well as work motivation and professional identity. These underlying issues reflect individual and collective understanding of service business, management and development practices as well as customer relations within organisations. According to Gebauer and Fleisch (2007) very few managers are motivated to invest resources in extending their service business. They emphasise that the motivation has to grow organically.

Therefore, managers need to overcome typical mental challenges to arouse personal motivation. Furthermore, in order to manage complex business transfor-

mation, it is crucial for managers to know how the development state of the company is understood and interpreted within the personnel. To make underlying beliefs and values explicit, motives for changes can be justified better from different perspectives, and arouse personal and shared commitment.

In **service business understanding**, the challenge is to move from a general understanding of service business and its strategies to a deep insight into the company's own potential and what service business means in practice in terms of company-specific business models, competencies, offerings, organisation, etc. (Nuutinen & Lappalainen 2012). Changes in both the managers' and employees' service awareness and role understanding are critical prerequisites for the transition (Gebauer & Friedli 2005). Changes are needed in the managers' service awareness, from services such as add-ons to value-added services, and, in the managerial role, from an understanding of customer support to the business manager. There is a need to establish 'value-added' employee service awareness and to change understanding of the employee role from selling a product to providing services (Gebauer & Friedli 2005). A shared, company-specific service business understanding should be adopted throughout the organisation to ensure that everybody understands *why* services are needed and *what and how* they relate to each person's work and competence requirements.

In terms of **management practices and supportive tools**, transformation is defined as a move away from strong control and divisional (or function-based) optimisation towards a more flexible end result and a value-oriented way of managing (Nuutinen & Lappalainen 2012). In manufacturing companies, the typical organisational approach involves fairly independent units reflecting the management paradigm in mass production (Hamel & Breen 2007). Instead, value-oriented business models and customised integrative solutions call for more networked and matrix-typed organisational structures that can be supported by integrative communication, information and meeting practices and tools. Thus, the driving force of the management has to be changed from inside-out to outside-in; to enable personnel to recognise changing needs and potential in the customers' activity and to connect these to the company's technological and business potential and to build the best possible fit between supplier and customer value creation processes (Grönroos 2008; Payne et al. 2008).

The challenge resembles that recognised in innovation research: how to handle flexibility and efficiency simultaneously in an organisation (Magnusson et al. 2009). This 'searching period' requires more freedom than the old 'souped-up manufacturing organisation machine'. Shared visionary objectives and collaborative attempts to define a new core task can offer a necessary 'safety net', e.g., for local decisions. Service management should not be seen as engineering-style management in the operation of complex machinery, but rather as social leadership in the creation, development and cultivation of a dynamic, living operational culture (Normann 2002).

It is important that a service orientation is adopted in all relevant business units or departments (Gebauer & Fleisch 2007) and is in line with all business models (Auguste et al. 2006). Nuutinen and Lappalainen (2010) argue that when the

whole company is involved in the service business transformation, the *entire* organisation's way of doing and thinking can be radically renewed to become more customer-oriented and agile with respect to future possibilities. In the new organisational context and with re-focused attention, a more radical view may also emerge (cf. Brax 2005; Vargo & Lusch 2004).

In **service and service business development**, the transformation is defined as a shift away from separated and function-based development towards common, integrative and cross-functional development (Nuutinen & Lappalainen 2012). Service development in many companies still appears to be either flimsy, based on single actors and ad hoc activities, or limited to innovation models aimed solely at technological innovation (Gebauer et al. 2008; den Hertog 2010). However, compared with technological product innovations, service innovations call for different development settings, especially in terms of processes, concepts and system (Edvardsson & Olsson 1996; Magnusson et al. 2009; Toivonen & Tuominen 2009). Cross-functional and integrated practices and tools are needed in order to be able to effectively share existing and developing knowledge, for example on customers, market needs and service pilots, gained from an organisation-wide customer interface.

Concept development serves to guide the service innovation process and to specifically define the value proposition for customers. Piloting strategies appear to be a typical mechanism in service and business model innovation and further development (Lappalainen et al. 2010), but call for targeted resources to enable success. Instead of being linear and closed, innovation processes have become multiform in terms of phases and roles of players in the value chain. Thus, dynamic, vertically and horizontally networked development practices aligned with a strategy and supported with social media and other enabling technologies are increasingly important in facilitating innovation activity among different players.

Innovation should be understood as an open process in which all of the network actors can mobilise resources and thus become co-innovators in co-creating value for themselves and others (Chesbrough 2011; Mele et al. 2010). Instead of a separate R&D function, a shared view of a broadened development responsibility is needed as well as a flexible but systematic innovation system to allocate resources purposefully and effectively.

Finally, **customer relations** transformation is defined as a shift from short-term and transaction-based relations towards long-term, development-oriented relations. In our view, development of a customer relationship is a precondition for the development of other interrelated elements (Nuutinen & Lappalainen 2012). Changing the focus of customer interaction from being transaction-based to relationship-based, and changing the focus of the value proposition from product efficiency to end-user process efficiency are two of the required transformations recognised by Oliva and Kallenberg (2003).

A key challenge with respect to marketing is that service business requires motivation of co-creation of value between service provider and customers (Vargo and Lusch 2008; Grönroos 2008). With regard to producing services, transaction-oriented systems are usually insufficient in managing service information. Fur-

thermore, services need to be designed to support the customer's goals and practices, and it is therefore fundamental to understand the customer's business context and operational conditions. Finally, the customers define the value of the new service or the solution in its use (Grönroos 2008; Heinonen et al. 2009). When a company pursues a transition towards a service- or customer-dominant logic, it is a cross-cutting change in orientation that has an effect on all of the elements presented above (Nuutinen & Lappalainen 2012). The following section will discuss the capabilities that are required for a company to be able to go through such a fundamental change.

2.3 Capabilities for developing service business

Outi Nuojua (University of Oulu)

As noted in the previous discussion, any company that wishes to succeed today needs to excel in its core business and be able to change (e.g. its practices) in line with its changing business environment. Both require that the company has certain capabilities that ensure the quality of its current processes as well as capabilities to change those practices and processes. In other words, to be able to succeed, a company needs to know how to perform and how to change when change is needed. In the following, we take a closer look at what may be needed for a company along the change path towards service orientation. We start with general categorizations of capabilities at the level of organizations and change, and then specify the network capabilities in the context of service business development that the literature suggests to be important with respect to pioneering in service business. The section ends with a discussion on how a company can enhance its current set of capabilities.

2.3.1 Organizational, dynamic and strategic capabilities

The idea of organizational resources and capabilities is based on the resource-based view (RBV) (Human & Naudè 2009) as it examines issues related to managing capabilities and resources within companies (Gulati et al. 2000). The concept of capability is used to refer to wide range of phenomena. On the one hand, scholars define companies' capabilities as complex sets of skills and collective learning which are exercised through organizational processes to ensure superior coordination and functional activities (Day 1994). Thus, **organizational capability** is the outcome of knowledge integration (Grant 1996). On the other hand, organizational capabilities can be seen as a company's ability to perform a coordinated set of tasks for the purpose of utilizing organizational resources and achieving a particular end result (Helfat & Peteraf 2003) or as the marketable processes of a company (Golfetto & Gibbert 2006). Different definitions of organizational capability are summarized in Table 2.

2. Theoretical insights to pioneering in service business

Table 2. Definitions of organizational capability.

Source	Definition
Day (1994)	Capabilities are complex bundles of skills and accumulated knowledge, exercised through organizational processes that enable firms to coordinate activities and make use of their assets.
Grant (1996)	Organizational capability is the outcome of knowledge integration.
Helfat & Peteraf (2003)	Organizational capabilities are company's ability to perform a coordinated set of tasks, utilizing organizational resources, for the purpose of achieving a particular end result.
Golfetto & Gibbert (2006)	Organizational capabilities are an organization's marketable processes.

The **dynamic capability** view complements and extends the RBV by helping practitioners and academics to understand how capabilities are developed and modified in a dynamic environment. The dynamic capability approach views resources as transitory, following a certain lifecycle (Helfat & Peteraf 2003). Different definitions of dynamic capability are illustrated in Table 3. These definitions, although different, share the view that to remain competitive a *company's resources need to adapt to the changing needs of the environment*. They thus highlight the time aspect and constant change of the market place. One such change is the shift from product orientation to service and customer orientation, as highlighted in the present study.

Table 3. Definition of dynamic capability.

Source	Definition
Teece et al. (1997)	Dynamic capabilities are the firm's ability to integrate, build and reconfigure internal and external competences to address the rapidly changing environment.
Eisenhardt & Martin (2000)	Dynamic capabilities are the firm's processes that use resources – specifically the processes to integrate, re-configure, gain and release resources – to match and even create market change.
Zollo & Winter (2002)	Dynamic capabilities are learned and stable patterns of collective activity through which the organization systematically generates and modifies its operating routines in pursuit of improved effectiveness.
Zahra et al. (2006)	Dynamic capabilities are the firm's ability to reconfigure its resources and routines in the manner envisioned and deemed appropriate by its principal decision-maker(s).
Wang & Ahmed (2007)	Dynamic capabilities are a firm's behavioural orientation constantly to integrate, reconfigure, renew and recreate its resources and capabilities and upgrade and reconstruct its core capabilities in response to the changing environment to attain and sustain competitive advantage.

Prior literature has categorized a company's capabilities as *functional* or *integrative* (Jarratt 2004), *enabling* or *relieving* and *internal* or *external* capabilities (e.g., Blois & Ramirez 2006). A company's capabilities can be classified as functional or integrative depending on the information and knowledge they contain (Verona 1999). On the other hand, these capabilities and the value they create can be internally or externally focused (Ramirez & Wallin 2000 via Blois & Ramirez 2006). Capabilities can also be seen as enabling or relieving depending on whether they improve the customer's performance or relieve it of an activity (Norman & Ramirez 1994 via Blois & Ramirez 2006).

From very early on, scholars (e.g., Day 1994; Grant 1996; Penrose 1959) have considered an organization's capabilities as *strategic assets, which may conduct the positions of sustainable competitive advantage*. The concept of **strategic capability** is usually linked with the RBV, as both perspectives emphasize the development of idiosyncratic capabilities which cannot be imitated by competitors (Parnell 2011). The capability approach locates the source of a defensible competitive position in the distinctive resources of a company (Rumelt et al. 1991), which are made up of integrated combinations of the company's assets and capabilities (Day 1994). Hence, it stresses the primary task of managers in maximizing value through the optimal deployment of existing resources and capabilities. Furthermore, the extent to which a capability is distinctive depends upon the company accessing and integrating the specialized knowledge of its employees (Grant 1996).

2. Theoretical insights to pioneering in service business

Strategically important capabilities are also referred to as, for example, distinctive competencies (Hitt & Ireland 1985), core competencies (Prahalad & Hamel 1990) and core capabilities. According to the knowledge-based view of the firm, Leonard-Barton (1992) defines *core capability* as a *knowledge set that differentiates a company strategically and provides competitive advantage* (Leonard-Barton 1992). Core capabilities can be also viewed as collective learning in the organization (Prahalad & Hamel 1990), which spans and supports multiple lines of business (Day 1994). Specifically, a company's core capabilities can be viewed from four dimensions (Leonard-Barton 1992):

- *Knowledge and skills* embodied in people
- Knowledge embedded in *technical systems*
- *Managerial systems* that guide and control the process of knowledge creation
- *Values and norms* embodied and embedded with various types of knowledge and with the process of knowledge creation and control.

Overall, strategic capabilities change the organization and create new business opportunities (Johannesson & Palona 2010). Hence, in order to become service and customer oriented, a company must develop its strategic capabilities.

The strategic and dynamic capabilities approaches both emphasize companies' competencies with respect to achieving and sustaining competitive advantage. Teece et al. (1997) suggest that the fundamental difference between the two approaches lies in capability's capacity to renew the company's other competencies. Hence, the dynamic capabilities approach stresses the understanding of how and why certain companies build competitive advantage instead of just safeguarding the existing competitive position (Teece et al. 1997). However, because of several similar kinds of theoretical definitions, no clear distinction between strategic and dynamic capability has been made by scholars.

Based on the RBV, Prahalad and Hamel (1990) suggest that a company's competitive advantage is created by combining and arranging the company's own internal capabilities efficiently. Nowadays, however, a company's competitive advantage is based increasingly on capabilities that are created jointly with other parties (Johnsen & Ford 2006). Hence, the role, development and performance of a company can be explained by its ability to develop customer relationships and business networks (Håkansson & Snehota 1995, pp. 4). Moreover, in the move towards a networked economy (Achrol & Kotler 1999), companies' capabilities to initiate, handle, use and when necessary terminate inter-organizational business relationships have become an important issue (Ritter & Gemünden 2003). These capabilities are discussed in the following section.

2.3.2 Network capabilities for service business development

According to Walter et al. (2006), *network capability*³ is defined as an *organization's ability to develop, use and maintain relationships with external partners*. Moreover, it includes dimensions of coordination, relational skills, market knowledge and internal communication (Walter et al. 2006).

Several scholars have suggested a distinction between the tasks of managing a single relationship and the tasks of managing a network as a whole (e.g., Ritter & Gemünden 2003; Möller & Halinen 1999). Furthermore, due to differences in networks' underlying value creation logics, different network structures demand distinctive management models and capabilities (Möller et al. 2005). Ritter and Gemünden's (2003) exploration of network competencies showed that the management must have the right skills, knowledge and qualifications in order for a network and its relationships to operate successfully. As the importance of service co-creation is highlighted, network capabilities have become one of the key success factors of companies in service business development (Valkokari et al. 2011).

From the new service development perspective, *capabilities* have been specified as an *organization's expertise to deploy resources and routines, usually in combination, to achieve a desired new service outcome* (Menor & Roth 2007). Intangible and other distinguishing aspects of services challenge the traditional approach of business networks and highlight the importance of service co-creation (Valkokari et al. 2011). In accordance with Valkokari et al. (2011), *collaborative service business development* demands two distinct networking tasks:

- *network configuration*, which deals with the challenges of partner identification and target formation, and
- *network management*, which deals with resource utilization within the value network.

Valkokari et al. (2011) suggest that a company's network role has a clear influence on the required service business development capabilities and networking capabilities. In other words, different roles demand different kinds of actions and skills from companies operating in collaborative service business development.

2.3.3 Capability development

The capability literature predominantly addressed only the contribution of capabilities to an organization's success and sustainable competitive advantage. Hence, the question of how capabilities are developed has received little attention (Johnsen & Ford 2006). Several scholars have suggested that the possession of capabilities alone may not be sufficient to ensure strategic differentiation of companies

³ Human and Naudé (2009) propose that the development of the network capability construct is based on theories of "alliance capability" (Kale et al. 2002), "relational capability" (Lorenzoni & Lipparini 1999) and "networking capability" (Anand & Khanna 2000).

(e.g., Johnsen & Ford 2006; Ritter & Gemünden 2003). Companies should also have the knowledge, skills, qualifications and ability to use such capabilities efficiently (Ritter & Gemünden 2003).

Relationship and network theories imply that capabilities developed in-house and capabilities applied through external relationships have multiple and complex interfaces (Gadde & Håkansson 2001, pp. 81–85). Thus, in accordance with Johnsen and Ford (2006), the integration and activation of capabilities usually happens through interaction with other parties and is influenced by managerial systems and the values and standards associated with the development of knowledge and processes.

A company's capabilities are shaped by the co-evolution of different *learning* mechanisms: (1) experience accumulation, (2) knowledge articulation and (3) knowledge codification. Capabilities emerge from learning and constitute the methods for modifying companies' operating routines (Zollo & Winter 2002). In their examination of capability lifecycles, Helfat and Peteraf (2003) emphasize that the endowments present at the founding stage are a precondition for further capability development as well as for experience accumulation and learning during the development stage.

To sum up, the path to pioneering in service business requires that a company develops new capabilities. To do so, the company needs to change its strategic capabilities and to learn new ones, such as new service development and network capabilities. What exactly needs to be developed and learned depends, of course, on the company in question, its current capability base, its network position, and business logic. However, the fundamental requirement is that the company understands its customers and their business and is able to develop and maintain rewarding customer relationships. The next section will explore this aspect further.

2.4 Customer understanding and relationships

Timo Koivumäki (VTT) & Outi Nuojua (University of Oulu)

Customer understanding has been recognized as a one of the cornerstones in service business. Despite its apparent importance, understanding customers is far from simple and often viewed merely from the goods-oriented perspective. From the service business logic viewpoint, customer understanding requires that the service provider understands *how value is co-created with the customer*. Therefore, instead of just focusing on the needs of the customer, the service provider should focus on understanding how they can assist the customer's value creation process by supplying goods and services that support customer's creation of value-in-use (Grönroos 2008).

2.4.1 The concept of customer value

The concept of customer value has been recognized as one of the main sources of competitive advantage in strategy and marketing literature in the past decades, and defining the concept has triggered a vast amount of research. As a result, there are numerous definitions of the concept. Some definitions focus on consumers' decision making in the purchase situation. For example, Groth (1994) defines customer value as equivalent to market price. This definition is somewhat restrictive, as it neglects the idea of net customer value, i.e. that customers may actually perceive a product as being more valuable than the purchase price. According to Monroe (1990), "customers' perceptions of value represent a trade-off between the quality or benefits they perceive in the product relative to the sacrifice they perceive by paying the price". Other definitions which define value in relation to pricing as the difference between customers' perceptions of the benefits and sacrifices include, for example, Leszinski and Marn (1997).

Khalifa (2004) presents a unified framework for customer value from the value exchange viewpoint, which assumes that customers are willing to make both monetary and non-monetary sacrifices in order to gain expected benefits which are higher than the sacrifices made. The model assumes that customers will make the purchase only when the expected benefits (total customer value) are the same or higher than perceived monetary and non-monetary sacrifices (total customer cost), i.e. when the net customer value is zero or positive. The composition of Khalifa's (2004) value exchange model is presented in Figure 3.

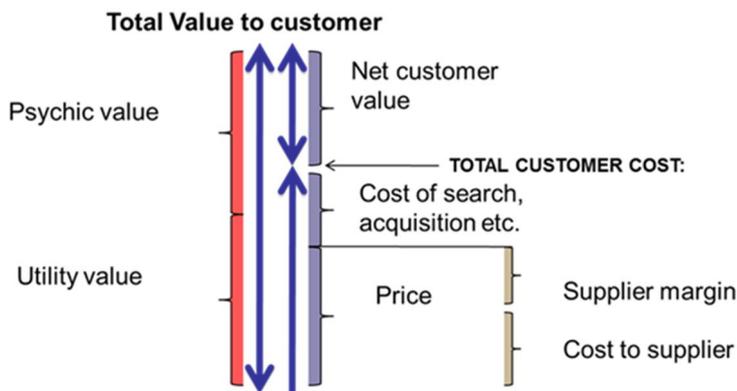


Figure 3. Khalifa's (2004) value exchange model.

Khalifa's model consolidates previous value exchange models by incorporating components such as total customer cost, net customer value, utility value and psychic value. Khalifa (2004) defines total customer value as the sum of psychic value and the utility value of the offering. Net customer value is defined as the difference between total customer value and total customer cost, which includes

the purchase price and the other acquisition costs such as search costs, learning costs etc.

Other definitions consider value as a dynamic concept which may change during the purchase and consumption process. Zeithaml (1988) defines customer value as “the consumer’s overall assessment of the utility of a product based on perceptions of what is received and what is given”. Huber et al. (2001) follow this definition and state that customer value is represented by the difference between benefits and costs, which are defined in terms of consumers’ perceptions in the activities of acquisition, consumption and maintenance as well as their expected level of personal values satisfaction before buying.

There are two common features shared by the different definitions, as noted, for example, by Woodruff (1997). Firstly, customer value is tightly linked to the purchase and eventual use of the service. This point is important as it distinguishes customer value from personal values, i.e. personal beliefs of what is right and wrong or good and bad. Secondly, for customers value is defined by the customers’ subjective perception of the benefits of the offering vs. the sacrifices that are needed in order to enjoy these benefits. Value can be both quantitative (price, speed of service etc.) and qualitative (design, customer experience etc.). Because the concept of value is subjective, it cannot be determined by the service provider.

Woodruff (1997) also highlights certain differences between the definitions which make their comparisons somewhat challenging. First of all, they are defined in terms of vague concepts such as utility, benefits and quality. Secondly, the notion of value is dynamic and differs with respect to the situation in which it is measured (e.g., purchase situation vs. actual consumption). For example, Gardial et al. (1994), Horovitz (2000) and Grönroos (2000) show that customers’ perception of value changes from the time of purchase to the time of use. According to Horovitz (2000), customers’ perceived benefits can be enhanced by, for example, providing customers with auxiliary elements related to the core product or service. Grönroos (2000) differentiates between core value and added value, where core value is the perceived value in the purchase situation, and the added value is the value created by additional services created in the customer-supplier relationship.

Woodruff’s (1997) value-hierarchy model attempts to consolidate different definitions of the sources of value. It suggests that customers conceive of desired value in a means-end way by highlighting the relationship between product attributes, consequences of the consumption process and personal values. Woodruff (1997) states that “customer value is a customer’s perceived preference for and evaluation of those product attributes, attribute performances, and consequences arising from use that facilitate (or block) achieving the customer’s goals and purposes in use situations” (Woodruff 1997, p. 142).

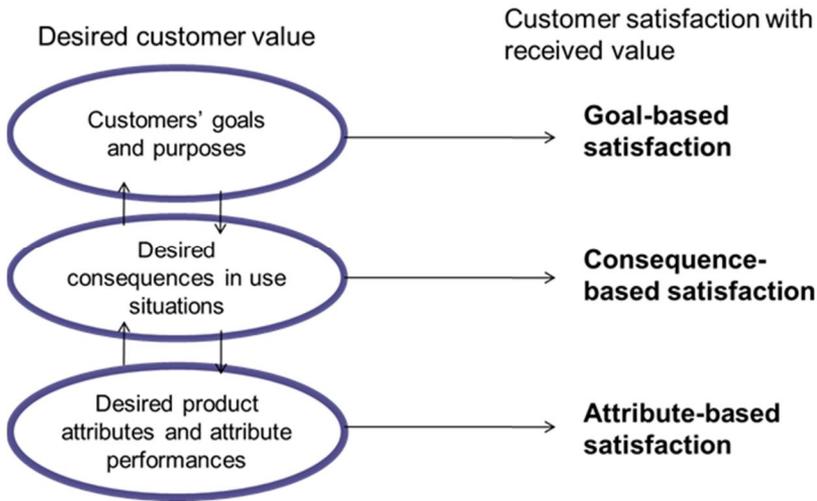


Figure 4. Woodruff's (1997) customer value hierarchy model.

The model assumes that customer value is based on the customer's learned perceptions, preferences and evaluations. Both desired and received value can be explained by moving from one hierarchy level to another. Starting at the bottom and moving upwards in the hierarchy, customers learn to consider the combined attribute value and performance value of the offering. On the other hand, starting at the top and moving downwards, customers assess the importance of consequences based on their goals and purposes.

Woodruff's model can also be used in describing perceived value, since customers evaluate products based on the current set of goals, desired consequences and desired product/service attributes. An important implication of the model is that customer value is strongly context-specific, because the set of desired customer value elements change based on the situation the customer is in.

2.4.2 Customer value and service dominant logic

The definitions of customer value in the context of services stem from the dynamic models (e.g., Zeithaml 1988), which assume that the total perceived value is determined in the process of purchase and consumption. In the context of services, the source of customer value is twofold. As stated by Bouwman et al. (2008) "services are perceived as the outcome of a process (the service product) and as the process itself". Hence, the total value of a service is the sum of the product/service value, i.e. the advantage of the service to the customer, and the process value, i.e. the process-related and operational advantages when producing that service. Since more and more products are evolving into product bundles including both the core product and auxiliary service components, the broader definitions of cus-

customer value have gained stronger foothold and created a shift in marketing thinking towards customer engagement in the value creation process.

The Service-Dominant (S-D) logic emphasizes the service process as a source of value. S-D logic focuses on co-creation of value and suggests that value is actually not embedded in the output of products or services, but rather co-created with the customer. This implies that the goal for companies is to generate customized offerings by maximising customer involvement throughout the offering creation process to achieve a better fit with the customer's needs and, hence, create higher customer value and competitive advantage.

Embracing S-D logic helps companies to overcome the limitations of product-centred value creation and offers them opportunities for competitive advantage and expanding their existing market by engaging customers in the process of specialization and value creation. To do that, knowing your customers through establishing, developing and managing customer relationships becomes more important.

2.4.3 Customer relationships

Developing customer relationships has been suggested as being an important means of gaining competitive advantage (e.g., McKenna 1991). Particularly in the service industry, where services are rendered on an ongoing or periodic basis coupled with the idea of customers forming relationships with people rather than goods, the demand for close customer relationships has strengthened (Berry 1995). Moreover, a loyal customer base has tremendous bottom-line value for companies (Gwinner et al. 1998).

Generally, relationships are “mutually orientated interactions between two reciprocally committed parties” (Håkansson & Snehota 1995, p. 25). Arndt (1979) describes *customer relationships* through long-term associations, contractual relations and joint ownerships, existing in industrial and institutional markets, but also in consumer markets. Moreover, the move away from transactional relations towards S-D logic (e.g., Lusch & Vargo 2006; Cova & Salle 2008) has expanded the market offering beyond the core product (Grönroos 1994) and affected the substance of relationships by including in it the exchange of products, services or both.

Customer relationships become assets for service organizations, although their establishment and development is a resource-intensive process (Anderson et al. 2001). Relationships develop as a chain of social interaction episodes – a sequence of acts and counter-acts where various activity links, resource ties and actor bonds are formed (Håkansson & Snehota 1995, pp. 25–42). Particularly in services, relationships are built from interaction between a customer and a service provider, where each encounter gives the service provider an opportunity to prove its potential as a qualified service organization and to eventually build trust and commitment. Hence, building a service relationship considers making realistic promises and keeping such promises during the service delivery by enabling employees and service systems to deliver the given promises (Bitner 1995). Moreo-

ver, for a strong relationship to exist, both parties must experience it as beneficial (Gwinner et al. 1998). Thus, the current form of a relationship is the outcome of previous interactions between the participants and it is affected by the company's own characteristics as well as the actions of third parties (Håkansson & Ford 2002).

Information technology has helped customer relationship management (CRM) by easing interaction with customers (Winer 2001). However, CRM is not just about technologies, systems or databases; its practices are a way to get close to customers, learn about their needs and preferences and to determine how to profitably create, satisfy, and sustain them (Battor & Battor 2010). Its purpose is to efficiently and effectively increase the acquisition and retention of profitable customers by selectively initiating, building and maintaining appropriate relationships with them (Payne & Frown 2006).

Different types of customers require different managerial approaches (Anderson et al. 2001). In particular, pursuing a service strategy requires understanding that traditional management methods and common sense from manufacturing may not work in the service context (Grönroos 1994). Thus, Anderson et al. (2001) have emphasized portfolio thinking and companies' own capabilities in managing customer relationships. Moreover, Jarratt (2004) underlines that an organization's relationship infrastructure capability, relationship learning capability and relationship behavioural capability are the key dimensions of relationship management.

In conclusion, pioneering in service business requires deep customer understanding so that the company can serve the customers' holistic needs, co-create value for the customers, and sense new business opportunities proactively. Furthermore, service customers require realistic promises and promise keeping on behalf of the service provider in order to gain the trust and commitment required for relationship building. However, customers are not the only stakeholders with respect to pioneering in service business, other partners in the network are also important. As noted in the section on capabilities, pioneering may well require learning new capabilities, and this can be done with the help of network partners. This business networks aspect is discussed in the following section.

2.5 Business networks and models

Teea Palo & Outi Nuojua (University of Oulu)

Business relationships and networks have recently received a great deal of attention in service business, as the development of new and competitive services often requires cooperation with customers and other partners. The growth of global competition, technological complexity, shortened product life cycles and new digital information instruments are driving companies' organizational specialization in core competencies (Möller et al. 2005). Moreover, the competitive environment is undergoing a fundamental change, with traditional markets being replaced by intentional networks (e.g., Möller & Halinen 1999) as individual companies are nowadays less able to develop major value activities or business innovations

alone (Svahn & Westerlund 2007). Hence, marketing outcomes are being increasingly decided by competition between networks of companies rather than by competition among individual organizations (Achrol & Kotler 1999).

2.5.1 Business, strategic and service networks

The network concept has been defined in various ways. Prior literature discusses both business networks and strategic networks. In its simplest form, **business networks** consist of business relationships that are directly or indirectly connected to each other. Business networks serve as a means of organising economic activity that lie in between markets of unconnected buyers and sellers and tightly connected hierarchies (Thorelli 1986). Moreover, in line with the industrial network approach, any industry can be described as a macro network or network of companies (Axelsson & Easton 1992). Hence, the network concept indicates a special organizational form at an aggregate level above individual companies (Håkansson & Ford 2002) and authors have used the concept in describing industrial settings as complex arrays of relationships between companies (Johanson & Mattsson 1987). Different definitions of business network are summarized in Table 4.

Table 4. Definitions of business network.

Source	Definition
Thorelli (1986)	Business networks are something between markets and hierarchies.
Johanson & Mattsson (1987)	Business networks are complex arrays of relationships between companies.
Håkansson & Ford (2002)	Business network indicates some kind of special organizational form at an aggregate level above individual companies.

From the strategic perspective, networks are recognized as stable interorganizational ties which are strategically important for participating companies (Gulati et al. 2000). Jarillo (1988) conceptualizes networks as modes of organization which are used by managers and entrepreneurs to gain and sustain competitive advantage. Thus, strategic networks are intentionally developed and strategy-based collaborative arrangements with shared goals and objectives focusing on innovation or knowledge transfer and a limited number of participating ties and actors (Svahn & Westerlund 2007; Ritter & Gemünden 2003). Different definitions of strategic network are summarized in Table 5.

Table 5. Definitions of strategic network.

Source	Definition
Jarillo (1988)	Strategic networks are modes of organization that can be used by managers and entrepreneurs to position their companies to achieve stronger competitive advantage.
Gulati et al. (2000)	Strategic networks are composed of interorganizational ties that are enduring, and of strategic significance for the companies entering them.
Svahn & Westerlund (2007)	Strategic nets are strategy-based networks with shared goals and objectives and a limited number of participating ties and actors.

Literature on network theory has evolved in significant ways during the past decades. Early network research focused on mapping the patterns of interpersonal ties within and between organizations. As we then moved towards a network economy, the research focus shifted toward studying networks as formal governance structures. (Achrol & Kotler 1999.) Moreover, the industrial network approach has concentrated on interaction between companies by exploring the formation and management of relationships between individual companies in industrial markets (e.g., Håkansson & Ford 2002; Håkansson & Snehota 1995). Furthermore, as the majority of research has dealt with the general characteristics of organically evolved networks, increasing attention has been recently given to the issues of intentionally developed strategic nets and, specifically, their management (e.g., Möller & Halinen 1999; Möller et al. 2005; Svahn & Westerlund 2007).

Lately, scholars have started to emphasize the service-dominant logic (e.g. Lusch & Vargo 2006; Cova & Salle 2008) and service business networks as a means of realizing it. *Service networks* are thus defined as constituting three or more organizations involved in long-term relationships (Thorelli 1986; Svahn & Westerlund 2007) concentrating on service business development and implementation. In service networks, services are co-created by a customer and a supplier (Lusch & Vargo 2006) and both – the customer and the supplier – are seen as resource integrators in the value creation process (Cova & Salle 2008). However, so far research has only considered service value co-creation in the context of solution business. Hence, further studies on the phenomenon are needed.

2.5.2 Network structures and forms

A network structure can be described as constituting interrelated layers of activities, resources and actors (Håkansson & Snehota 1995) where the actors in the network engage in relationships comprising certain activity links, resource ties and actor bonds (Svahn & Westerlund 2007). Networks arise as a result of interde-

pendent outcomes and form into complex, continuous and informal arrangements between the participants. Each relationship in a network entails reciprocal commitment, but also interdependence. In other words, close network relationships can create interdependence, but they also offer a means of handling this interdependence. (Håkansson & Snehota 1995, pp. 9–25.)

Another way of handling interdependence in relationships is to create and develop trust. Trust is a central feature of the relationship (e.g., Morgan & Hunt 1994) as it reduces feelings of uncertainty and fear of opportunistic behaviour. Moreover, trust and mutual adaptations are usually seen as prerequisites for long-term commitment and development of a network (Geyskens et al. 1996; Håkansson & Snehota 1995, p. 9).

Networks are described as both stable and changing, as most exchanges take place within the existing relationships which are changing all the time through interaction among the companies (Johanson & Mattsson 1987). Although routinization is common, a degree of conflict is important in order for the network and its relationships to operate successfully (Håkansson & Snehota 1995, pp. 9–10).

The literature offers several categorizations of networks based on their fundamental function, characteristics or location. Möller et al. (2005) distinguish three forms of network based on their structure: vertical, horizontal, and multidimensional value nets. Möller and Rajala (2007) develop this further using the underlying value creation logic of a network to distinguish current business nets, business renewal nets, and emerging business nets. Additionally, intra-corporate networks, strategic alliances and industrial districts have been classified as viable types of networks (Inkpen & Tsang 2005). However, such network types are usually formed around a single hub company, resembling some kind of vertical integration, and thus these classifications are not considered sufficiently extensive (Möller & Rajala 2007).

Achrol and Kotler (1999) identify four different network types: (1) internal market network, (2) vertical market network, (3) inter-market network and (4) opportunity network. Based on the concept of opportunity network, scholars have described dynamic networks as temporary alignments established around a particular customer project (Snow et al. 1992). As a hybrid form of vertical network and opportunity network, Piercy and Cravens (1995) have introduced the concepts of hollow network and virtual network. In a hollow network, a hub company usually draws heavily on the other companies' resources to satisfy its customers' needs (Möller & Rajala 2007). A virtual network consists of a group of individual organizations that have agreed to co-operate for a temporary period in order to exploit a market opportunity (Piercy & Cravens 1995).

Strategically important networks between individual organizations are often viewed as embedded in different spatial, social, political, technological and market structures which make each network unique (Halinen & Törnroos 2005). Differences in the underlying value creation logic and the networks' characteristics in turn create strict requirements with regard to organizational capabilities and arrangements (Möller et al. 2005). Hence, service business networks with customers and the management of these networks should receive further discussion.

2.5.3 Network management

A company's behaviour and performance can depend on how it initiates, handles, uses and terminates its relationships with other organizations within the network (Ritter & Gemünden 2003). The question of the manageability of networks is the focus of growing debate. In defining network management, authors traditionally refer to various actions ranging from organizing to delegating elements in networks of multiple actors (e.g., Lancioni 2000).

Authors representing the resource-based view suggest that large companies have a proactive ability to intentionally create, adapt and control a specific network structure due to their position as the central actor (Dyer & Nobeoka 2000). On the other hand, the industrial network approach argues that, as historically embedded and constantly changing sets of direct and indirect organizational relationships, networks cannot be controlled or coordinated by any one actor, even a so-called hub company. Moreover, a network and its structure is seldom the result of one party because it is the outcome of the deliberations, aims and actions of various participants (e.g., Håkansson & Ford 2002).

Recent scholars have highlighted the influence of organizational life cycle on network management. Networks are often dominated by path-dependent processes during their emergence, but become more intentionally managed as companies mature (Hite & Hesterly 2001). Hence, Möller et al. (2005) have adopted a pragmatic position towards companies' ability to operate within networks. They presume that an actor in the network can, at least to some reasonable extent, influence and control the behaviour of other actors and, in that way, manage in a business net. However, the opportunities and challenges of control and coordination vary considerably in terms of the type of network, and thus different skill sets or capabilities are required when companies operate in different types of networks (Möller et al. 2005). On the other hand, managing in a net can be seen as managing interactions with others. Then network management takes place through the roles that individuals, companies and other network actors take and receive from the parties (Heikkinen et al. 2007). Such roles include webbers, instigators, gatekeeper and advocates (Heikkinen et al. 2007).

To summarise, pioneering in service business requires that a company develops and manages in its service networks with strategically important customers and other partners. In order to do this, it needs network capabilities as well as a good understanding of the network and its characteristics, as these widely affect the overall coordination and management of the service business network.

2.5.4 Networked business models

To develop service business and commercially viable services, companies need to be capable of changing and developing new business models in order to be able to engage in their customers' changing processes. Previous literature offers various definitions of business models comprising different sets of elements and com-

ponents. Most definitions broadly consider the business model as a value creation logic or the architecture of the company. Shafer et al. (2005) identifies four major categories of business model components: strategic choices, creating value, capturing value, and the value network. Doganova and Eyquem-Renault (2009) emphasize value proposition, architecture of value, and the revenue model as the key elements of a business model. Perhaps one of the most known and used classification is provided by Osterwalder et al. (2005), who provide nine different building blocks of business models: value proposition, target customer, distribution channel, customer relationship, value configuration, capability, partnership, cost structure, and revenue model. Change in one element of the business triggers corresponding changes in its other elements (Kindström 2010).

Some studies consider business models to be centred on a particular actor (Amit & Zott 2001) and examine the network through this central actor (Palo 2011). These traditional business models are based on the idea of developing, producing, marketing and selling the product by oneself (Chesbrough & Schwartz 2007). Networks have, however, also been emphasized in business models (Shafer et al. 2005; Westerlund et al. 2008). A business model is seen as an important locus of innovation and a crucial source of value creation not only for the company but also for its suppliers, partners and customers (Amit & Zott 2001).

This boundary-spanning nature of a business model highlights the need to consider activities performed outside the boundaries of the focal company, which can rely on the resources and capabilities of third parties (Zott & Amit 2010). Cooperating with partners in the development of a new service creates many business model options, such as reducing expenses and opening new markets (Chesbrough & Schwartz 2007). In addition, in new service development a complex web of both internal and external relationships often emerges (e.g., Morgan, et al. 2007; Syson & Perks 2004) since a single company cannot master all the relevant competencies and resources needed (e.g., Komulainen et al. 2006; Lundgren 1995; Möller & Svahn 2009). Such relationships, for example with customers, suppliers and research institutions, can serve to share innovation activities (Ritter & Gemünden 2003). It is therefore essential to take the perspective of strategic networks discussed earlier. As part of developing the business model for a specific service, the necessary actors and roles in the service production need to be identified and formed into a strategic business net. The business net often has one or more leading actors; these usually have numerous critical roles and have a strong influence on the development of the business model. However, the service and content providers may also have the opportunity to be the leading company in the network (Kijl et al. 2005).

A business model thus provides a broader conceptualization for capturing the evolution of value creation from individual companies to networks (Nenonen & Storbacka 2010; Zott & Amit 2008). The business model describes the way the network of companies creates customer and network value (Kijl et al. 2005). Business model can even be perceived as a tool for forming a network for a new innovation or venture. Market creation can be seen as a set of trials, as encounters with potential partners. Such encounters transform the network that is being built

by the service innovation. The business model is shaped to fit the partner; each encounter puts the business model to the test and may result in major changes, for example to the technology or the network. (Doganova & Eyquem-Renault 2009)

Therefore, to distinguish business models from their traditional use, the concept of a *networked business model* is used here to describe the various actors coordinating and combining their activities and resources to create value from a specific service: the logic of the business net (Palo 2011; Palo & Tähtinen 2011). The key elements of a networked business model are the service, the customers, the other network actors and their roles, the value exchanges between the network actors as well as the dynamics of the business environment (Palo & Tähtinen 2011).

In summary, if a company is able to orchestrate or coordinate a network to jointly co-create value with not only customers, but also other stakeholders, it can use this ability right at the starting point of the process, i.e. when designing the services. This is highly important especially for small and medium sized companies that cannot possess all the capabilities needed to design competitive high-tech services. In the following section, the development of new services is examined further.

2.6 Service design and co-development

Mikko Sääskilähti, Essi Kuure, Antti Lindström (University of Lapland) & Katri Kallio (VTT)

2.6.1 New service development

Edvardsson and Olsson (1996) present a three-dimensional frame of reference for *strategic service development*, in which the main task of service development is to create the right generic prerequisites for the service. They state that the process must be adapted to the logic of the customer's behaviour and a good customer outcome. This presupposes that the company has a thorough understanding of its customer's needs and expectations and that it involves the customer in the process of developing new services.

Edvardsson's and Olsson's (1996) model distinguishes three main areas of service development:

- 1) service concept development,
- 2) service process development, and
- 3) service system (resource structure) development.

The *service concept* refers to the description of the customer's needs and how they are to be satisfied in the form of the content of the service or the design of the service package. The service concept serves as a prototype of the service, describing in detail what is to be done for the customer and how (utility, benefits and sub-services). It forms the point of departure and defines the prerequisites for realization of the service. The importance of the early stages of new service de-

velopment (i.e. idea generation, idea screening and concept development stages) and the role of customers in the service innovation process are emphasized also in other literature (e.g., Alam 2006, Alam & Perry 2002; Barczak 1995; Iwamura & Jog 1991).

However, systematic concept development is seen as the most critical phase (Perttula & Sääskilahti 2004; Orihata & Watanabe 2000). It can even act as a tool for reducing the fuzziness of the early stages of a development process (Alam 2006; Perttula & Sääskilahti 2004), since various and competing concepts can be created simultaneously with a reasonable amount of resources. By ideating, developing and presenting the new concepts it is possible to explore future possibilities with the customers and end-users. Informative and holistic concepts enhance fruitful communication (Sääskilahti et al. 2005) at this stage. Nevertheless Sääskilahti et al. (2008) claim that the traditional interpretation of concept development yields too narrow a perspective; the business should be considered as a whole, and new concepts should be developed to accomplish innovations.

The *service process* relates to the chain of activities that must function properly if the service is to be produced. The company does not have direct control over all parts of the process, but it must be able to control it in its entirety. This means that the roles and responsibility of the customers and partners must be clarified and means of controlling customer expectations specified. Here, detailed blueprints of the service process can be of assistance. Edvardsson and Olsson (1996) identify the following key managerial tasks: 1) *to create an understanding* of the customer outcome and the customer process; 2) *to involve the customers* in the development process and help them to articulate their needs, and 3) *to involve strategic partners and suppliers* when they are affected.

The *service system* for its part constitutes the resources that are required by or are available to the service process in order to realize the service concept. The system forms a whole where the subsystems must function separately but also together with other sub-systems. In the Edvardsson and Olsson model (1996), the system consists of the service company's employees, the customers, the physical/technical environment and the organization and control. A key aspect of the model is that the organizational structure clearly defines responsibility and authority, so that the profit and other activity centres are suitably organized with respect to their tasks. In addition, the company should be organized to focus on the customer's needs, the service and the business. This includes, for example, how feedback is achieved and how complaints and customer dissatisfaction are handled.

2.6.2 Service design

Service design has become more and more common among companies in both the service sector and industry in the effort to achieve desirable and innovative services. Service design activities *can occur at any stage of service development* (Holmlid & Evenson 2008). Just as product design is considered an integral aspect

of product development, service design is also to be considered a natural and important part of service development. As a discipline, service design should be viewed as complementary to service development, management, operations and marketing (Mager 2004; Edvardsson et al. 2005).

The **service design approach** is holistic and the work of service design is often interdisciplinary by necessity, because services are living systems and produced through interaction (Mager 2009). Service design is based on a user-centred approach that puts the users of the service at the centre of the development process (Koivisto 2009). Service design focuses on the customer experience and the quality of the service encounter as a key measure of success (Saco & Goncalves 2008). Service design is described as an outside-in perspective (Edvardsson et al. 2005) fitting thus with the customer-dominant logic.

Service design combines cultural, social and personal interaction. The use of different design methods, design research, design thinking and different visualization techniques link different stakeholders' views during the service development process (Miettinen 2009). The service design approach emphasises the power of collaboration and co-operation. Co-creation forms part of service design in two key ways. Firstly, the customers and end-users are thoroughly integrated into the development process. Secondly, co-creation also concerns the service offering. Most services are co-produced, so service design integrates the customers as active players in the service delivery process. In service design, customers and end-users are seen as active partners and co-creators of value (Mager 2009).

Designing innovative services cannot be done rapidly. It is important to first understand the operations of an organization, and then the lives of the customers (Eckersley 2008, p. 65). Involving users as innovators can result in more innovative services of greater customer value. Users are not substitutes for professional service developers, but their ideas can be used to trigger the design process (Magnusson 2003). Organizational teams have a major role in making the change permanent, as they have detailed process and system knowledge (Eckersley 2008, p. 65). Innovation is thus a teamwork process.

Service design process models, phases and methods should be selected and applied according to each case. However, the following key factors must always be considered (Miettinen 2009; Mager 2009; Moritz 2005):

- 1) Understanding the development challenge;
- 2) Collaborating with the clients, other stakeholders and the users;
- 3) Iterating throughout the process, i.e. creating ideas, prototyping, evaluating, improving and visualizing, and
- 4) Implementing the new service and maintaining and developing the services after implementation.

By using *service design techniques* that enable all levels of the service to engage with their users and to understand their experiences, it is possible to turn collaboration and involvement into real service improvements (Thurston 2009, pp. 150–151).

Service design that involves a holistic view, interdisciplinary and co-creative work, visual thinking and radical approaches creates a unique spirit that gives motivation for change (Mager 2009, p. 39). Organizational change can start from engaging with the client, by doing a design project together (Eckersley 2008, p. 65).

Service design is the design of the overall experience of the service as well as the design of the process and strategy to provide that service (Moritz 2005). Brand issues are also strongly tied to service design. Service design is conceptual and iterative by nature (Miettinen 2009). It implicitly contains the idea of innovation. A service designer can “visualize, express and choreograph what other people can’t see, envisage solutions that do not yet exist, observe and interpret needs and behaviors and transform them into possible service futures, and express and evaluate, in the language of experience, the quality of design” (Service Design Network 2005).

Customer and end-user collaboration in service development involving customers in the innovation process has a positive effect on new service performance (e.g., de Brentani 1991, 1995; de Brentani & Cooper 1992; Edgett 1994). The selection of collaborating customers should be made carefully, because the success of interaction depends on the strategic fit between the customers and the companies that interact with them (Alam 2006). Dynamic, vertically and horizontally networked development practices aligned with strategy and supported with social media and other enabling technology are increasingly important in facilitating innovation activity among these different players. Innovation should be understood as an open process in which all of the network actors can mobilise resources and thus become co-innovators in co-creating value for themselves and others (Mele et al. 2010).

The rapid development in methods and tools of personal communication has opened up new opportunities for collaboration with end-users. The Internet as a medium has enabled the harnessing of collective intellect for collaboration in ways that have been impossible to achieve through traditional planning meetings (Brabham 2009). This kind of dialogue between members of a network using web-based techniques, as described by the term *social media* (Kaplan & Haenlein 2010), has long been utilized as a medium for communication and marketing, but lately also for collaboration. The use of social media tools to seek ideas, opinions and information from an undefined group of volunteer end-users is called crowd wisdom, a type of crowdsourcing (Howe 2008). Social media and crowdsourcing are both recognized as key assets in equally involving larger crowds of network actors, from customers to service providers, in development processes.

When opening up the process to network members with different levels of development experience and with different types of expertise, communicating ideas accurately without misunderstanding becomes a greater challenge. The immaterial nature of services may also pose challenges in terms of communication during the service development process. More concrete methods of communication are therefore needed in order to minimize the possibility of misinterpretation among network actors. There are various service design methods that can be used for this purpose. These can be used to involve customers and facilitate co-creation of

innovations. Furthermore, the methods provide means to concretise a new offering or innovation even in same development process (Miettinen 2009).

When service is seen from users' perspective new ways of structuring services are needed. In service design, the customer journey and the service moments can be used as tools in the concept design phase of new service development. Each *service moment* comprises a number of touchpoints which reveal the relation and interaction between the user and the organization. Touch-points can be divided into channels (i.e. environment and places where the service is conducted), objects (i.e. things that the customer use, needs or gets when using the service), processes (i.e. determine how the service is conducted to the user) and people. These touchpoints can be designed and through them the service is experienced. (Koivisto 2009)

Service prototyping brings a concrete aspect to the evaluation and comparison of alternative options in the early phase of the development process (Blomkvist & Holmlid 2010). The main purpose of prototyping is to concretize ideas (Fulton Suri 2008). Prototyping offers a quick means of testing new service ideas in real settings with real users, which enables new service models to be trialled before investing large amounts of money in releasing them, thus reducing the risk of failure and enhancing the possibility of generating more meaningful and desirable futures (Meroni & Sangiorgi 2011).

Service prototyping produces rough representations of service concepts, i.e. prototypes (Blomkvist & Holmlid 2010). The service prototypes are used to explore, evaluate and communicate design ideas and concepts. The use of prototypes throughout the development process keeps concept discussions at a practical level and provides a tangible means of experiencing and explaining the different aspects of a service concept or idea. However, due to the emergent nature of service prototypes, service prototyping cannot be said to be a single activity, but rather a variety of approaches and activities (Blomkvist & Holmlid 2010).

When seeking to develop new concepts, the service innovation process needs to adapt accordingly. The organisational culture must also be open to risky initiatives and to open collaboration between network members. Service concepts are the result of development activities, and a concept is innovative when it is unique and brings competitive advantage for the company and value to the customers. The input of talented and creative individuals is also key to this success. Innovation always means change, and change can be challenging. When faced with difficulty, innovators would do well to draw on the words of Mahatma Gandhi, 'First they ignore you, then they laugh at you, then they fight you, then you win'.

3. Methodology

Arto Wallin (VTT), Jaana Tähtinen (University of Oulu), Inka Lapalainen (VTT), Maaria Nuutinen (VTT) & Teea Palo (University of Oulu)

3.1 Research design and methods

This study has been conducted as part of the Proform research project (2010–2012) funded by the Finnish Funding Agency for Technology and Innovation (Tekes), VTT, the University of Oulu and the University of Lapland. Our chosen research design was abductive (see Kovacs & Spens 2005), since it places equal importance on theory and the discovery of unexpected observations from qualitative empirical data. Accordingly, we started with a set of different theoretical viewpoints (as discussed in chapter 1). Applying a variety of theoretical angles was made possible by the different theoretical backgrounds of the researchers involved in the project. This multidisciplinary approach aimed firstly at creating multiple views of the multifaceted empirical phenomenon under study and, secondly, at establishing common grounds for multidisciplinary research on pioneering in service business. Based on these theoretical perspectives, an initial framework of pioneering elements in service business was drafted. However, the integration of theoretical perspectives continued throughout research project.

The empirical part of the study was designed to be two-fold. *The first sub-study* focused on *the success factors of service business as a phenomenon*, with interview data and workshops. *The second sub-study* focused on *collaborative case studies*, in which companies aimed at developing their business logic towards a service- and customer-based logic and thus towards pioneering in service business. This sub-study was conducted as three individual case studies. In addition, one international success case of service business development was studied to complement the three Finnish case studies. Each case company was at a different stage of development and thus, together, they offered a rich source of empirical data. Figure 5 illustrates the overall research process, from the theoretical starting points to empirical data collection methods and case analyses.

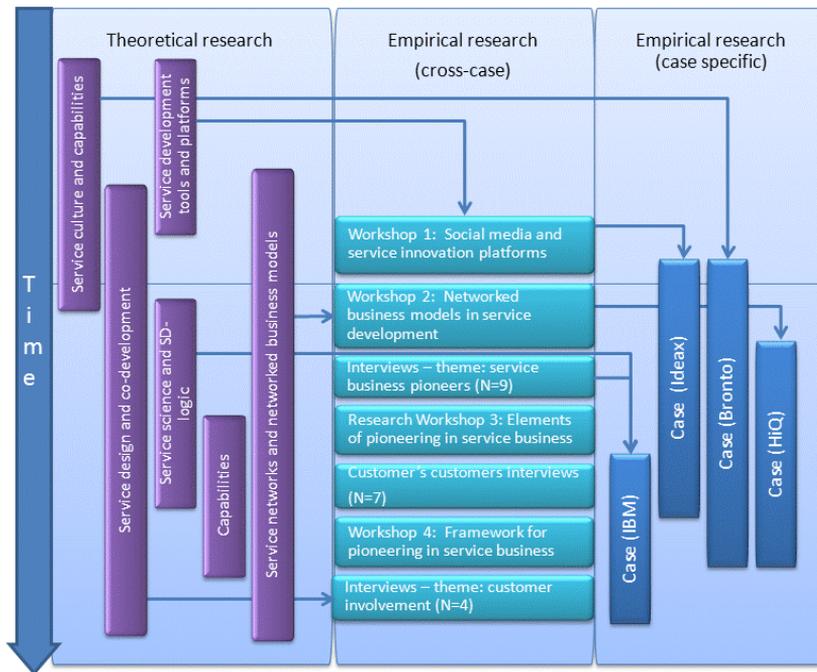


Figure 5. Progress of the research.

During the research process, several joint workshops were organized with the collaborating companies. The first workshop concentrated on service innovation platforms and tools, and it acted as a preliminary for the Ideax case study. In the second workshop, a scenario-based approach was used to vision the future business models for the services under development. This workshop introduced the companies to the development of future business models, and several participating companies expressed keen interest in piloting the future visioning method.

After the two workshops, the data collection for the first sub-study started. Nine semi-structured interviews were conducted at the five companies, which were developing new services and their service business. The thematic interviews concerned service business, new service development, and characteristics of service business. Later on, these interviews were continued with managers and other employees in four companies in order to collect narratives on service business. In addition, seven customer interviews were held in order to bring the customer's point of view into the study.

The interview data were analysed with the help of NVivo software using content analysis and theme-based categorization. These results were reflected on against the initial theoretical framework, resulting in a second draft of elements for pioneering in service business. However, the analysis was not limited to these precise themes, and therefore other relevant issues concerning the phenomenon were allowed to be raised.

After the first interviews and data analysis, the research group met in a two-day workshop to discuss the findings and their alignment with different theoretical perspectives. The results of the interviews and research workshop were summarized as a new version of the service business pioneer framework, which was presented to the participating companies for feedback. These workshops provided additional understanding of the phenomenon of developing service business and enhanced the multidisciplinary view of pioneering in service business.

In the second empirical sub-study, each case was analysed from a specific theoretical viewpoint. Hence, each case provides a unique aspect to the development of service business and service-oriented business logic. Each case and the case-specific research methodologies are discussed in more detail in the next section.

In parallel with the empirical data collection and analysis, the research group returned to the theoretical domains of service business development, transformation and pioneering in order to seek concepts and models that could provide better understanding of the empirical data. Hence, the original theoretical insights directed the empirical part of the study, but also new themes were allowed to arise from the empirical domain. These new discoveries then urged the researchers to go back to the theoretical tools and to refine the framework. The resulting framework will be discussed in Chapter 5.

3.2 Case-specific methodologies

As mentioned earlier, the second sub-study consisted of one success case and three Finnish collaborative case studies. Their specific research methodologies are presented in Table 6 and are only briefly discussed here.

The first case relies on interview data and a literature survey concerning IBM's historical development. It acts as a reference case and complements the other cases in which more varied data types and sources were applied.

The second case focused on studying and facilitating a large Finnish IT service provider to create new business by introducing more interactive, customer- and end-user-oriented service development practices within its organization and establishing a value network. This case study focused on a business unit that serves the state administration and municipalities as its customers. For the case study, we created the IDEAX learning model to renew the service innovation practices within the organization, and the IDEAX co-development process to manage development work between the IT company, the customers and end-users. In addition, the researchers brought knowledge and methods drawn from service design and social media for involving end-users and relevant network members in the service innovation process.

The third case represents futures research. The Delphi method was used to identify essential elements in developing future networked business models for services. Delphi utilizes experts' opinions in a structured communication process allowing the experts to deal with a complex problem (Linstone & Turoff 1975). The

method is justified by the research objective; the development of service business is complex and varying perspectives are needed.

The fourth case focused on studying and supporting a technology manufacturer to create new operating practices for interaction with the customers in order to develop new service innovations. The concrete development target and the enabler of new service development and changing current practises was an IT s ystem, for enhancing information exchange, communication and service development together with customers. From a broader perspective, this was also a case of an organisational culture transformation path. The case was based on an earlier action research-based intervention in which the state of the service culture and capability was evaluated based on extensive data in order to identify the company's service business development potential and challenges. In addition, the development was supported by organising multi-functional ideation workshops in which the present and future services of the company were analysed and envisaged. The case aimed to tackle some of the challenges recognised in the earlier study and, thus, to learn more about how to support long-term transformation of building service capability and culture.

Table 6. Methodology in four parallel cases.

	Case 1	Case 2	Case 3	Case 4
Stakeholders	IBM	Tieto Finland, City of Mikkeli, Citizens	HiQ Finland Oy	Bronto Skylift + 6 customers
Unit of analysis	Organization's transformation process	New service development	Business model	Interventions for enhancing organisational culture transformation
Objectives	To study how service research supports the transformation process.	To study a new networked and customer-oriented methods of service development in the business to municipal context.	To develop the future service offering by analysing potential changes in the business model.	To study how customer involvement in service development can be increased in order to support building service capability and culture.
Research method	Qualitative interview, literature analysis	Case study / Action research	Delphi method	Action research / case study
Data collection methods	Literature analysis: books, articles, annual reports, etc.; interview: Skype	Participatory observation, interviews, videotaping, memos, questionnaire.	Delphi questionnaire rounds (online)	Interviews
Analysis methods	Content analysis (identification of themes)	Content analysis and theme-based categorization.	Content coding and theme-based categorization	Content analysis
Theory / framework	Service science, change management, renewal	New service development, service design, user-driven and value network perspectives.	Business models, strategic networks	ISCC approach

4. Empirical cases – development paths towards pioneering in service business

This chapter describes the second empirical sub-study of this study, namely the four single cases which are examples of the different development paths companies may take when aiming towards pioneering in service business. Each case is titled to according to the development aspect how service business was developed and service-orientation was enhanced.

The first case provides two interesting perspectives on the later discussions. Firstly, it aims to describe the successful development path of a previously highly technology oriented organisation which managed to transform into a global leader in IT services by combining its technology orientation with a customer service orientation. Secondly, it provides a unique viewpoint by studying the role of service research in this development process.

The other sections introduce three Finnish case studies in which companies aim to develop their service business with specific methods. The second case studies a new networked and customer-oriented means of service development. This case study is conducted in the business to municipal context, which provides an additional interesting point of view to this report. In the third case, experts are involved in the development of the company's future business model by utilising methods of future research. The last case describes a long-term study in a technology-focused company which is aiming to develop its service business. In this case, service business development is focused mostly on developing new operating practices for interaction between the supplier and customer during the service innovation process.

4.1 Service research supporting the transformation to service business

Katri Kallio & Arto Wallin (VTT)

Table 7. Key information: IBM case (IBM 2010).

International Business Machines Corporation (IBM)		
General	Industry	IT services & consulting, computer software and hardware
	Main markets	Global
	Employees (total)	426 751 (2010)
	Main offering (IBM Global Services)	IT infrastructure and business process services. Consulting, systems integration and applications management services.
Case	Focus of research	Service research unit's role in IBM transformation towards services.
	Objective	To create understanding how IBM's service research has impacted IBM's success in service business.
	Research method	Literature study and interview

IBM is a well-known example of successful transformation from a technology-oriented organization into a service company (e.g. Mathieu 2001). IBM initially built its worldwide success in high-tech product business (mainframe computers), but by the beginning of the 1990s IBM was struggling to survive. The struggle culminated in 1993 when IBM experienced the most substantial annual loss in its history, resulting both in layoffs and a new CEO. However, IBM's near-death experience during the early 1990s raised new opportunities to the foreground, and in retrospect may be considered as the starting point for IBM's success in service business.

Although the IBM success in service business stems from the 1990s, IBM has also taken major leaps in service business – particularly in service research in the 21st century. IBM's first service research group was founded in late 2002, and since then service research has amplified IBM's success. Our study focuses mainly on the time period starting from the establishment of IBM's first service research group. Unlike IBM's overall survival and fast growth in the 1990s, this part of IBM's success story hasn't yet received extensive academic attention. Therefore, this case study provides new viewpoints to IBM's success story in transforming its business logic towards services. In particular, this case study focuses on the development of the IBM service business from the research unit's perspective, and is based on the interview with Dr. Jim Spohrer – former Director Almaden Services

Research at IBM's Research Center in San Jose, USA. The time period preceding Jim Spohrer is described mainly as based on the existing literature.

4.1.1 Background of the interviewee

Jim Spohrer⁴ entered IBM Research after about 10 years of work at Apple Computers. He started leading the user experience research area in 1998, and quickly transitioned to the role of founding CTO of IBM's new venture capital relations group. During his work in IBM's Silicon Valley-based VC group, he realized that IBM service business – already a high growth area of IBM driven by IT outsourcing – was about scaling innovations and should be seen as an innovation amplifier. Moreover, he realized that innovations did not have to come only from inside IBM: rather, external companies also represented a huge opportunity for IBM's service business.

Spohrer realized that IBM Research could be producing hardware and software technology that was superior, and yet their service business would help to scale-up innovations that were already in the marketplace because – unlike the research technologies – the external ventures already had full business models built around them. Moreover, when some small company sold, for example, enterprise software for 100k€, the systems integration work associated with it may have totalled one million dollars. Consequently, IBM's service business was sometimes making revenue that was 10 times that of its the software business.

In 2002, since the Internet-investment bubble had burst, Spohrer became the key person in establishing IBM's Almaden Services Research group in San Jose, USA. During 2003 and 2009, he worked as the Director of Almaden Services Research. From that time onwards, Spohrer has been a driving advocate of the Service Science, Management, Engineering and Design (SSME+D) initiative across companies, governments, academics and universities.

Currently, Spohrer works as the Director of IBM Global University Programs. He studies universities as rapidly evolving complex service systems, and with colleagues around the world, he also helps universities establish and/or grow their service research and education programs. The study of complex service systems requires multidisciplinary knowledge and challenges the traditional academic disciplines to focus on service systems as the fundamental building blocks of business and society.

4.1.2 Rise of IBM service business

The beginning of IBM service business can be dated at 1989, when IBM introduced its first business recovery services and signed service contracts with important customers (IBM 2002). A few years later IBM formed a new subsidiary – 'Integrated Systems Solutions Corporation' – which was focused on systems inte-

⁴ Dr. Spohrer received a PhD in Computer Science from Yale University in 1988.

gration services. Thus, the rise of service business had been initiated, but shortly IBM was about to face the most serious crisis in its entire history.

In 1992, IBM was quite literally struggling for its existence. The company experienced a catastrophic \$5000 million yearly loss, and by 1993 nearly 120 000 employees had left the company (IBM 2002). There was strong pressure on IBM – which was already very fragmented – to be broken down into individual, independent businesses (Gerstner 2002). However, the company's direction was changed after IBM's board forced chairman and CEO John Akers to resign and new CEO Louis Gerstner⁵ was selected. Gerstner, who didn't have a technology background, wanted to change one of the main weaknesses he had experienced as a previous customer: IBM was not listening to its customers.

"...Gerstner realized that customers sometimes wanted to buy our competitors' hardware and sometimes the competitors' software. However, customers also told Gerstner that they trusted IBM more than anyone else to integrate hardware and software into their critical business systems (some also said) we want to outsource our technology, because running computers is not our core business..." (Spohrer)

As a result of starting to listen to customer needs more carefully, IBM started emphasizing systems integration and IT-outsourcing services. Against previous expectations, Gestner changed IBMs strategy from separating businesses to integration, and IBM's service business was playing a key role in the new strategy. In just a few years IBM was saved from the worst, but it took more years to transform the technology-oriented culture into a new blended technology and customer service-oriented organization. The 'near death experience' became one of the biggest motivators for the change, and it was used very skilfully in a long process of transforming IBM's organizational culture. Figure 6 describes the development of IBMs net income and number of employees from the crisis in early 1990 to the success experienced during the first decade of the 21st century.

⁵ Lou Gestner started as IBM-s CEO in April 1993....

4. Empirical cases – development paths towards pioneering in service business

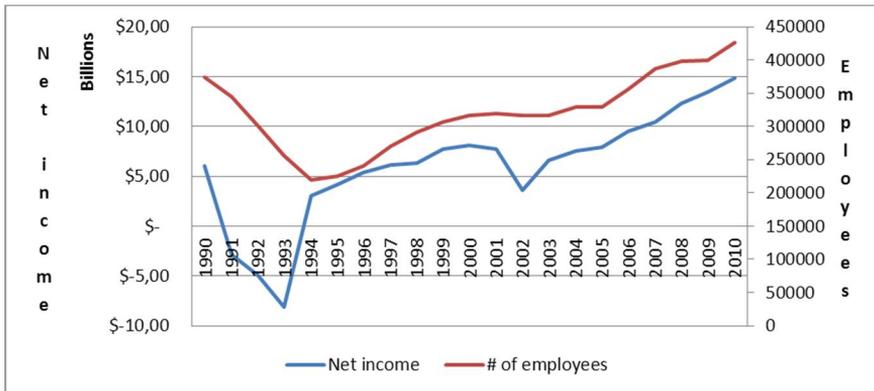


Figure 6. IBM's historical turnover in terms of net income and number of employees.

Along with focusing on saving IBM from the crises, new management focused strongly on developing service business (Gerstner 2002). Already at the end of 1993, IBM had developed its first company-wide service strategy. In 1995, IBM unified its worldwide service business under a single brand – IBM Global Services⁶ (IBM 2002). By the end of 1997, IBM had more than tripled employees working in service business and it had become world's largest IT service provider. Revenues from IGS had also started to rise significantly. Figure 7 depicts the development of IBM service business from 1991 to 2010.

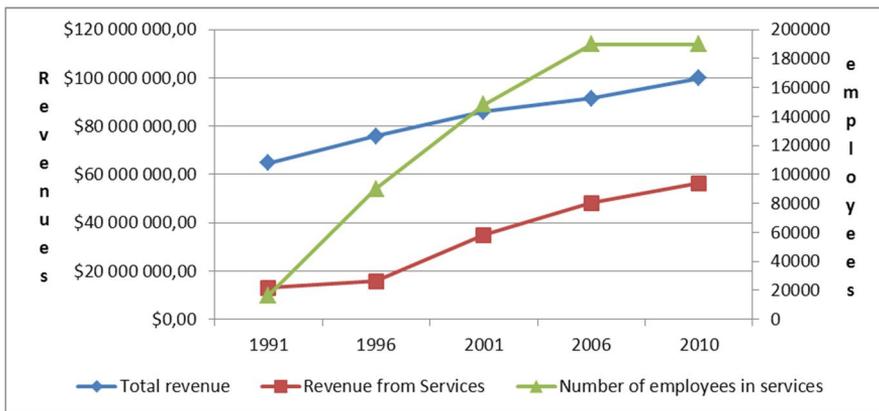


Figure 7. The rise of IBM's service business (IBM 1994, 1996, 2001, 2006, 2010).

⁶ Global Services: within Global Services, there are two reportable segments: Global Technology Services (GTS) and Global Business Services (GBS). GBS primarily provides professional services and application management services, whilst GTS provides primarily IT infrastructure services and business process services. (<http://www.ibm.com/us/en>)

By 2001, IGS had already grown from \$7 400 million business (1992) to \$30 000 million and accounted for roughly half of the company workforce (Gerstner 2002, pp. 132). Nevertheless, IBM focused more intensively on its service business, and the strong growth continued for the first half of the 2000s.

Over the course of these year, mergers, acquisitions and divestitures also had an important role to play on the development of IGS and the evolution of IBM as a whole. IBM made several strategic acquisitions to strengthen the knowledge of services and to enable moving up to higher value service offerings, which had the largest growth potential. On the other hand, it became more obvious during the 2000s that hardware had become a commodity. Consequently, IBM moved voluntarily away from several sectors it had occupied in the hardware industry. For example, in 2004 IBM sold its hard disk business to Hitachi. At the end of the same year, IBM made an agreement under which Lenovo acquired IBM's personal computing division⁷. There were also many other strategic deals that transformed IBM's focus more intensively on higher growth service businesses.

In summary, in the early 2000s, IBM was in the middle of a massive strategic change from hardware-oriented business towards appropriately blended hardware, software and service business. However, the focus of research was still almost purely based on the old strategic goals, so the strategic goals of IBM research also needed to be updated.

4.1.3 Emergence of service research at IBM

"In fact, most people in IBM Research at the time didn't know what service innovation was." (Spohrer)

Although IBM is well-known for its investments in research and development⁸, service research is quite a new area in IBM research. In early 2000, service revenue accounted for almost 50% of IBM's revenue, but virtually none of the 3000 researchers at IBM research were working in service research. Spohrer discloses that IBM Almaden Research Center – which had been focusing for years on data storage⁹ – wanted to be the leader of the 'next big thing' for IBM research. Moreover, there was a definite need to start supporting the new business, creation of new business models and knowledge creation on services by means of service research.

⁷ Lenovo to acquire IBM personal computing division: <http://www-03.ibm.com/press/us/en/pressrelease/7450.wss>.

⁸ On an annual basis, IBM invests approximately \$6 billion for R&D. 2010 was the 18th consecutive year when IBM has been the top patent leader in the United States. IBM's 5,896 patents in 2010 represented the greatest number of U.S. patents ever awarded to a single company in one year. (<http://www.ibm.com/investor>)

⁹ Many major information technological innovations have been devised and invented at the Almaden Research Center. For example, innovations such as the hard disk (1964) and relational database were invented there.

“There was a gap between what IBM’s business was and what our research group was doing.” (Spohrer)

Spohrer clarifies major reasoning behind the establishment of the service research group. Firstly, they realized that service research could be utilized to improve the quality and productivity of existing offering as well as improve customer satisfaction. Secondly, they discovered that service research could be applied to improve IBM’s ability to acquire external companies and services. Thirdly, they noticed that there was a considerable amount of key intellectual property in the service area. Lastly, they learned that understanding service systems and where the value is in service networks is very important in service business, and there is a great need for creating a new kind of service researcher who understands service systems from multiple disciplinary perspectives. On the basis of these issues, the first service research group was formed at Almaden in December, 2002. The research group had six specific responsibilities, which can be summarized as:

1. Improve the company’s existing service offering
2. Create new service offerings
3. Improve mergers, acquisitions and divestitures
4. Improve customers’ service research and innovation capabilities
5. Create intellectual property for IBM in service area, patenting
6. Publish about service research and innovation, and become the global leader in service science.

4.1.4 Critical points in the successful transformation and how the process was managed

Since IBM succeeded in creating such an outstanding change in their business logic, it is very interesting to learn how they managed this transformation and what the key points in its success were. Spohrer provides the four most critical factors for IBM’s successful transformation: First of all, the most critical point in the change for the IBM Researchers was the formation of service science, as an IBM Research professional interest group (PIC) area, and creating a shared understanding about service systems throughout the organization. Secondly, a significant amount of high level executive support made the transformation possible. In addition, Spohrer suggests that the organization’s ability to develop and acquire particularly capable people has been critical for long-term service innovation success. Furthermore, the organization has to be able to renew continuously in order to sustain success in service business. This means that the organization has to invest in innovation; Spohrer describes this as the organizations capability to “run, transform and innovate”. In the following, these critical success factors are explained in more detail.

Formation of service science and creation of a shared understanding

“Probably the most critical thing was really the formation of service science and the deeper understanding that we developed about service systems”. (Spohrer)

Spohrer highlights the importance the creation of a multidisciplinary service science approach and the substantial role that understanding of complex service systems has had to the organization. It required an active involvement in new kinds of networks and recruiting new persons to an organization that represented multiple perspectives – such as business, organizations, anthropology and supplementing the existing technology know-how. This development has acted as an engine for change and for the future. Currently at IBM, customers and other interest groups (organizations, cities, states, nations or even the planet itself) are seen as complex service systems involving people, technology, organizational networks and shared information.

“So fundamentally, when we started getting really really good at modelling service systems and being in all kinds of different types of service networks that existed in this world... .. it was really the deep understanding of service systems that allowed us to improve our model, allowed us to see opportunities for understanding that you can’t just approach service systems from technological perspective; you’re going to miss out on the majority of value.” (Spohrer)

High level executive support and communication

“Without strong executive support, it would have been incredibly difficult.” (Spohrer)

Spohrer stresses that the transformation of the company’s business logic was based on a strong executive commitment and support. The company’s top management, starting from the CEO, was keen on saving the company, of course, as well as creating new business and research to enable its future success. It is vital that the business transformation – especially on a magnitude like this – is supported from top to bottom. Moreover, Spohrer emphasizes the significance of high commitment that the executives lent to the formation of new service science.

“There has been a huge amount of executive support... Part of our secret success is that we have very, very, very smart systems-thinking executives, not just in technology.” (Spohrer)

Spohrer describes that after creating a shared framework for the change, the high-level executives put a lot of effort into communicating it throughout the organization. You could interpret from this that one cannot actually over-communicate in the transformation process: rather, the more means one uses in communications, the better.

“Communicate, communicate, communicate to the rest of IBMers: this is the way we are going to do things. It made our jobs at service research much easier...”

Ability to create and acquire service business capabilities

“I would say that the most important thing really for long term service innovation success has been our ability to create T-shaped people.”

When organization changes its logic towards a holistic approach, it means that the personnel have to share the view and have the capabilities needed to offer this kind of service. Spohrer emphasizes the importance of creating new kind of T-shaped skills and people to the organization. These people must have broad communication skills across the systems and academic disciplines (and cultures as well: this is a third dimension that IBM is good at). In addition, they have to represent different backgrounds, since multi-disciplinary perspectives enable the organization to adopt the holistic systems perspective. Spohrer finds this really critical for long-term success in service innovations, and he notes that IBM has been successful at this.

“T-shaped people, who have that combination of technology, business, social, organizational change... they can work better in teams and really have deeper understanding of what service systems are and how they evolve. So once you have a proper abstraction, then you can move your people around more easily – they hit the ground running better. There is just huge amount of benefits when you start seeing all of these different things as service systems, opposed to very, very different industry sectors.” (Spohrer)

However, Spohrer mentions that – in practice – it is highly challenging to create new kind of skills and capabilities in a company with a long history, due to the prevailing culture and knowledge. In addition, the roots of people’s thinking are already formed within the schooling system and universities. This is why Spohrer is currently working in close collaboration with universities across the globe. He wants to educate students to learn about holistic service systems, that e.g. a city or an organization is. Furthermore, Spohrer accentuates the importance of the acquirement of new knowledge from the outside organization when needed skills cannot be found in house.

The acquisition of PricewaterhouseCoopers Consulting (PwCC) division was a very critical acquisition for the development of IBM service business. It allowed IBM to move up from systems integration services to higher value business consultancy services. The knowledge acquired from the consultancy firm in collaboration with existing knowledge helped to create specific tools to enhance change, study customer needs and behaviour, and show its impacts. This development was very relevant to the change:

4. Empirical cases – development paths towards pioneering in service business

“I would say it (the acquisition of PwCC) was at least 50% of our success, because my team worked very closely with that acquisition¹⁰, and we realized very early on that to succeed in service research, we had to model our customers much, much more than before and in much more sophisticated ways, and also much more deeply than ever before.”

As a result of working with PwCC (inside IBM called GBS – Global Business Services), the service research team was able to develop far more sophisticated tools for modelling different industries and customers. Spohrer’s team won two IBM Research outstanding accomplishment awards, each of which requires a demonstration of over \$100 million impact for business.

“if you accumulate, we had billions of dollars’ worth of impact for IBM just from improving the Component Business Modelling (CBM) tool (acquired from PwCC). So we had very sophisticated models for our customers, far more sophisticated than we ever had in IBM’s history.” (Spohrer)

The aspiration to renew the organization continuously

“An organization definitely has to have the capability to redefine itself year over year.” (Spohrer)

This is how Spohrer describes an organization that aspires to be a pioneer in service business. IBM has invested a lot of effort in continuously renewing itself. It is very important that renewal is embedded deep into the organization culture. In addition, it is crucial that the personnel is capable of being innovative, learning continuously, and being able to communicate broadly and understand different vocabularies. Spohrer reveals that they try to achieve this by moving people a lot to see various jobs and assignments.

“If the area they are working on is less needed than before, we have very good ways to internally transfer T-shaped people onto the new things that have higher probability of leading to innovation for IBM.”

For another, Spohrer emphasizes the importance of investing in innovations. He explains that in order to create innovations, you must have the discipline to lower running costs every year: the organization has to be able to create more and more productivity and efficiency, (“doing more with less, year after year”) which frees up the people who previously have been in the “running” part of the business, and to contribute to the “transform” or “innovation” part of the business. In addition, the company has to master the governance structure around and how they add money to invest in innovation. Further, in order to create innovations (for which the creation and management process cannot be precisely known beforehand), the organization is also required to accept a realistic failure rate.

¹⁰ See the book “Can Two Rights Make A Wrong: Insights from IBM’s Tangible Culture Approach”

“You could have very successful business, but it doesn’t innovate; it just does “run” and “transform” investments, which copies innovation from others. But if you want to be a leader in innovation, you can’t just run and transform, you have to run, transform, and innovate.”

4.1.5 Lessons learned

In conclusion, it can be interpreted that IBM’s business transformation, from a technology-oriented company to a company enhancing service-orientation, has been a challenging and long-lasting path that has evolved extensively over the course of two decades. The change has certainly been a major one, and it has been able to bring the company from the “near-death experience” back to a highly successful corporate entity strongly competing in global markets and finding a new direction for the future. The transformation needed in the organization originated from a situation where IBM had not been listening well enough to its customers and pursued excellence in primarily internally-developed technology. The changes in the top management launched the path of transformation, and soon the emphasis was put on listening to and understanding the customer to better offer holistic solutions instead of the excellence in technology-based products alone. This change in the business logic required significant changes in the organization, particularly in the way of perceiving the business as well as in the corresponding requirements the personnel should endorse. This meant transforming *organizational culture and creating new business models*.

In our case study, we were especially interested in the role the research center has had in supporting the change and how the transformation process was managed. To summarize, the development of new service business capabilities and service science have been critical steps enabling the success of the transformation. This required a new kind of systems thinking among the executives, organizational re-structuring (e.g. mergers and acquisitions), and creating the new kind of T-shaped people with diverse backgrounds in the organization. The creation of service science and know-how in service systems (also referred as smarter systems) seems to have acted as a shared frame of reference that supported the creation of new kind of service-oriented culture in the organization.

In addition, the renewal and creation of innovations is an essential part of the service-oriented culture at IBM. IBM focuses heavily on innovation activities, which are enabled by continuous improvement and the reduction of running costs. The surplus can’t hereby be invested in innovation activities. Moreover, service research and business work like an innovation amplifier by scaling-up (internal and external) innovations and hence enabling huge service revenues.

The critical success factors in IBM’s transformation path from the research center’s perspective can be summarized as follows:

1. Creating customer understanding from the changing customer needs and starting to act as based on the same

4. Empirical cases – development paths towards pioneering in service business

2. Creating a shared frame of reference among the executives, the research center and the whole organization (deep understanding of service systems)
3. High level executive support in the change: systems thinking executives supporting service science and business
4. Communicating vision and creating a flexible organization
5. Ability to create T-shaped people
6. Knowledge acquisition through strategically important mergers and acquisitions
7. The capability to re define the organization year-after-year (empowering everyone to be innovators)
8. Disciplined investment governance: Predictably lowering the running costs, year after year, and investing in innovation.¹¹

This case began by describing the historical background of the rise of IBM service business as based on the existing literature. Our study differs from most of the studies made of IBM in the sense that it focused especially on the important role and perspective the service research has had in supporting the pioneering nature of IBM's service business. This perspective of IBM's transformation has not previously received significant scientific attention. The validity of our case study is improved in the way it is connected to the existing literature and conducted by two researchers, who circulated the ideas between them. However, the empirical analysis of the case study is based on a single interview with the former director of IBM Almaden Service Research. This is why it is strongly influenced by his views and opinions. Nevertheless, we believe that he has a holistic picture of the research center's role in supporting the transformation. In further research, this perspective could be deepened and made more diverse by also interviewing other persons from the research center who have been involved in the transformation and creation of service research at IBM.

¹¹ See IBM's Earning Per Share since 2002 - one dollar added each year

4.2 Co-developing new services with customers and end-users in the business to municipal context

Inka Lappalainen (VTT), Katri Kallio (VTT), Essi Kuure (University of Lapland) & Antti Lindström (University of Lapland)

Table 8. Key information of Tieto case.

Tieto Finland		
General	Industry	IT services
	Main markets	Nordic countries, Russia and Poland
	Size	18,098 employees (2011)
	Main offering	Industry solutions, enterprise solutions, managed services, product engineering solutions, consultation
Case study	Stakeholders	Tieto Finland (IT company) City of Mikkeli (municipal organization) End users: citizens
	Focus of research	<i>How to involve customers and end-users in the co-development process (service provider viewpoint)</i> <i>What kind of benefits and challenges the process resulted in from the different perspectives of participants.</i>
	Objective	To examine a new networked and customer-oriented means of service development in the business to municipal context.
	Research method	Case study / action research

4.2.1 Background – three perspectives on managing new service development

The starting point of our case study was the interest of the IT company to develop a new service concept for facilitating more interactive and user-driven public service development. Taking a broad view, this interest relates to the radical transformation in business and innovation logic in the IT industry in Western countries (cf. 1.1.1; Chesbrough 2011). Consequently, IT companies have faced the need for a comprehensive transformation from product- and technology-orientation towards a more service- and customer-oriented culture (cf. Nuutinen & Lappalainen 2012). At the same time, the public and, especially, the municipal sector, are under pressure to find more efficient and customer-oriented ways to organize, produce, and develop services. Citizens have shown growing interest in more active participation in decision-making, while the digitalization of services and social media enables new kinds of services and their co-development with end-

users (see e.g. Brabham 2009; Bäck et al. 2012). Hence, the roles of producing and developing services are changing between different players, such as municipalities, IT-providers, and end-users, which were the focus of our interest.

New ways of developing services as networks, which include business and municipal organizations as well as citizens are therefore needed. It is challenging for IT-providers, however, to define customer value in terms of changing public sector demands. Additionally, it can be difficult for private and municipal organizations to understand the profound changes needed in their core tasks and the ways in which they should manage new service development processes with their partners and citizens. Therefore, it was not only a question of developing a new service, but at the same time multilevel service business development was required within the IT company and the entire value network.

In order to highlight the nature of the profound change, we defined it from the following three perspectives: 1) the organizational perspective of managing new service development more interactively, 2) the perspective of co-developing a new service concept, and 3) the application perspective of the co-development process with customers and end-users (the entire value network). These three perspectives illustrate the aspects that have to be taken into account in the comprehensive transformation towards a more service- and customer-oriented culture, and how this transition could be realized. Figure 8 shows each of the development perspectives addressed in our case study.

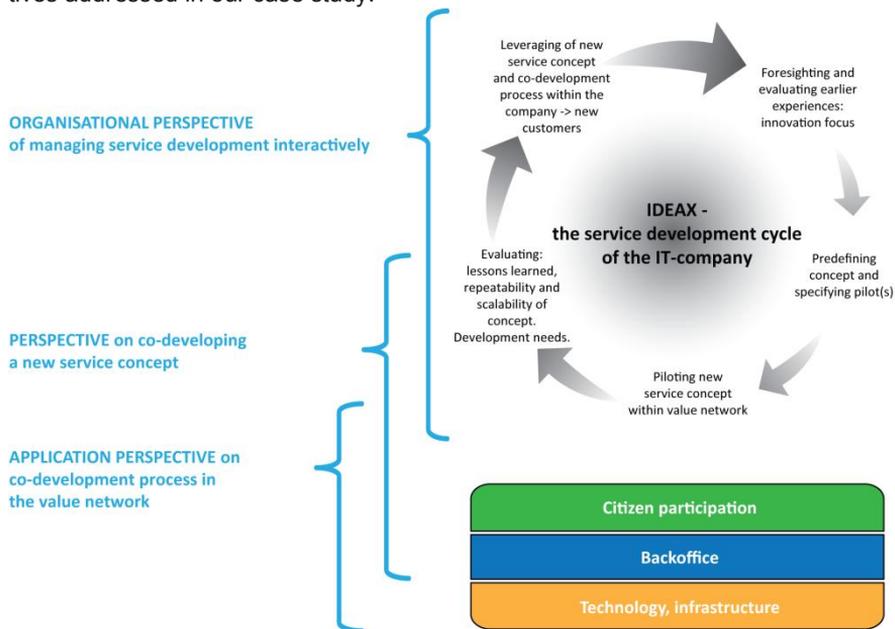


Figure 8. Three perspectives of new service development.

I. Organizational perspective of managing new service development interactively

From the IT company perspective, we facilitated new service development via a revised IDEAX learning cycle, which combines foresight, co-development with customers, and development-oriented impact assessment. The learning cycle thus integrates strategic aims with operative actions as an iterative, dynamic and interactive, so-called expansive, learning process. These principles were implemented in the collaborative workshops within an internal network of company representatives and with the chosen value network. Each workshop had a specific development task in the IDEAX cycle, including identifying an innovation embryo, predefining a service concept, piloting the concept with the chosen value network representatives, modifying the service business concept and, finally, leveraging the new service concept internally and marketing externally (see Figure 8 and Kallio et al. 2011; Halonen et al. 2010). Consequently, the IT company puts effort into new service business development and learns to co-develop its services more interactively within the company and the chosen value network.

II. Perspective on co-developing a new service concept

The importance of developing a service concept in new service development is to be underscored. Here, we emphasize the service concept as being a description of 'what and how', i.e., what is to be done with the customer and how this should be carried out. The concept communicates a new value proposition and the roles and resources for service production (cf. Edvardsson & Olsson 1996). It can be used as a tool to manage the service (innovation) process. We claim that the company has to pre-define the basic elements of the service concept before involving other value chain representatives in the service development (cf. organizational perspective).

Service design (see 2.6.2) provides a practical means for visualizing and concretizing, as well as empirically testing (i.e. prototyping) and evaluating alternative service concepts already in the early stages of service development. Every member of the value network has their own motives and limitations, and the end-users' experience cannot be isolated from the experience of others in the network. When innovating, all perspectives must be taken into consideration otherwise the end concept will be difficult to implement (Dandavate 2006).

III. Application perspective

By application perspective, we refer to all practical activities and iterative cycles related to empirically testing the innovation embryo and developing the new service further together with the customers and end-users. In our case, collaboration with the Finnish City of Mikkeli in the '*Mikkeli is playing*' project was the first pilot for the IT company aimed at applying the emerging service concept. The motive for collaboration between the IT company and the City of Mikkeli arose from the conscious steps taken by the city in recent years towards user-driven services and

involving citizens in co-development at both the strategic and practical levels (see www.mikkeli.fi). The aim of the pilot was twofold: (1) the practical objective was to co-design a new meeting place in the city centre. This concrete target was chosen (2) to enable the development and testing of a co-development process which the City could apply in resolving its development needs and the IT company could apply in creating its new service business.

In practice, the three perspectives above (organizational, concept and application) are strongly interlinked. Together, they describe how to organize and manage new service development in a customer-oriented way within the IT company and the chosen value network (see Figure 8). Next, we will focus on the application perspective and the co-development process within the established value network when piloting the IT company's emerging service concept.

4.2.2 Co-development in the value network – application perspective

The pilot consisted of representatives of the municipal organization and citizens, as well as the IT company and researchers from two organizations. The roles of the customer and end-users in the co-development process were as follows: 1) the City of Mikkeli was responsible for urban planning and regional development, local communication and moderating of social media, 2) the citizens, as end-users, included active parents with children and employees from day care centres and schools, as well as representatives of local associations. The IT company was defined as the facilitator and also as responsible for the utilized technical infrastructure. The main research tasks were divided as follows: VTT took responsibility for analyzing and supporting the management of customer- and process-oriented service development, while the University of Lapland focused on applying and studying service design and social media in the co-development process.

When services are developed interactively with customers and end-users, the roles and practices involved become more diverse and complex. In order to achieve goal-oriented, efficient and useful co-development from the viewpoint of the entire network, the issue of process facilitation becomes urgent. In order to build shared understanding of the aims and roles of the value network among the participants in the co-development process, it is important to identify different levels or sub-processes and their connections.

In seeking a suitable framework for the co-development process, we decided to integrate approaches from new service development (NSD) and previous innovation studies (e.g., Engwall et al. 2001; Alam & Perry 2002; Näkki & Antikainen 2008; Toivonen 2010) and service design (Mager 2004; Bitner et al. 2007; Designing... 2009), keeping the emphasis on user-orientation and managing complex innovation processes in network settings. In this case, it became necessary to define the co-development process in terms of the following three sub-processes; 1) participation of end-user groups, 2) planning and managing of the consortium and 3) developing and utilizing collaborative technologies (see Figure 9). The co-development process was built on the main phases of a typical (service) innova-

tion process, and implemented by means of service design and social media. Despite the critique against linear, stage-gate- innovation process models (see Kline & Rosenberg 1986; Engwall et al. 2001), we claim that our multi-level process model gives a deeper understanding of co-development from different stakeholders' perspectives. In addition, it serves as a tool for planning, communicating and managing the co-development process and the potential service concept. However, the model should be flexible enough to be applied in a dynamic practice.

We examined the aims and collaboration practices and identified the specific benefits and challenges resulting from the practical involvement of participants with different interests in the co-development. Our hypothesis was that the co-development in the value network contained complex tensions, but simultaneously offered many opportunities for change and new business potential.

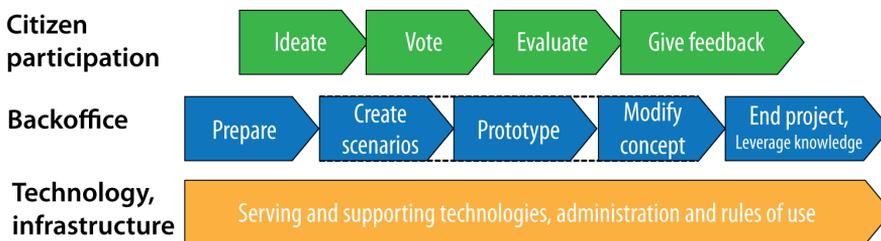


Figure 9. Main sub-processes and phases of the co-development process from the application perspective.

During the **preparation phase** of the project, the representatives of main stakeholders (the IT company, the City of Mikkeli, VTT and the University of Lapland), drew up a rough action plan, task responsibilities and target groups for the main phases of the co-development with the help of the process model pictured in Figure 9. They also prepared a kick-off meeting for the entire network. This was implemented as an **ideation** workshop for citizen volunteers and members of the target groups, held in the main showroom of Mikkeli City Library. The small teamwork tasks in the workshop were targeted, on one hand, at ideating *requirements and features for an open co-development platform*. On the other hand, the citizens participating in the kick-off were encouraged to *share their ideas on what needs the proposed communal meeting place in the Market Square should fulfill*. After the kick-off, the web platform was opened to all citizens of Mikkeli, to share their ideas and thoughts about the meeting place and to discuss them with each other as well as with Mikkeli city representatives. The ideas produced in the kick-off workshop were brought to the platform to inspire and continue the ideation openly among website visitors. Through this process, it was ultimately decided that the meeting place would be a playground that would encourage encounters among all age groups.

Ideation and comments on the platform were managed by a moderator recruited by the City of Mikkeli. The importance of the moderator's role in activating

platform discussion was recognized during the ideation phase. The moderator published daily questions which assisted citizens in commenting and kept the debate focused during the ideation stage. For purposes of avoiding misuse of the platform, registration on the platform was initially required for participation in the co-development, but shortly after the public opening of the platform registration was dropped, which led to more active communication on the platform. The lack of registration was found to have no negative effects on the content of the platform.

After the open ideation phase, the University of Lapland researchers gathered the ideation material from the platform and drew up several theme proposals – **scenarios** – based on the material. The proposed themes included Nature, Adventure, Intelligence and Labyrinth, among others. The researchers also gathered a list of playground and other recreational area elements, which were listed along with the themes for **voting** on, which took place on the platform after the ideation phase.

After the voting, the most voted themes and elements were built into a **prototype exhibition** of the playground, which was designed by students together with researchers from the University of Lapland. The students and researchers built the exhibition assisted by a team from the local Youth workshop. Rough prototypes of the playground elements provided an opportunity for children, as primary users of the playground, to test the different playground elements, and also provided a concrete grasp of the most voted themes. After testing the prototypes at the Mikkeli City Library, the children were asked to **evaluate** the playground themes and elements *through their experience* by giving feedback and ideas by drawing, creating miniature models and answering a short questionnaire on the web platform. Adults who visited the exhibition with their children got also a chance to experience the playground concepts from their perspective.

The **final playground plan** was drawn up by an architect chosen by the City of Mikkeli. The architect designed the plan based on the material created in the process and the **feedback** received from the second citizen workshop held after the prototype exhibition. The architect's plan then continued further the municipality's regular decision-making and procurement procedures. A web questionnaire was also made available to citizens of Mikkeli to gauge their thoughts and opinions on the co-development process as a whole. The playground-themed meeting place was finally built according to the architect's design in Mikkeli market square in summer 2011.



Figure 10. Participation of citizens in the co-development process: 1) kick-off workshop, 2) ideation on an Internet platform, 3) voting on the mes and elements, and 4) testing the prototype.

The pilot for the co-development approach, the year-long ‘Mikkeli is playing’ project, was communicated in numerous ways throughout the co-development process. The project was visible through several local medias outlets including TV and leading newspapers and the City of Mikkeli website as well as in public places such as libraries, supermarkets, municipal service offices, and smaller community centres such as day care centres and schools. Approximately 50 people participated in the open workshops and the 2-week prototype exhibition attracted over 700 visitors. In addition, the co-development platform had over 2,300 visits during its 6-month period. The consortium (IT company, municipality, researchers) leading the co-development planned and monitored the progress of the process via scheduled video conferencing events, ending with a final face-to-face evaluation workshop. The consortium parties then continued their development work separately; the IT company continued developing its service concept, and the municipality began seeking new applications for the co-development model created.

4.2.3 Main challenges and benefits of the co-development: viewpoints of different stakeholders

The co-development process produced different benefits and challenges for the participating citizens, the municipal representatives and the IT company. However, the participants clearly agreed on the main successes and lessons learned.

Participating citizens – co-development experience inspiring, but doubts about the results

The benefits and challenges from the viewpoint of the participating citizens were collected via short interviews (N = 15) during the prototype exhibition and a web questionnaire (N = 17) conducted after closing the co-development process. According to the feedback, the user-driven, open and transparent development approach was considered to be a very positive and necessary means of involving

citizens in municipal decision-making and service development. One participant described it as follows: 'As a newcomer to Mikkeli, it was great to be able to take part in this sort of development as a community member and a local city resident'. Newspaper ads were seen as the most effective means of activating participants, and, in particular, the prototype exhibition aimed at children was extremely popular. The exhibition was described as providing a concrete opportunity for user experience, as one participant summarized:

'Children also appreciate being heard, they were very enthusiastic about giving their vote and commenting on the playground being developed'.

The variation between virtual and physical methods of participation was recognized as being inspiring and purposeful. The feedback showed that about half of the respondents were involved in both the workshops and the web platform, while the other half clearly preferred either virtual or face-to-face modes of co-development. The digital platform was seen by some as a limiting participation method in favour of young people, but was accepted as a viable alternative. Multiple modes of participation thus serve the different aims of the process as well as participants with different communication preferences. This kind of co-development approach was also considered suitable for other development targets such as urban planning, cultural and youth activities as well as social and health services. However, the development target should be clearly defined in order for it to be able to be managed successfully.

Participants identified two main challenges with respect to citizen empowerment: 1) overcoming the pre-assumptions of the citizens, and 2) the limited resources of the municipality; the latter being a common issue when pursuing something that calls for radical change in resource thinking. Some criticized the amount of effort invested compared to the concrete end results, which were seen as being just an ordinary playground. Unsatisfied comments can be interpreted in several ways. The basic prerequisites of the playground, such as its very limited size and safety and cultural-historical requirements were not communicated clearly enough at the outset of the project. As a result, some citizens' expectations for the playground were not realistic. The dilemma of balancing between creative ideation and regulations was discussed in the consortium during the process. As known from previous studies, expectations are typically high among pioneers when piloting new ways of empowering citizens (cf. Bäck et al. 2012). Even those with prior experience of citizen empowerment can have unrealistic expectations regarding the effect of their own input on the end results. We also realized that the architect should have been involved earlier on in the process.

Moreover, it seemed that the participating citizens did not understand the piloting nature of the co-development process itself. This aim was communicated to the citizens but, in order to avoid confusion, it was not emphasized in relation to the concrete aim at co-designing the meeting place. The feedback also showed that negative attitudes still exist regarding the perceived effectiveness and legitimacy of the end results when involving citizens in public decision-making and

service development. The means of participation are still regarded to be too complicated and distant, as one visitor commented at the exhibition:

'There's still a lot of prejudice between people and public authorities...it's not easy for people to be active participants because the means available to them are so distant from their daily life...but I've seen it working here, we just need more of these kinds of opportunities to break the boundaries'.

Participants from Mikkeli municipality: empowering citizens calls for changes also in the municipal organization

The feedback from the representatives of the municipality of Mikkeli is based on four interviews as well as the evaluative workshop held at end of the co-development process. From the perspective of the City of Mikkeli (the development manager, three architects specializing in green areas and building infrastructure, the moderator and the manager of Youth workshop services), the co-development process produced both a concrete plan for the playground on the city's central market square and a general user-driven approach to development work. The approach provides a useful framework for clearly defined development targets and also guidelines for change management issues in general. Furthermore, public participation, sense of community spirit and opportunities to exercise influence were seen as essential benefits, as one participant summarized:

'Next summer people will walk along Mikkeli's market square and say "this is our place." ...I feel it's important that the local unemployed youth are also participating in this process'.

Another interviewee added, similarly, that public officials can lose touch with peoples' everyday life, and that these approaches enhance equal dialogue and mutual respect for each other's competence and experience.

The participants agreed that the consortium (the municipal organization, the IT company and the researchers) succeeded well in terms of complementary competencies, commitment and team spirit. Some admitted having in the beginning a skeptical attitude towards the quality of the end results and their ability to reach a shared understanding with the municipal staff involved. Others were somewhat suspicious towards the social media discussions. However, the intensity and quality of the debate was a positive surprise to all of the consortium participants. Although the numbers of people reached via social media were not extensive, digital media was mentioned as a key means of successful citizen empowerment and of increasing dialogue between the authorities and the public. In agreement with the feedback from the participating citizens, the prototype exhibition was mentioned as the most successful means of participation due to taking the target group, children, so well into account.

Overall, the municipal participants were satisfied with the use of the flexible process model, role tables, time schedules and risk analysis to facilitate co-development, although some would have preferred even more assertive manage-

ment approach. Others saw that they lack some self-command among municipal participants to take their responsibility. However, the roles of the IT company and researchers as external facilitators and experts were seen as important for gaining new insight, achieving credibility and fostering a networked and customer-oriented management style within the municipal organization.

The municipal representatives agreed with citizens' views regarding the main challenges relating to resources and the broad cultural changes in public decision-making and service development. As one interviewee summarized:

“The city officials and the public both agree on empowering citizens, but when they start to talk about money, there’s usually precious little to spare”.

Cost effectiveness was still seen as the main criterion with respect to urban planning and procurement activities in general. A participatory approach with supporting creativity was experienced as being relatively time and work demanding in relation to the end result. This might reflect the piloting nature of the approach, but also affects how it will be applied in the future. As with the participating citizens, also within the municipal organization expectations had been very high and even too optimistic considering the allocated resources. However, not only user-driven development, especially via social media, but also cross-functional development work seemed, in general, to still be quite new within municipalities. There appeared to be a degree of internal confusion concerning mutual roles, responsibilities and authorities among the municipal participants and in relation to their current duties. Furthermore, the view that there was a lack of resources for the approach was interpreted as a contradictory sign from the management concerning the reliability and legitimacy of the approach.

The co-development process also challenged the municipal participants to consider and test their renewing roles as experts internally and externally, and in terms of their changing competence needs. As one expert said: *‘Actually my task here was kind of guiding at the back office’*. While some saw almost no changes required, others claimed that the role of city official is transforming incrementally in terms of expert role, competencies and ways of working. For instance, the importance of the web moderator's local insight was recognized and, furthermore, the importance of the moderator being a local person rather than an external facilitator. The case of the moderator provided a concrete example of completely new competencies and evolving local culture of empowering citizens in public decision-making.

The IT company perspective: towards a new business concept and networked new service development

For the IT company, the networked co-development process provided the possibility to apply and develop the emerging service concept. Through its success and considerable positive publicity, the pilot created a good base for new service business opportunities. At the same time, the company's personnel was involved in

learning and renewing its service development in more networked and customer/user-oriented ways. As one facilitator put it:

'this process really deepened our customer understanding and forced us to take the role of the customer'.

When the co-development process started with the City of Mikkeli, the IT company had established its internal supportive network and core team, which focused on facilitating the process and providing the technical infrastructure. Changes in process facilitation resources were made during the co-development, but these were managed successfully. According to the three interviews with the core-team members and the feedback in the evaluative workshop, the IT company also considered the collaboration within the consortium (municipal organization, IT company and researchers) to be very open and co-creative. Although the pilot was initially defined by the top management of the City of Mikkeli, the municipal experts were able to define the final development target, which secured their professional commitment. The IT company was also satisfied with the researchers' contribution to the co-development process. Experiences from the social media platform appeared two-fold: while it was effective enough with respect to the case-specific needs, and the collaboration with the solution provider worked well with regard to the modification requirements, the IT company representatives viewed it as not agile or cost effective enough for customization at a broad scale.

According to the facilitators, it was a conscious choice among the consortium to leave room for an iterative and ad hoc type of process in order to seek new means of reaching different interest groups, test variable participation methods and develop the co-development process model further. As one facilitator summarized:

'successful management of the co-development process calls for openness, encouragement, readiness to get rid of traditional ways of thinking and doing, strong insight into the customers' needs, scope and prioritization, as well as leadership to keep the focus throughout the process'.

This kind of multidisciplinary learning-by-doing approach was clearly new to both the IT company and the municipal organization, who found it to be both challenging and very inspiring.

The IT representatives considered that the main challenges faced during the pilot related to the internal organizational changes both in the municipality and in the IT company. These also challenged the new service concept development. Based on their extensive, long-standing experience in the public sector, the facilitators considered that the internal difficulties faced by the municipal organization were typical indicators of the on-going incremental cultural change towards more transparent and user-driven services, which calls for reallocation of resources in cross-functional collaboration, new combination of competencies, as well as real empowerment of citizens. As regards future customer cases, the representatives of the IT company also wondered about the actual reason for the fact that innovative ideas are not realized in the public sector. Is this due to concrete limitations, such as safety requirements and cost-effectiveness, or to human error, such as involv-

ing the architect in the process too late? Or could democratic decision-making mechanisms, like voting and ranking, actually exclude the so-called radical innovations and lead innovators?

For the IT-company's perspective, the emerging service concept should be generic and applicable for different purposes and customers. Nevertheless, context-specific knowledge was seen to be crucial when developing and piloting new service concept. Thus, at the same time as facilitating and co-creating the emerging innovation process for a concrete pilot target, here the playground in the city centre, the IT company had to consider how suitable these solutions are in terms of the emerging *generic* service concept. From the concept development perspective the pilot provided the IT company with new possibilities to explore and exploit:

1. a new value proposition with specific competence needs,
2. the changing role and earning model of the IT company, and
3. modularity/customization of the service concept and key network partners in the value creation.

This parallel work, concrete piloting and conceptualizing, was considered challenging by the IT company. This was due in part to the on-going re-organization in the company, which made it more difficult from the business and marketing points of view to involve a suitable internal network in the concept development. However, after the several other pilots, the overall lessons learned were again critically evaluated in terms of repeatability and scalability, and the service concept was developed further towards leveraging internally and marketing externally. When comparing our findings with the previous innovation process models which consist of a separate conceptual phase/phases (see e.g. Menor et al. 2002; Näkki & Antikainen 2008), our study showed that the concept development continued alongside the innovation and co-development process (see also Kallio et al. 2011; cf. Alam & Perry 2002). It was not actually a separate phase. As mentioned in the first subsection of this case, the emerging service concept served as a common thread for the innovation process within the IT company and in the chosen value network (see Figure 8 and 9).

4.2.4 Conclusions and lessons learned

This case study illustrated that the traditional roles of service provider, customer and end-user have become increasingly blurred when developing new services in the business to municipal context. The roles of producing and developing services are changing between the different players, such as municipalities, IT providers, and end-users. In our case, the co-development of services in practice contributed many kinds of benefits, but also challenges for different participants in the value network. These can be interpreted as reflecting the on-going transition towards more customer- and user-oriented services, which calls for comprehensive changes within the organizations involved as well as collaboration practices in the value

network. The results were supported by previous studies. Moreover they increased understanding of the dynamics of new service co-development in a network setting from the multi-agent perspective. (See e.g. Syson & Perks 2004; Smith & Fischbacher 2005; Gottfridsson 2009; Bäck et al. 2012.)

The main lessons learned from the *municipal* point of view were:

- 1) Clearly communicate prerequisites to the participating citizens throughout the process,
- 2) Focus on clear development targets, especially when adopting new approaches, in order to manage co-development successfully and to convince doubters (without ruining creativity),
- 3) Take more explicit ownership of the process in the target organization,
- 4) Support from top management is needed in guiding the change towards a user-driven and networked way of working and developing services, and
- 5) The meaning of co-development must be understood by all participants. Instead of ready-made answers from individuals (cf. traditional expertise), this calls for defining and solving problems collaboratively.

In general, it seems that the role of municipal organizations in providing and coordinating the prerequisites for empowering end-users in decision making and service development will be emphasized in the future. Similarly, networks of service producers, suppliers and developers are widening by utilizing and combining the strengths and potential of local citizens, companies and the third sector. (cf. Hartley 2005; Brabham 2009; Thurston 2009; Bäck et al. 2012.)

As the *process facilitator*, the IT company learned that the following issues are important when developing the service concept further:

- 6) The customer's chosen development target indicates their development needs and creates commitment to co-development.
- 7) Have clear aims and achieve them via a transparent and flexible process (why, who, when and how to contribute)
- 8) A specified role and competence map communicates resource needs and, above all, emphasizes the process owner's authority.
- 9) Combine different methods, such as virtual (e.g. social media) and face-to-face working, to gain full user experience and purposeful involvement of relevant stakeholders.
- 10) Solve emerging problems openly and collaboratively.

When taking into account the importance of local knowledge, resource use, and the involvement of end-users, the main role of the IT company could be as a coordinator of a complex and networked co-development process with the main conceptual, managerial and benchmarking expertise. Increasingly essential here is a broad customer understanding and the capability to provide suitable infra-

structure, such as social media platforms, to support co-development (see Miles 1999; Chesbrough 2011).

The results showed that, in practice, this kind of co-development in a network setting demands mutual commitment, joint planning and facilitation of development work. This approach requires time and resources from all participants. The experience of participation and mutual benefits (over costs and risks) increase the commitment of the customer and the end-users and, thus, their contribution to value co-creation (cf. Vargo & Lusch 2008). As the main lesson learned, the authors underline that, in future, the contexts in which this kind of process is applied should be carefully considered, as it has varying requirements and also demands considerably more effort compared to traditional (more closed, product- and provider-dominated) development approaches. The authors further suggest that this kind of co-development approach should be applied to strategically important targets, when it is essential to invest in the user-driven process execution, in order to achieve novel and useful results (cf. Vargo & Lusch 2008; Heinonen et al. 2010).

As researchers we applied the participatory action research approach (e.g., McIntyre 2008) as a way to facilitate and analyze the development in the service provider organization, and by way of a concrete pilot project, to examine the changes in service development practices in the value network described. In participatory action research, the community members participate as partners in the research process and are committed to action for social change. In this approach, the researchers thus conduct research with people, not on people (McIntyre 2008). The role division between researchers from the different organizations worked well; VTT challenged the IT company's current service innovation logic, helped the company representatives in predefining the networked co-development process and examined how it emerged and worked in practice, while the University of Lapland applied and studied the suitability of service design and social media approaches in the business to municipal context.

The multi-method research approach (workshop observations, interviews, questionnaires, and analysis of the content produced on the web platform) and researchers' intensive involvement in the process contribute to the validity of the results. The results are based on common interpretations of four researchers and were also approved by the IT company and the municipal representatives. The empirical data was consistent and representative, although the process feedback from citizens was rather limited and thus only provided rough estimations and guidelines.

As our study was a case study, the results can be carefully applied to other settings with the same contextual criteria. However, some general conclusions and lessons learned can be made, which are supported by the previous studies discussed above. The created co-development approach and the emerged service concept appeared viable, but need further elaboration in practice and in theory.

4.3 Involving experts in the development of future service business

Teea Palo (University of Oulu)

Table 9. Key information of HiQ case.

HiQ Finland Oy		
General	Industry	IT Services (management and consulting)
	Main markets	Scandinavia
	Size	HiQ Finland > 250 Group: 1,300 employees in 4 countries
	Main offering	Project management, systems development, quality assurance, specialist consulting
Case study	Focus of research	Quality assurance services
	Objective	To develop the quality assurance service offering proactively by analysing potential changes to the business model
	Research method	Delphi method

HiQ Finland Oy is a consultancy company specializing in communications, software development and business-critical IT. The company strives to be a pioneer in IT service business by engaging its customers and service end users in its agile development processes. Moreover, HiQ pursues a proactive service approach by recognizing the needs of end users and offering new business opportunities for its customers. An example of this is HiQ's efforts to proactively develop its quality assurance service offering in cooperation with its customers and other strategic network actors.

When developing an existing service offering, it is important to consider the possible changes to the business model that this may entail. Therefore, in the early stage of planning HiQ's future offering, the Delphi method was employed to identify and plan for potential changes in its quality assurance services business model.

4.3.1 Methodology – using the Delphi method to develop service business

In the HiQ case, futures research, in particular the Delphi method, was used as a tool to identify elements essential to changing and developing the company's future quality assurance services business model in its development path to becoming a pioneer in service business. The method utilizes experts' opinions in a structured communication process which allows a group of individuals to jointly

deal with a complex problem (Linstone & Turoff 1975). The method was seen as a useful tool considering the complexity of developing service business and the need for varying perspectives in the process. The Delphi technique involves a process consisting of various phases. For example, Linstone & Turoff (1975) identify the following four main phases: 1) exploration of the subject, wherein individuals contribute additional information, 2) process of reaching an understanding of how the group views the issue, 3) in case of strong disagreement among the group, an exploration of the underlying reasons for the differences, and 4) final analysis and evaluation. The process provides the individuals with a great degree of individuality and freedom of expression (Linstone & Turoff 1975), and hence can provide important insights into the phenomenon in question. Overall, the Delphi technique provides values, views, and ideas as a foundation for planning and decision making for the future. Thus, it can be a valuable tool for developing service business and facilitating future planning and decision making in the company.

The Delphi technique sets certain requirements for the development process, such as the iterative nature of the questionnaire rounds: the views and ideas of the experts from the first round can be specified and examined in more detail in the following rounds. The HiQ case study included two questionnaire rounds. After the rounds, the results of the questionnaires were presented to the experts, who were given the possibility to provide feedback and change their views if necessary.

The role of the experts is essential in the process. Specific attention should be given to the identification and selection of the experts to be included in the panel to cover the most essential areas of knowledge concerning the research phenomenon. In this specific case, the panel of experts represented the key actors in the service development and production; the service provider (HiQ), the customer, as well as experts from research institutions. Hence, the panellists were selected to include expertise in the field of service development and production, customers, finance, and the industry.

The experts were asked to present their views of the future and, specifically, the year 2016. The first round of questions (presented through a web questionnaire) consisted of future statements and open questions on networked business model elements and the general IT business environment. During the second round, the experts elaborated on the company's service offering, customers, networks, resources, capabilities and activities, as well as revenue and cost structure. The experts were thus able to anonymously share their views and beliefs concerning the company's networked business model in 2016. The aim was to gain an iterative (hence two rounds) and diversified (hence many experts from different areas) views to help the company in its new service development and business planning. In the following, the results of the questionnaire rounds are presented.

4.3.2 Expert perspectives on developing service business – involving actors within and outside the company

The experts presented interesting and diversified views on the possible directions for developing the services and service business. They identified several changes in the IT and quality assurance business field. First of all, the shift towards service-based business was seen as important, especially for new actors in the field. For existing companies whose organizational culture and operations need to change, this shift was considered to present a number of challenges. Secondly, an increasing amount of customer needs and responding solutions was predicted. This will require the capability and resources to be able to respond quickly to changes in markets and technologies. Thirdly, globalization was one of the most emphasized changes in the field; the same quality assurance service needs to function regardless of geographic location or culture. Other changes and related challenges in developing the quality assurance service business included customer-centric service development, and the need for wide-ranging capabilities, as emphasised by the following quotation:

'It is really difficult to develop competencies that combine genuine interest in the customer's operations and technology.' (Round2)

The main changes concerning the service offering are in service production and sales. The challenges relate to the calculation of costs and revenues, productization, understanding customer needs, and the acquirement of wide-ranging knowledge. Another essential change in the future development of the services is service modularity; the balance between modularity and customization seems challenging. While service modularity can facilitate the pricing of services, customer-based customization is also important.

'Solution-based [service] customization will always be needed.' (Round1)

To develop the future service business, *changes in customer segments* need to be identified. Although the experts did this with respect to quality assurance services, the novelty of such segments was not evident. Hence, determining the most potential new customers seems challenging. In addition, the identification of novel channels to attain customers is also important. Networking and the combination of personal and e-sales were emphasized as the most potential channels or ways to attain customers in the future. Overall, close cooperation with the customer was seen as important in service development, although the service provider has the responsibility to develop best practices, which can then be customized for specific customers.

'[Long and intensive customer relationships] facilitate operations on both sides of the table. Both sides know the processes, requirements and the playing cards. This way we can scale the qualitative requirements and expectations correctly and at the right price.' (Round1)

4. Empirical cases – development paths towards pioneering in service business

Most experts emphasized the *role of the network* in developing and producing the services in the future. Firstly, the experts identified various actors and roles in a possible network for developing and producing quality assurance services. The most important actors identified were individuals contributing to the service production, such as testing and verification specialists. Secondly, the actors were identified mostly based on the knowledge and capabilities they possess related to marketing, business and technology. Thirdly, determining the roles of the actors seemed challenging; on the one hand overlapping roles were seen to guarantee common incentives, whereas on the other hand, partnerships with actors who have differing roles are more profitable. Finally, the emergence of such networks can be customer-based; by approaching the customer the company can find other actors related to the customer. However, such networks are strongly customer-specific.

'Each actor needs to focus on their own core competencies. There is an increasing amount of knowledge and skills, and therefore it is not possible and/or profitable for a single company to maintain all competencies by themselves.' (Round1)

The *necessary resources* in the future are mostly intangible and relate to business, quality assurance itself, and customer understanding. Clearly, the most important resources needed in quality assurance services will be active and skilful personnel and their social capital, accessed through the network. The necessary activities in quality assurance concern technical tools and processes, marketing, and service production itself. Network management was emphasized in situations where technology or business is changing.

'[The necessary resources can be gained] by educating people and adding companies who have the needed competencies to the network.' (Round2)

Defining the cost and revenue structure of the whole network was seen as important in the future. However, this is a highly challenging task. The most essential costs will arise from the above-mentioned resources, personnel and the maintenance of expertise. On the other hand, pricing of the services was not seen as an essential way to differentiate from competitors compared to the service itself and the value it creates for the customer.

'The overall customer benefit is what counts, not the price directly.' (Round2)

In addition to the networked business model elements, the experts provided some interesting perspectives and ideas concerning the business model as a whole. Based on the first questionnaire round, it was seen that a business model cannot be developed for a service, but for companies who produce and provide the service. However, as specified in the second round, a service-based business model was seen as possible at a general level. Service-based business models can even provide a means to differ from competitors.

4.3.3 Lessons learned

As an example of a tool used in a development path towards pioneering in service business, there are a few lessons to learn from the case. Developing services and service business in general in the field of technology is challenging. Business models need to change, and different actors are needed in the development and production of such services as single actors cannot master the relevant competencies and resources by themselves. To succeed in such a changing and dynamic business field, managers and companies need new and flexible ways to act (Halinen & Törnroos 1995, p. 518). Hence, this study employed the Delphi technique to facilitate the development of service business. Future-oriented statements and open questions were presented to a panel of experts representing the key interest groups regarding a specific service offering in the field of quality assurance.

First of all, the *business model elements provide a tool for future business planning*. Existing literature has identified the key elements or components of business models (e.g., Osterwalder et al. 2005; Shafer et al. 2005), but the use of such elements in planning and organizing business still lacks research. The essential elements of a networked business model emphasized here are the service, customer, network, resources and activities, cost and revenue structure, as well as dynamics of the business environment (see Palo & Tähtinen 2011). By analyzing each element, the key changes and challenges can be determined, which provide the basis for planning the service business.

Secondly, the *service itself is the basis for developing and changing the business model*. It determines the actors and roles in the business model, the necessary resources and activities, as well as the cost and revenue structure. Hence, the study supports the development of service-based business models (see Kindström 2010).

Finally, the *Delphi method provides a facilitative method for gaining diversified perspectives on a complex phenomenon*. Combining and considering the perceptions of the different actors can facilitate the creation of successful services in networks. Companies can use such methods to facilitate their understanding and identification of possible customer segments, actors and roles, resources, and the pricing methods for a specific service.

Of course, the focus on the future time dimension brings challenges as well. The answers provided by the experts remain rather abstract, and are mostly based on the notions of the current situation. They are also strongly subjective interpretations and insights, which cannot be proven right or wrong.

4.4 Case of building service capability and culture

Table 10. Key information of Bronto case.

Bronto Skylift		
General	Industry	Truck-mounted hydraulic platforms
	Markets	Global (customers in > 120 countries)
	Size	~ 300
	Main offering	Products: ~50 models (working height 23–112 m) After-sales services
Case study	Focus of research	Interventions for enhancing organisational culture transformation
	Objective	To create new operating practices for interaction with customers in order to develop new service innovations
	Research method	Qualitative interviews, internal workshops and discussions

4.4.1 Introduction to the case

Bronto Skylift is a global technology manufacturer which is aiming to increase its service business. Currently, the company designs, manufactures, sells and offers services for hydraulic platforms intended for rescue, fire-fighting, construction and maintenance applications. The company has operated a small, separate service organisation responsible for after-sales (repairs, spare parts, training) for a number of years. However, to remain a brand leader and to serve its customers better, the company has realised the need to develop its service business.

In product development, Bronto Skylift focuses on leveraging new technologies and customer feedback. Innovation and quality in all parts of the process enable continuous improvement of expertise and the retention of that expertise in Finland. The long-term nature of the company's operations is evident in that Bronto Skylift has been at the cutting edge in its field for decades, developing multi-purpose hydraulic platforms and also lobbying actively for legislative amendments and development of training in the field.

The principal goal of the case project was to create new operating practices for interaction between Bronto Skylift Oy (hereinafter the supplier) and the customer to develop new service innovations. The project involved developing models and processes and an IT system through which the supplier can develop new services and revise existing ones together with key customers in an agile way. Another goal was to expand the service development cooperation in the future to include global customers, and also to raise the in-house profile of the service business in the overall context of the company's business.

The following three interconnected items were identified as development targets:

1. Operating model for developing new services at the customer interface

The purpose was to develop a model where the supplier continuously develops and revises services together with 'lead users', comes up with ideas for new services and tests their viability. This engages the customer in the service innovation process.

2. Operating model for service productisation and design

Several challenges were identified in service business development, such as service pricing and marketing. Customers will also have to adopt a new way of thinking when the service is implemented. The data generated should correspond to the customer's perceived need for information about hydraulic platforms. However, some customers may not approve of centralised collecting and processing of their data. For the model to work, customer relationships must be based on trust, and it must be demonstrated that the practice will yield clear benefits. Open questions include the following:

- What are the potential revenue logic models for the service and its pricing options?
- How will it be ensured that the services remain confidential and agreement-based?

3. Developing the IT system for service implementation

The goal was to develop a technological solution for the new service. The principal questions were:

- How will the platform be implemented technically and integrated with the products?
- How will the system development be integrated into the project?
- How can the system be made open enough to allow for continuous development?
- How can the information-intensive nature of the service be enabled?
- How can the service design aspect of the IT system be incorporated?

The concrete object of development and the procedural development platform is the new customer/user interaction IT platform that will be integrated into the console display of the hydraulic platforms. This is an information system through which customers will be given important notifications (e.g., maintenance bulletins). In the future, customers will be able to monitor the training level of their employees, user and maintenance data of their hydraulic platforms, user manuals, smart fault diagnostics and images, and they will also be able to order spare parts and send messages to the supplier.

An in-house project team was set up to implement the project, including representatives from the design, maintenance, product development and service business functions. An external software supplier, selected at a later date, also formed an integral part of the project team, particularly in the development of the IT platform.

4.4.2 Theoretical background and methodology

This case study aimed to examine the company's transformation path from a product and/or technology-oriented organisational culture towards a more service- and customer-oriented culture. Current understanding of transformation paths is based mainly on retrospective analysis of companies' development (e.g., IBM), or comprehensive yet quite general cross-sectional analysis between companies representing different levels of 'maturity' in service business (Hyötyläinen & Nuutinen 2010). We applied the ISCC approach as a theoretical framework in order to focus our reasoning. In addition, we aimed to reflect on the case from a broader perspective as an example of concrete steps to be taken to create prerequisites for stronger customer involvement and to create pressure for cultural change. In addition, we extended the temporal focus of the study to also include some viewpoints from a previous joint project with the company, thus achieving a partial longitudinal perspective and learning more about how to support profound, long-term transformation. The first project was conducted from 2006 to the beginning of 2009, with most of the data being collected in 2007; and the second from the beginning of 2010 to the beginning of 2012. In this chapter, we will focus mainly on the second project, but conclude with the lessons learned from the broader perspective. The two projects can be seen also as interventions, with the researchers intervening in the company's everyday operations.

The aim of the first project was to assess the baseline service capability and culture. Firstly, personnel and customer interviews were conducted as part of this cooperation (at the beginning of 2007), and then the ISCC survey on service capability and culture (based on CULTURE-questionnaire Reiman 2007) was conducted throughout the organisation to assess the potential for developing a service business.

According to the evaluation, the existing organisational culture was strongly technology and product-based, reflecting the present state of the business logic. The culture manifested itself mainly as internal development practices and customer relationship defined by a strong technology brand and product-based selling. Although the personnel viewed service business positively in general, they did not feel any urgent need to develop it. There was no shared understanding of the need to create more radical service business strategies. Based on the analysis, three critical issues for further development were recognised: *clear communication of the motives behind service development*; *emphasis on service development with customers*, and *gradual building of the service business*. These provided a starting point for the second joint project, where the emphasis was to support the company's own development project.

The goal of the company in the second phase was to continue the service business development. In order to accelerate development, it was crucial to achieve concrete and visible progress towards operational reform. We focused on supporting the company's creation of new operating practices for interaction with its customers in order to develop new service innovations. The new service ideas enabling IT platform offered a tool for seeking new ways of developing services and creating prerequisites for transformation towards long-term, development-oriented customer relationships. In this second phase, the dataset consisted of six customer interviews and twelve internal workshops or discussions.

4.4.3 Interventions supporting building service capability and culture – researchers as an intermediary

The role of the researchers in the project was to support customer-oriented service development. They worked with the maintenance manager and service business development manager. The cooperation focused on discussions and joint operations development, and also the planning, implementation and evaluation of customer interviews and pilots.

Customer views on the supplier's current operations and the evaluation of service ideas

Two different customer segments – contractors and rescue services – were selected for the interviews, as they have very different operating procedures and goals. The customers selected for the interviews were Finnish, being geographically close and having a long-standing business relationship with the supplier. The interviews surveyed and evaluated the present situation and the future outlook of the customers' business, the products and services they obtained from the supplier, and the development of their customer relationship. For the interview, services that the new IT platform would enable were envisioned and described. Customers were invited to evaluate each service idea and to name those that had the most potential for their business; they were also allowed to suggest new services. Other topics in the interview included:

- How would you see the role of the services offered by the supplier in your the future business?
- What level of cooperation would be possible and feasible for you?
- What kind of activities are you expecting from the supplier in the future?
- Do you consider it useful to expand your interaction with the supplier? In what ways?
- Would you be interested in participating in developing the supplier's services in the future?

The researchers analysed the interviews and compiled a summary for the supplier. The following are the four main points of the summary.

Firstly, the customers were willing to engage in the joint development of services and identified practical challenges that the proposed services would cause for their business. Customers also outlined critical parameters for the service, e.g. pricing and information security.

Secondly, the customers were more or less unanimous in naming which services were the most important and useful for their business. Rescue services customers considered that the services are particularly useful for uninterrupted operations in shift work and reducing reliance on memory; contractor customers focused on the strong business aspect of troubleshooting capability through the service.

Thirdly, maintenance was a very important link to the supplier for all customers, if not the most important. The wish list for the service business included a more active approach, a more flexible service and a better service attitude. Consideration of how the service supports the customer's product family or overall equipment management was also suggested.

Finally, all customers wished for more active communication from the supplier and were willing to engage in a closer and more development-oriented interaction with them. Customers encouraged the supplier to develop its operations and services and were willing to continue their cooperation with the supplier.

In summary, we may note that the most important competitive factors from the customers' point of view were not the products or their technology, but reliability of use, dependability and ease of maintenance. This is also evident in that there is less difference between competing products in terms of technical features than there used to be. Products were seen as one-off investments which are meaningless if they do not generate a significant competitive advantage. It is important to focus on this aspect in business development.

The feedback concerning service development and prioritisation matched the supplier's own conceptions to a large extent. Although customers highlighted a variety of challenges and were willing to engage in closer cooperation, the supplier did not make a case for changing their approach of continuing to focus on the development of the technological platform. On the other hand, more active cooperation was also sought with global customers in the growing European market. Customer pilots were not implemented with Finnish customers within the time limit of the research project. The supplier applied for and was granted a year's extension to implement its own development project.

4.4.4 Lessons learned

Based on the customer interviews, there is a good possibility that the development project will reach its targets and the new IT platform will enable closer customer collaboration in new service development. Ensuring sufficient resources for customer cooperation and top management commitment are critical to its implementa-

tion. The customer interviews could also be a reference model for new practices of interacting with the customer in service development. Although the customers saw the supplier mainly as a strong product brand, their expectations were at a level that enables more comprehensive services to be offered and they were open to closer development collaboration in services. A broader service business strategy could clearly support realising these potentials more thoroughly. The supplier had no difficulties in formulating service ideas, neither did the customers in evaluating them once they were concretised by the idea of linking them to the console display of the hydraulic platforms. This can be held as a good example of concrete steps that create prerequisites for stronger customer involvement and that also utilise existing strengths – strong technological competence. Ultimately, this could create pressure for cultural change. The long-term impact of the new IT platform and the related development efforts, however, is dependent on how well the supplier fights the typical product manufacturers' cultural tendency to keep the development within its own organisation, based on the broadly accepted logic of competition through technological innovation.

Based on this study, one could question whether this company is on the transformation path towards service- and customer-oriented business. The literature tends to give a somewhat idealised picture of this transformation – as if from the beginning companies would aim for radical change in order to pursue a service- or customer-dominant logic. Even if a company could accept the reasoning behind the logic, realising it in practice is difficult – and often the path can be constructed only retrospectively. The will to emulate and learn from companies already established in service business is evident. However, this brief glimpse into the company's life illustrates that although there is evident progress in many service related issues, the path builds gradually, contextually, on the basis of the company's history, its situation, markets and practical realities. The path is dynamic in nature and there are many driving forces pushing and pulling in different directions.

The story of IBM illustrates the profound and long-term nature of this transformation. In IBM's case, there was a clear threat to the company's business that motivated the development and energised radical acts – although the path's direction was far from clear. On the contrary, in this case, there was no obvious need to change the product-oriented strategy. However, Grönroos (2009, p. 502) gives three reasons why an organisation should transform wholly into a service company, with manufacturing and service operations combined into a single business. These are: i) having several operating logics confuses the customer; ii) a successful service business can cannibalise the strong image of a product business; and iii) when there is conflict between two different cultures the older and stronger culture tends to win.

Since the power of the old culture is strong and pervasive, the role of researchers' interventions and joint development projects is important. In addition, the researchers can act as a bridge between the old and the new when bringing research knowledge into practice.

5. Crafting a framework for pioneering in service business

Arto Wallin (VTT), Maaria Nuutinen (VTT) & Teea Palo (University of Oulu)

Development towards *pioneer in service business* is a highly complex phenomenon. In the following, we present an emerging framework which aims to clarify this complex issue by highlighting the important perspectives and success factors, and thereby provide some point of references for the journey. The framework is based on theoretical work and the analysis of the empirical data collected during the research project. The four perspectives – which the firm should especially focus on during the development path – are value network, strategy, business model and organizational culture. Perspectives of the framework are influenced by several theoretical perspectives, mainly: industrial service culture and capability (Nuutinen & Lappalainen 2010), business model framework (e.g. Osterwalder 2004), strategic management and change (e.g. Teece et al. 1997; Bharadwaj et al. 1993) and service-dominant logic (e.g. Vargo 2008b). Moreover, there are five main categories for success factors that should be viewed through all these perspectives. These success factors are based on the empirical findings from the cases introduced within the previous chapter and, in total, 21 interviews that specifically focus on various conceptions of pioneering in service business – and we are utilizing citations from the interviews in order to illustrate each of them. Figure 11 illustrates the framework.

We will first present the perspectives, which can be used as lenses to analyze the development towards pioneering in service business. Secondly, we present the main success factors for development to service business pioneer.

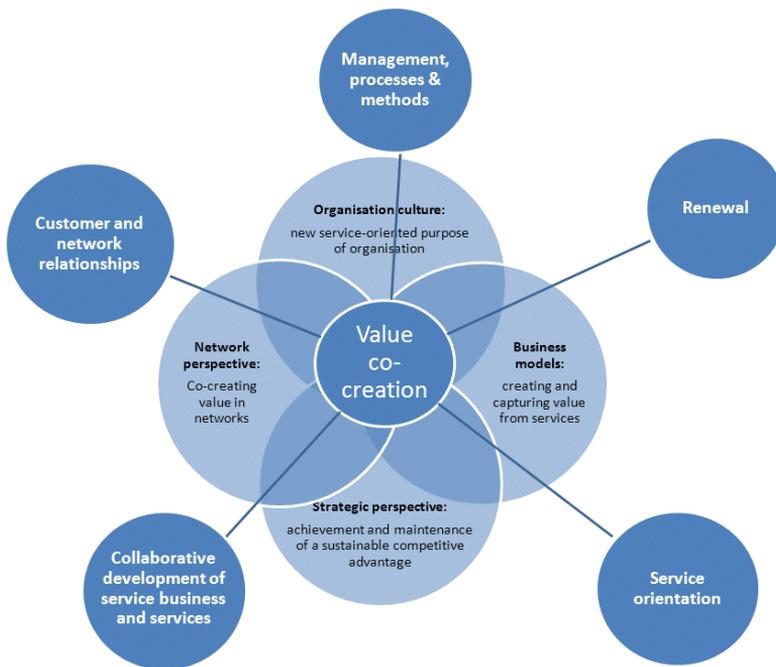


Figure 11. Framework for developing in service business.

5.1 Four perspectives on development towards pioneering

Development paths towards pioneering in service business are very complex in nature. Therefore, even though development should be as holistic as possible, it is usually easier to understand the challenge if the phenomenon can be viewed from the different perspectives. Therefore, we view the development towards pioneering through four complementary perspectives, which are:

1. The **organizational culture perspective** offers us a perspective to focus on driving and obstructive forces of development over the long term. Organizational culture refers to the practices, norms, values, conceptions and underlying assumptions forming over time during the company history and affecting all the company's activities (which are in turn affected by them) (Reiman 2007, p. 41). All members of organization are part of its culture – even if the newcomers can first marvel at some ways of thinking, soon they tend to adopt similar conceptions when surrounded by strong cultural beliefs. Organization's culture defines what kinds of business models or strategies are seen as plausible and which partners as possible. As already noted (2.2) the organizational culture can be defined as a solution created by an organization for the demands set by the core task (Reiman & Oedewald 2002, p. 27; see also Reiman 2007, p. 41). Herein rests the key for

change: if the underlying conceptions of the core task changes towards *new service-oriented purpose of organization*, the culture develops to support it. This, however, requires that an *organization becomes aware of its present culture and that there is shared understanding of why the new core task is needed, what it means in practice, and how the needed changes can be reached* (Nuutinen & Lappalainen 2010). Even if this is understood, in every uncertain and new situation the old culture – the former ways of working and thinking – can easily slip through.

2. **The business model** itself provides a valuable perspective for examining the development towards pioneering in service business. The business model depicts the value creation and capture (Shafer et al. 2005), and the value proposition (Osterwalder et al. 2005) of a company in the network. As part of the development paths, companies need to *analyze and change their business models to be able to create and capture value from services*.
3. **Value network perspective** – the company has to understand that service (value) is not delivered from service provider to customer. Instead, *value is co-created in a value network together with service provider, customer, and other network actors*. Here the key focus is on the co-creation by a customer and a supplier (Lusch & Vargo 2006) which are seen as resource integrators of the value creation process (Cova & Salle 2008). However, we acknowledge that this co-creation takes place within networks of relationships that are directly or indirectly connected to each other. Development towards pioneering takes place in the network, which may influence this development and vice versa.
4. **Strategic perspective** – The literature on company strategies comprises fundamentally different views on strategy formation mechanisms. From the viewpoint of the traditional, so-called planning school, (e.g. Ansoff 1965; Chandler 1962) strategy formation is seen as a managerial activity: the strategies are plans that are created by top management and implemented by personnel. According to today's thinking, strategy is emerging in organization and can be seen as practice (e.g. Whittington 1996, Johnson et al 2003) and indirect action (Chia & Holt 2011). The role of top management changes from planners to gardeners (Mintzberg & McHugh 1985), who mindfully keep aware of what is going on in the organization, immediately uprooting unconstructive weeds and cultivating or even building a hothouse around them that seem to be capable of bearing fruit.

From the strategic perspective, in order to become a pioneer in service business, company has to *establish a difference that outperforms its competitors* in some way. There are basically two ways to outperform competitors (Bharadwaj et al. 1993, Porter 1996):

- 1) superior execution of same strategy as competitors ('performing similar activities better'), and

- 2) implementing value-creation strategy that is not simultaneously employed by current or prospective competitors ('performing different activities or similar activities in different ways')

More importantly, company can outperform its competitors in the long-run only if the established difference can be preserved (Porter 1996). For this reason, the fundamental basis of long-run success of the firm is *achievement and maintenance* of a *sustainable competitive advantage* (Hoffman 2000). The sustainability of competitive advantage is dependent on competitors' ability to imitate and/or substitute the source of competitive advantage (Barney 1991). Also firm's ability to adapt to the changes in environment, and therefore, to renew its organization is essential for sustaining the competitive advantage (e.g. Zahra et al. 2006; Wang & Ahmed 2007).

The second way to outperform competitors is an essential part of becoming pioneer in service business. However, key differentiating factors are usually unique and new to the business, and thus it is very difficult to define these differentiators generally. It may be possible to indicate where in the more general level is the source of difference originated, though. For example, some organizations may have exceptional organizational culture, which creates a sustainable competitive advantage for them.

In addition to key differentiation factors, there are some more general success factors, which are very important to the success in service business. Succeeding in terms of these factors may also enhance development towards pioneering in service business. Some of these enhancing factors can become differentiators if the company can outperform its competitors with them. Moreover, if proper attention is not paid to these factors, they can start to hinder the development of service business or even become barriers of development. Therefore, it is extremely important to recognize these general success factors and understand their importance to the success in service business.

5.2 Success factors of development to the service business pioneer

Bruno and Leidecker (1984) define critical success factors as: "*those characteristics, conditions or variables that, when properly sustained, maintained, or managed, can have a significant impact on the success of a firm competing in particular industry*". In the following we apply their definition; however, instead of focusing on critical success factors on individual firm's business, the focus is in more general level enabling factors for creating success in service business.

Although these success factors do not necessarily make a company a pioneer in service business, these factors can be considered to increase the chance of being able to *become* such a pioneer. Therefore, these factors can be seen to be highly important in a path towards becoming a pioneer in service business.

5.2.1 Service orientation in practice



Figure 12. Transition to service orientation as a success factor.

Creating shared understanding and commitment to service business

Organizational culture is an elementary building block in the development of successful service business. Our empirical findings suggest that there are many different ways of how organizational culture can either foster or hinder the efforts of creating prosperous service business. For example, without widespread *service-oriented culture* throughout the organization, efforts of aiming to become pioneer in service business are most likely to be pointless. The change can start from the top management – they should have knowledge on and great faith in the service business and necessity of change.

“..the number one thing in the development towards service business pioneer position is the upper level – why not also the middle level – management understanding (of service business)”

Hence, we argue that the firm aiming to become a pioneer should focus on supporting the transformation of the organizational mind-set towards a service-oriented view. This task is, however, quite challenging, and requires organizational development from many perspectives – such as relationships, management and development practices. The transformation can be supported a shared frame of

reference based on a deep understanding of service systems, as in the IBM case. If all company personnel are involved in that change process, then the developing service business also opens up a possibility for profoundly renewing the entire organization and improving its preparedness for the future (see Nuutinen and Lappalainen 2012).

Linking service-orientation to business strategy

From the S-D logic perspective, strategy is about *making choices about how best to facilitate and enhance value co-creation with network partners for mutual and long-term betterment* (Karpen et al. 2011). Consequently, strategic view needs to be shifted from providing superior value to certain customer segments (provider-dominant view), to a more network-oriented view of facilitating and supporting the value-creation process of customer. If the company aims to become service-oriented, but strategic focus is still provider-dominant, there is great risk of failure in the transition process.

“if it (service business) is not in business strategy, there’s no point in trying to be a pioneer”

Allocating resources for service business

“As boring it may sound, you can’t be a pioneer in our business if you don’t have the specific resources for that...”

To enable development of organizations mind-set and business logic towards service-oriented view, company has to invest in service business, allocate new resources for it, and develop existing capabilities. Resources and capabilities needed in service business may differ from the capabilities needed in product-oriented business. For example, some interviewees thought that changing views of old product-oriented sales force towards more service-oriented view was very challenging. It was even questioned whether product-oriented salesmen could be trained to sell services. Hence, the long history in product business and organizational resources and capabilities developed for those purposes can hinder the development of service business. One possible solution for development towards service-orientation is to acquire new resources and capabilities, thereby strengthening the organization’s service business capabilities.

Developing service-oriented capabilities

“in the consulting business, it is extremely important that you have those individuals as employees who are pioneers themselves, who can make change and who are equipped with the right attitude”

As the quotation suggests, success in knowledge-intensive service business is highly dependent on individual employees. However, the type of know-how and

skills needed in the service business varies substantially. Often companies need combination of different expertise, for example, technology, design, marketing, sales, and management to enable the development and co-creation of service. The significant variety in aspects may create problems, for example, in communication between disciplines. Focusing on the development of so called “*T-shaped professionals*” of service business has been suggested as a solution for this problem (Donofrio et al. 2009). The objective is that these service professionals would have a broad understanding of various disciplines, good communication skills and practical experience from a diversity of fields (horizontal line of the T), supported by deep knowledge in their own discipline – for example, engineering, management or design (vertical line of the T).

Fostering service-orientation through the whole value network

The *value network perspective* is very important when applying service-oriented business logic. Especially in knowledge-intensive business services, the outcome of service process is highly dependent on the human resources that co-create the service. If service is produced in tight connection with customers and partners, their resources and capabilities as involved in service co-creation are as important as the service provider’s. Therefore, all human resources involved in service co-creation and organizational capabilities formulated from these individuals are extremely important elements in creating successful service business.

5.2.2 Boosting close customer and network relationships

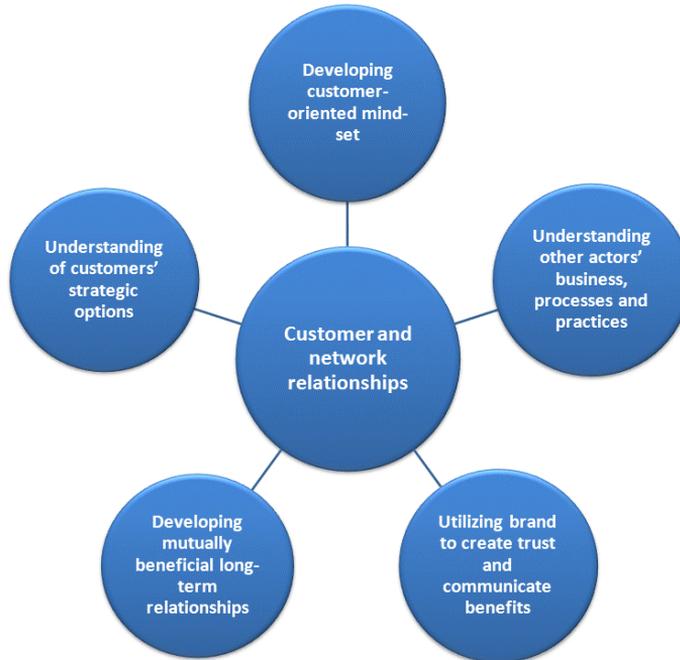


Figure 13. Close customer and network relationships as success factors.

Developing customer-oriented mind-set

Although customer-orientation is inherently included in the service-oriented view, its importance was highlighted substantially by the interviewees; therefore, it is raised as a separate topic in this report as well.

Customer-oriented mind-set is one key characteristic of the service culture. Thereby customer understanding should stem from the culture in a way that all employees of the organization are devoted either directly or indirectly to creating value for customers, and everyone knows their role in the same. Customer understanding is critical requirement also at other levels in organization and in the whole value network – and can be a driving force for cultural change. The **understanding of customers business and processes** is extremely important for companies aiming for pioneer position at the market. Company should have clear understanding about, for example, how customer and the whole value network create and capture value, and what the market conditions are where the customer operates.

“We are pioneers in the way that...we are really close to the customers and we listen to them”

Creating trust and developing mutually beneficial long-term relationships

Customer relationships management is a key element of sustaining long-term relationships and creating superior customer value. Capabilities to acquire new customers and nurture existing long-term relationships were considered cornerstones of successful customer relationship management. Knowing the customer's business to the core, customer trust towards the service provider, personal relationships and operating in the same geographical location are very valuable – especially from the sales viewpoint.

“.. in some cases we have such long relationships with our customers that it is impossible for our competitors to beat our know-how in that environment”

Many interviews pointed out that the marketing and sales of services is extremely challenging if you do not have a previous relationship with the customer. One of the main challenges is that it is extremely difficult to provide customers with ways to perceive customer value before the service is co-created. Therefore, *brand* is one of the key resources in building relationships to new customers. Some organizations have utilized the brand factor in creative ways to overcome the barrier of selling complex business services to new customers. For example, one interviewee complained that their competitor didn't have anything special than their brand, and yet they had customers queuing at their door. The brand can thereby be seen as a valuable strategic asset and potential source of sustainable competitive advantage.

Understanding customers' strategic options

“If you want to be a pioneer in serving others, you have to know to whom you're selling your services”

Customer understanding at the strategic level is also highly relevant in the creation of sustainable competitive advantage. In order that company can steer its strategy to the right direction, a profound understanding of customers' strategic options in changing the market environment is needed. A close strategic partnership with the customer may be an important way for achieving customer understanding at the strategic level. Most of the case companies aimed at understanding the customers' business through close partnerships with their key clients. Involving these clients in the service development processes was seen as important, and most companies also envisioned that customers would be more intensively involved in their service development in the future.

5.2.3 Collaborative development of service business and services

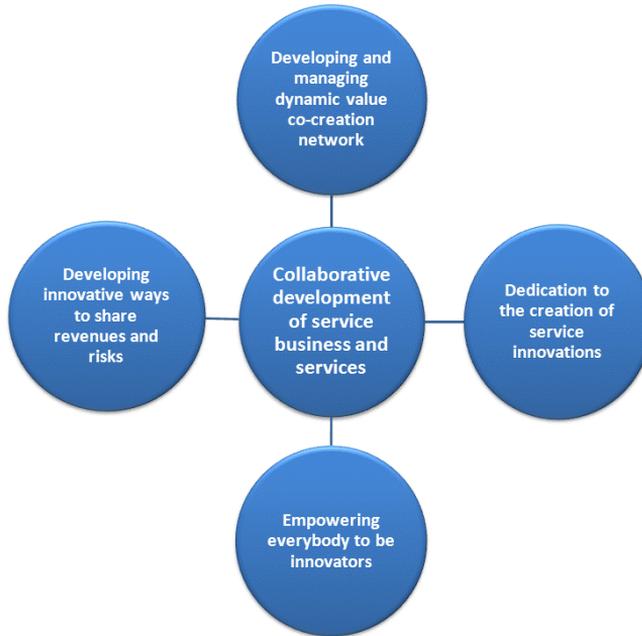


Figure 14. Success factors in collaborative development.

Developing and managing a dynamic value network to access resources and technologies

“We actively aim to also involve other new parties in delivering services. Maybe the development work is also one element in it. The service business is constantly evolving.”

Somewhat surprisingly *technological capabilities* were not considered to be critical for becoming a pioneer in (technology-intensive) service business by the interviewees. It was further clarified that technological capabilities are a highly important part of providing services; however, these technological capabilities should be provided by those partners in the *value network* who do it most effectively. Especially in software business, it is practically impossible for one company to master all technologies and produce service effectively. Therefore, the value creation network should be extensive and active, and the required resources and capabilities should be found quickly when needed. Hence, the importance of value network, network management and ***sharing revenues and risks with network partners*** is becoming increasingly important in service business.

Dedication to the creation of service innovations

“To be a leader in service innovation, you have to be student in service innovation”

The *innovation capability* of an organization is a complex combination of, for example, culture, organizational structures and systems, competence base and strategy (Lawson & Samson 2001). All these different factors affect the firm's abilities to create new services and develop service innovations which were considered to have a high impact on the long-run success of services business. Our empirical findings point out that *cross-functional teams* and *systematic processes* were considered important factors for the service development, though the systematic NSD processes were not very common among case companies.

“In order to become a pioneer in new service area, you need to take a risk and start investing in and developing this new area”

Resources were also regarded as highly important factors when aiming at new service innovations. The continuing challenge in the companies is to balance with resource allocation between business activities producing short-term profits and service innovation activities. Adequate allocation of financial resources is a necessity in service innovation activities, but the availability of highly talented human resources in service development was seen as a critical success factor. One suggested solution to cope with financial restraints was to drive continuous productivity improvements in current business, which enables the allocation of financial and human resources to new service innovation activities.

“If you want to be an innovator, you must have discipline that allows you to do investment in innovation year after year”

Although service development and innovation activities are often associated with the development of new offerings to customers, it should not be viewed too narrowly. In some cases, the most innovative part of the new service has been the novel way to put together different, previously separate technologies and services, thereby using varied capabilities of value network partners to create innovative service offerings. Interviewees pointed out that service innovations can also be based, for example, on new ways to set prices or sell services.

“Pioneering in service business is, to a large extent, about how you develop new innovative ways to sell services”

Empowering everybody to be innovators

Quite often, innovations are still considered to be the responsibility of small groups of employees in organizations. In today's world of open innovation, there are numerous of idea sources which companies can utilize to get an 'out-of-the-box' view of business. According to IBM's Global CEO study (IBM 2006) most external ideas and innovations come from business partners (38%), clients (36%), consultants (22%), and competitors (21%). On the other hand, a major share of internal ideas

come from employees in general (42%), and sales/service unit (18%). Somewhat surprisingly, the internal R&D unit is just third in the generation of internal ideas (17%). Hence, *empowering everybody to be innovators* can be a significant competitive advantage; however, the actual implementation is far from simple. Creativity and innovativeness requires a certain level of employee freedom – yet, at the same time, existing business operations must be run effectively and the strategic focus of the company must be kept consistent. A close link to customers' world can suitably channel one's interests into beneficial directions.

"You have to balance between creative craziness and routines"

5.2.4 Enhancing management processes and methods to support development



Figure 15. Management process and methods as a success factors.

Committing managers to service business

"Service business has to be internalized by top and middle management...it has to be started from the top"

The preceding quotation summarizes one of the key messages from the most interviews, which emphasized the importance of management commitment to the development of service business. The importance of management commitment

5. Crafting a framework for pioneering in service business

when conducting strategic change is also emphasized widely in theory (e.g. Mezi-
as et al. 2001). In the interviews, strategic management in particular was seen as
important, but there are also many other management areas that are important for
success, such as human resources, network, brand, knowledge and risk man-
agement.

*“it is pleasant to operate with SMEs, because once you get their management
involved it is clear that the thing starts rolling”*

The acquisition and development of talented employees

Interviewees highlighted that *success in human resource management* is a critical
factor for the development of successful service business. The development and
acquisition of some specific capabilities were critical for excellence in service
business. For example, *management competence, service sales and marketing
capabilities, and new service development capabilities* were considered to be
important for the success in service business. These capabilities are often highly
dependent on the skills and know-how of employees. Furthermore, cross-
disciplinary understanding is essential in the development of service business.

Some companies had experienced that challenges in *talent acquisition* had
hindered potential growth of service business. Especially companies operating in
the consulting business found the talent acquisition was one of the cornerstones of
success. When succeeding in it, it is possible to gain competitive advantage, be-
cause of the superiority and scarcity of high-performing employees. Nevertheless,
the continuing challenge is to develop skills and expertise of individual employees
and transfer this development for the benefit of whole organization as organiza-
tional capabilities. Without succeeding in this, the competitive advantage may be
as fragile as is the commitment of individual employee to the company, particularly
in a small company.

In addition to acquiring brightest talents, the processes and practices in ***talent
development*** may have significant effect on developing organizational capability
to conduct service business in the long run. For example, job rotation, different
assignments, and continuous learning of new things were considered to be im-
portant parts of building pioneering service business.

Promoting flexible risk management

*“If the company wants to be an innovator...they have to accept a certain failure
rate – it’s not that everything you’re going to try is going to be successful...”*

Many interviewees stressed the importance of being open towards risk-taking
when pursuing pioneering in service business. In order to stay ahead of your com-
petitors, you must question your existing business, have the willingness to take
risks, and invest in activities that aim developing new services and service innova-
tion. However, to enable success in the long-run, the company’s management
must have the capability to manage risk-taking in a flexible and controlled manner.

Therefore, two often separate capabilities are needed from the management of the companies aiming to become pioneers. Management has to be very open-minded and future-oriented, but at the same time able to estimate carefully what risks are worth taking.

“You have to understand that risk management is not about avoiding risk – it’s about taking calculated risks”

Pursuing systemic change

“You have to manage change and the existing business with different goals and measures, so that there is a possibility for both to succeed”

A clear need for change management was emphasized in the interview data. In developing service business, changes in the current strategy and culture as well as the business model itself are necessary. Managing this change seems to be challenging, but it is a key activity to pioneer in service business. For example, when providing complex and new services, a phased execution of the kind of change in the service development and delivery is vital. Also supporting the customer’s change by providing specific services can be essential for the service provider to pioneer in its business. Hence, changes in the customer’s business can lead to changes in the service provider’s business.

When conducting more radical business transformation, the change management becomes very challenging. In these cases, existing business must often be managed (run) at the same time as radically new business is adapted (transform). Radical business transformation also frequently requires acquiring and developing new resources and capabilities as well as cultural adaptation. Change requires solving conflicts between the old and the new emerging way as well as different parts of the activity system. Ensuring the effectiveness of current business is key issue to keep financial performance at the good level. Accordingly, this kind of business transformation was considered to be a very challenging situation, where good change management capabilities that pursue systemic change are extremely valuable for company.

Positioning and coordinating networks

When cooperating with different kinds of actors in developing and conducting service business, coordination and management efforts in the network are essential for the success of the business. Defining a clear position or a role in the network was emphasized by many of the interviewees. Through such roles, the actors can aim to manage the network (see Heikkinen et al. 2007) with a specific strategy, and focus on the market and service business in general. The companies can hence limit their options instead of engaging in a variety of potential activities in the network. Hence, the roles limit the responsibilities and possibilities of the actors in the network, which in turn facilitates the collective objectives, e.g. in the service development.

"There are many parties involved in the network, such as the development partner, and we as a...provider, and then there is the customer and their project management. So when there are altogether four groups involved, you cannot do the job of the others. There are these kinds of areas of responsibility which you cannot exceed as a supplier."

5.2.5 All-embracing renewal throughout the organizations

As a summary from the previous sections, the organization's ability to renew itself is critical for sustaining its competitive advantage. Especially if the company has attained a pioneer position and wants to sustain it, new service development and innovation activities should have high priority in the company's strategic agenda – year after year.

Although the company's innovation capabilities are essential in the renewal, there are also many other factors that exert a great impact on renewal. Renewal is needed on all levels of the company: in *culture*, *capabilities*, *structures*, *processes* and *strategy*. Furthermore, renewal is needed in *customer relationships* and within the whole *value network*. Figure 16 illustrates success factors of development towards service business pioneers from the renewal point of view.

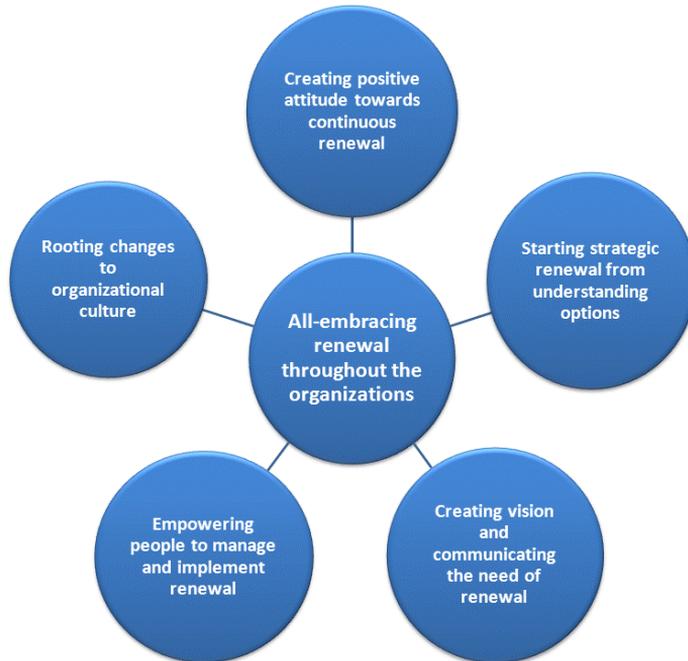


Figure 16. Success factors linked to the renewal of organizations.

Utilizing different ways of renewal

There are many different ways how *organizational culture* can either foster or hinder the efforts of creating service business. For example, innovative culture that fosters *creativity, open-mindedness, and learning* was seen characteristics for service business pioneers. However, if these good qualities are utilized only within present business logic and targets (the present core task), they do not self-evidently contribute to radical development. Making possible for everyone to become aware of customers' world can act as a driver for renewal of culture (Nuutinen and Lappalainen 2010) as an outcome of adopting the more service- or customer-dominant logic.

It is not enough if the organization only renews internally, since the renewal often affects all actors in the value network. Therefore, it is essential that the renewal is viewed from the *value network perspective* and the effects to network partnerships and customer relationships are evaluated. Moreover, when developing and producing services, finding and exploiting new actors on a constant basis are important in trying to become a pioneer in service business. Since one actor cannot govern or acquire all the necessary capabilities, the actors need to actively find potential new partners and discover new ways to engage in cooperation within the network. Changes in IBM's innovation network partnerships are a great example how fast renewal at network level can be. During the intensive service business development phase at IBM in 2001–2002, IBM changed 46 out of 59 partners in their innovation network (Dittrich et al. 2007).

Renewal is also a largely strategic issue, and hence, strategic planning and implementation was seen as a critical success factor. Without clear strategic focus on developing the service business and a strong vision of the future position in the market, efforts to promote service were regarded as trifling.

Starting strategic renewal from evaluating the options

"You can't be a pioneer in everything.. ..you must have knowledge where you're going, focus and strategy, and you have to know what your position is in the value network and markets"

A baseline for strategic renewal is that the firm has to *understand the competitive environment* where they are and how it is continuously changing. The capability to *recognize market opportunities and potential changes* in the business environment as well as realign company's strategy on that basis was considered to be vital characteristics for service business pioneers. Also, the capability to *detect right timing* to seize the opportunity and conduct change in strategy is also very critical. The courage to renew business in a way that challenges current ways of thinking is one big difference between follower and pioneer.

"The pioneer strives to think in an innovative way as to what the future needs in the market will be"

5. Crafting a framework for pioneering in service business

Creating vision and communicating the need of renewal throughout the organizations

“You must have clear direction as to where you’re going, and be able to share that common vision throughout the company”

Once the company has formulated clear vision and a strategy of how to build successful service business, the main challenge is to *spread this common vision throughout the organization*. This may sound simple, but most of the success stories highlight the hard work needed from management to successfully share vision and strategy (c.f. Kotter 1995).

The level of challenge is defined by the organization’s history, as well as its current culture, resources, structures and organizational capabilities. Therefore, large enterprises with a long history in technology or product business may have significantly bigger challenges at transforming their business to service-oriented in comparison to a fresh start-up company. Moreover, renewal often affects the whole value creation system, and thus the need has to be communicated over the organizational boundaries to all involved actors.

Empowering people to manage and implement renewal

The capability to implement and manage the change process of the strategic renewal quickly (if needed) was found to be highly important. One of the core issues presented by interviewees was the commitment of certain key personnel to the planning, management and implementation of renewal. However, in addition to these key persons, a much larger group of employees is often needed to be convinced to go behind the renewal. The number of needed ‘change agents’ is affected by the organization’s size and the leadership capabilities possessed by the management (Kotter 1995). Hence, in small organizations a CEO with good leadership capabilities may be able to manage renewal, but in large enterprises the number of needed change agents is much higher.

In addition to ‘recruiting’ change agents, practically all company employees can be empowered to contribute to the renewal. For example, over 50 000 IBMers were involved in the renewal of the corporate management system through the profound discussions about corporate values and how they should be developed (Hemp & Stewart 2004).

Rooting the changes to organizational culture

Many problems can be reduced or even avoided by building new strategy and a plan for change through the participatory process, which is based on the awareness of the current characteristics of organizational culture and with respect for the present culture from the very start. Communicating the ready-made strategy to employees may appear simple, but without rooting the renewed strategy to the organizational practices and culture one cannot expect all employees to work in accordance with it. A fully participatory strategy process from the beginning –

when searching for a radically different direction – can be too costly and difficult to handle, but the task of rooting the changes to organizational culture cannot be avoided. However, the way of formatting strategy is worthy of consideration (see e.g. Mintzberg 1990). The key for change is that the underlying conceptions of the core task changes towards the new service-oriented purpose of the organization, and in time the culture develops to support it. This requires that an organization becomes aware of its present culture and shares an understanding of why the new core task is needed. Hence, the dialogue of need for renewal is crucial to all steps of that renewal.

“When you start the action, you must have all of your employees involved – you can’t leave out even that one basic worker who has worked for the last 30 years in the same old way”

Creating positive attitude towards continuous renewal

Interviewees emphasized that *renewal is a continuous process*. Thus, once the change has been implemented, the pioneer evaluates its new position and starts to think about new opportunities. Understanding the limitations of current business is very essential in the change, as is the continuous desire to develop services and service business. The IBM case shows that, because of a long and stable success period (in 70s and 80s), it was really challenging to make changes at a fast pace when needed. Therefore, a company should keep on developing all the time – even if business is good (c.f. Hemp & Stewart 2004).

“The pioneer... ..develops its operations and services all the time. It never stops on its achievements, but goes on all the time and searches for something new. It’s hungry all the time”

However, overly rapid cycles of changes or ‘stop-go’ decisions can sometimes become counterproductive. If the logic and *reasons* behind changes are not fully accepted by people in the sphere of influence, and new practices do not reach every part of the activity system, the tools of managing change can lose their power against local sub-cultures rooted strongly in the past.

6. Discussions and implications for finding a path towards pioneering in service business

Maaria Nuutinen (VTT) & Mikko Sääskilahti (University of Lapland)

This concluding chapter discusses the findings of the research in the light of their theoretical contributions to the existing literature on service business and on research methods, especially with respect to multidisciplinary and collaborative research with company representatives. In addition, an evaluation of the shortcomings of the study and avenues for future research are concluded. At the end, this chapter provides managerial implications of the findings and hence addresses situations where managers in industrial as well as in service companies wish to develop their company's business, logic, practices and process towards service- and customer dominant logic, thereby enhancing the achievement of a pioneering position in service business.

The first objective of this study was to study the success factors in technology-intensive service business and development paths towards pioneering in it. The other objective was to study organizations' transition from goods-oriented¹² businesses towards service-oriented businesses. We presented four glimpses of the companies' paths and demonstrated four ways to enhance development: service research, co-developing services with customers and end-users, involving experts in the development of future service business, and gradually building service capability and culture through developing new operating practises for collaborative innovation process with customers. The implications from these empirical cases were presented in the end of each case and were not discussed in details here.

We also crafted a new framework for supporting development towards pioneering in service business. The framework summarises the main success factors of development to service business pioneer and offers three important perspectives which can be utilized in critically evaluating the present strengths and weaknesses of a company amongst the factors concerned.

¹² Also referred as product-, technology- or provider-oriented.

6.1 Mediating between theory and practice

This study was inspired by vivid on-going scientific discussion on service science and service- and customer dominant logic on the one hand and the challenges of companies' aim to pioneer in technology-intensive service business on the other hand. We noticed that there is still a gap between theory and practice: how to conduct the theoretical lessons in a real-life company setting and how to develop theories based on practical challenges. The literature suggests that many companies still apply the goods- or provider-oriented mind-set. Even companies that are in technology-intensive service business can have the provider tendency to over-emphasise their excellence in technology, instead of offering holistic solutions based on close customer relationships and understanding. To be able to take advantage of service-orientation and give guidance and tips on how to gear the processes of a company to support pioneering, mediating is needed. In this report, we presented several theoretical insights, new empirical studies and a new framework that can all mediate between theory and practice.

This study adopted a multi-disciplinary perspective and collaboration between academy and companies, as encouraged in the present discussions on service research. The collaboration with the companies was an essential part of the study. We agree that the complex nature of the phenomena studied requires the adoption of multiple perspectives. However, doing this in practice is challenging, and some amount of theoretical eclecticism and conceptual ambiguity cannot be avoided. The abductive way that the new framework was developed links it both to theory and practice. We did not systemically utilize the emerged framework in the analysis of a company's situation in this study, so the framework can be regarded as tentative. It can already guide practical development but also further empirical studies with regard to each success factor in more detail. However, we consider that the four perspectives of the framework are something that should be maintained. Fostering the different though partly over-lapping perspectives to become a coherent construct could destroy the unique foci of each perspective and raise the level of abstraction too high to offer any practical guidance – counteracting against the motive to mediate between theory and practice.

The first of our empirical cases – IBM's story of transition – cast light on the important role of research and knowledge creation – and how, thereby, the shared frame of reference can support the creation of a new kind of service-oriented culture within the organization. The importance of shared model integrating important perspectives when aiming at a new networked and customer-oriented method for service development was evident in the second case. This instance also illustrated how the traditional roles of various actors into service provider, customers and end-users have become blurred in practise. This is also related to the challenges of theoretical development: we are missing suitable concepts that could properly catch the dynamics of multi-agent action in networked service business as based on value co-creation on the practical level. This is also one of the shortcomings of this study: using "the old" concepts of service provider and customer, we tend to

lose the sharpest focus on co-creating value. There again, both terms are still very much in use in common language and real in companies' everyday life. Moreover, the change does not happen overnight – either in theoretical or practical development.

6.2 Service- and customer-dominant logic as a renewal driver in transition

As noted at the beginning of the report, pioneering, – i.e. being among the first in finding new ways to create and/or capture value – can be achieved, for example, by developing innovative services (outcome perspective), redeveloping service system (process perspective) or providing services in new contexts (market perspective). We think that development towards pioneering in service business can be significantly enhanced by the successful adoption of service- and customer dominant logic throughout the company's own as well as its network activities, processes and practices. The adoption of new logic can provide an advantage in every above-mentioned perspective, thus opening the path towards pioneering within that particular context. This adoption, however, is a challenging task, and the bigger the company or network in the question the harder this is. As the IBM case demonstrated, even if systemically pursued, the transition can easily take 20 years. In a smaller firm, the change might be easier, but continuously challenging one's activities may still be needed within a context where the new logic is challenged by the others' old way of thinking in the networked business world. The key question is: How to make transformation faster, keep risks under control, and make the most of it?

The transition from a goods-oriented view to a service-oriented view can be considered a key element in the development towards pioneering. Transition to the service-oriented view means holistic change in companies' everyday thinking, processes, business models, competences, structures, management ideologies and strategies, etc. This transition requires a fundamental change of the viewpoint for conducting business – how the company's core task is understood – and it creates an excellent foundation for the company aiming to become a pioneer in service business. However, making the transition to service-oriented business does not necessarily mean that the company is a pioneer of service business. As already noted, some companies may be referred to as pioneers of service business, but they still have a long way to go to transform their 'organizational mindset' to one that is fully service-oriented. Even so, transforming company's holistic view towards services (including strategy, business logic, and organizational mindset) can be considered as a huge leap towards pioneering in service business. From the organization culture perspective, the transition can be supported by exploring and communicating new core task demands and the synchronised development of customer relations, management and service development practices, as well as service business understanding. If all the company personnel are involved in that change process, then the developing service business also opens up a possibility for profoundly renewing the entire organization and improving its

preparedness for the future. This is because of the development of service business brings the members of the organization closer to the customers' world, and subsequently they can more easily follow the changes in the customers' business – also in the future.

Our study can be criticized on the basis of the quality of the data, since only one of the studied companies (IBM) is commonly referred as a 'pioneer' and fills generally accepted criteria of pioneering; moreover, the longitudinal perspective was relatively weak. Finding correct data for studying pioneering in service business, however, is not self-evident. When the status of a pioneer is reached, the path where one wandered has already vanished – the retrospective studies can give us valuable understanding as the IBM case demonstrated, but they typically do not provide the whole picture of a vanishing goal, every twist and turn, and perhaps the process of temporarily getting lost. Our case studies offered glimpses of companies' past or on-going paths and demonstrate the challenges and various ways to enhance development. Each of these ways highlighted an important aspect when searching for one's own path. For example, the first one is the need for a shared frame of reference – a purpose the new framework can be utilized for. Also, engaging co-developers in new service development and broadening one's view to take into account the broader network in addition to future business are important. A further aspect highlighted was evaluating the present state of organizational culture and, based on this, gradually tackle the main obstacles of change and support of cultural transformation in the long run.

To conclude, we see that a key in differentiating – as well as gaining the sustainable competitive advantage – rests in the company's success to adopt service- and customer-dominant logic as a renewal driver. The theoretical insight and perspectives, together with the framework of success factors offered in this report, can help in this during the transition. However, theoretical discussion in this area is still very much on an abstract and conceptual level, and there is a lack of empirical, deep studies on actual dynamics in endeavouring towards customer-dominant logic or its relationship in pioneering in service business. In order to carry on with the ideas emerged from this study; we suggest carefully implemented longitudinal case studies. They can serve, better than broad quantitative studies in this early phase, the target to learn more about how the SD- and CD theories can be utilized as a driver of practical change.

6.3 Pioneering by boosting innovative service solutions based on selective investment in the success factors

We recognized five general success factors which were further defined in more details as based on the theoretical and empirical work carried out in this study. Success in terms of these factors is presumed to enhance development towards pioneering in service business. Some of these enhancing factors can become differentiators if the company can outperform its competitors with them. Moreover, if proper attention is not paid to each of these factors, they can start to *hinder* the

development of service business or even become *barriers* to development. Therefore, it is extremely important to evaluate one's situation against these general success factors and analyze their importance to the success within that particular context.

The effort towards pioneering can further be supported by focusing on the success factors from organizational culture, the business model, value network and strategic perspective at the time. Even though development should be as holistic as possible, it is usually easier to understand the challenge if the phenomenon can be highlighted from the varying perspectives. Together with the success factors, these perspectives formulate the new framework for supporting service business development and finding one's own path towards pioneering in service business, by providing some points of references for the journey.

In the centre of the business, there is still the service itself. It serves the customer, and the customer is willing to pay for it. In this report, we have collected a wide range of factors which together form the idea of service-oriented business and affect the development of innovative services. From the perspective of the reader – e.g. entrepreneur or manager – the content of this report can be seen as a map which draws an overall view of the “world of service innovations”. There are “treasures” on the map which the reader may find. The key to the breakthrough concept can be found from the area of, e.g. human resources and corporate culture, by encouraging and supporting the employees in the development of new services; or for some companies, a co-creation with customers and end users may be very essential. Furthermore, in some cases a new way to network or create brand value, or the ability to adapt innovatively technologies, may lead to victory. We believe that it is important to identify factors which act as bottlenecks in the development of service-oriented business. Barriers must be eliminated by affecting operational environment, management, processes and habits. However, the most urgent issue is to discover the possibilities to proactively find new means to develop and offer better service than the competitors and have the capability to strengthen unique existing resources and policies the company is based on.

We studied the service orientation within a multidisciplinary research team and we brought the angles of management, organization, technology and design to this conversation. People behind these areas naturally think the role of their own subject is the most important within this context, and when aiming at new service innovations it is most important to concentrate especially on a certain perspective. Researchers in management love business models and strategies, whereas others believe in change management and the power of human resources; on the other hand, technology is a solution for everything that some of us like to design, and creativity is ‘the thing’ for others. Nevertheless, the clue is perhaps that when all these people are forced to engage in one conversation and a common vision must be generated, the understanding of the subject as a holistic entity has already risen to a next level – true convergence has happened during this process. Our opinion is that the same convergence could happen in the companies and their networks inclusive of clients, by taking all these perspectives into action through fostering the enthusiasm of the professionals in these fields. We hope that

our definitions help the reader to understand service-oriented business from the multidisciplinary perspective and provide advice when creating one's own map of business and potential new concepts. We encourage the reader to examine the map in an unprejudiced manner, and find the most precious treasure from his/her own point of view.

Acknowledgements

The authors of this report would like to thank several individuals who made it possible to study the development of service business empirically: Leena Valtonen, Markku Leivonen, Juha Lintula, Kristiina Luukkonen, and Raija Mankki (Tieto Finland), Tuomas Nousiainen (HiQ), Petri Lajunen and Heikki Tiura (Bronto Skylift), Dr. Jim Spohrer (IBM), Henry Palonen and Kari Niinimäki (Inno-W), Soile Kuitunen (Mikkeli) and Ilkka Ketola (Videra).

We would also like to thank Finnish Funding Agency for Technology and Innovation (Tekes) and the Serve – the pioneers of service business programme – for funding the ProForm project, and providing a precious opportunity to study pioneering in service business first-hand.

References

- Achrol, R.S. & Kotler, P. (1999) Marketing in the network economy. *Journal of Marketing*, Vol. 63, No. 4, pp. 146–163.
- Aggarwal, A., Berry, O., Kenney, M., Lenway, S. & Taylor, V. (2008) Corporate strategies for software globalisation. In: Labrianidis, L. (Ed.). *The Moving Frontier. The Changing Geography of Production in Labour-Intensive Industries*. Ashgate Publishing Company.
- Alam, I. (2006) Removing the fuzziness from the fuzzy front-end of service innovations through customer interactions. *Industrial Marketing Management*, Vol. 35, No. 4, pp. 468–480.
- Alam, I. & Perry, C. (2002) A Customer-oriented new service development process. *Journal of Services Marketing*, Vol. 16, No. 6, pp. 515–534.
- Amit, R. & Zott, C. (2001) Value creation in e-business. *Strategic Management Journal*, Vol. 22, pp. 493–520.
- Anand, B. & Khanna, B. (2000) Do firms learn to create value? The case of alliances. *Strategic Management Journal*, Vol. 21, No. 3, pp. 295–315.
- Anderson, H., Havila, V. & Salmi, A. (2001) Can you buy a business relationship? On the importance of customer and supplier relationships in acquisitions. *Industrial Marketing Management*, Vol. 30, No. 7, pp. 575–586.
- Ansoff, I. (1965) *Corporate Strategy*, McGraw-Hill, New York.
- Arndt, J. (1979) Toward a concept of domesticated markets. *Journal of Marketing*, Vol. 43, No. 4, pp. 69–75.
- Auguste, B.G., Harmon, E.P. and Pandit, V. (2006), 'The right service strategies for product companies', *The McKinsey Quarterly*, Vol. 1, pp.41-51.
- Axelsson, B. & Easton, G. (1992) *Industrial Networks: A New View of Reality*. London, Routledge.
- Barney, J. (1991) Firm resources and sustained competitive advantage. *Journal of Management*, Vol. 17, No. 1, pp. 99–120.
- Barczak, G. (1995) New product strategy, structure, process, and performance in the telecommunication industry. *The Journal of Product Innovation Management*, Vol. 12, No. 3, pp. 224-234.

- Battor, M. & Battor, M. (2010) The impact of customer relationship management capability on innovation and performance advantages: testing a mediated model. *Journal of Marketing Management*, Vol. 26, No. 9–10, pp. 842–857.
- Berry, L.L. (1995) Relationship marketing of services – Growing interest, emerging perspectives. *Journal of Academy of Marketing Science*, Vol. 23, No. 4, pp. 236–245.
- Bharadwaj, S.G., Varadarajan, P.R & Fahy, J. (1993) Sustainable competitive advantage in service industries: A conceptual model and research propositions. *Journal of Marketing*, Vol. 57, No.4, pp. 83–99.
- Bitner, M.J. (1995) Building service relationships: It's all about promises. *Journal of Academy of Marketing Science*, Vol. 23, No. 4, pp. 246–251.
- Bitner, M.J., Ostrom, A.L. & Morgan, F.N. (2007) *Service Blueprinting: A Practical Technique for Service Innovation*. Center for Services Leadership, Arizona State University, Working Paper.
- Blois, K. & Ramirez, R. (2006) Capabilities as marketable assets: a proposal for a functional categorization. *Industrial Marketing Management*, Vol. 35, No. 8, pp. 1027–1031.
- Blomkvist, J. & Holmlid, S. (2010) Service prototyping according to service design practitioners. *Proceedings of ServDes 2010*. Linköping, Sweden. Retrieved 12.02.2010 from ServDes: <http://www.servdes.org/pdf/blomkvist-holmlid.pdf>.
- Bouwman, H., Haaker, T. & De Vos, H., (2008) *Mobile service innovation and business models*, Springer.
- Bouwman, H. & Fielit, E. (2008) Service innovation and business models. In: Bouwman, H., De Vos, H. & Haaker, T. (Eds.). *Mobile Service Innovation and Business Models*. Berlin, Springer. Pp. 9–30.
- Brabham, D.C. (2009) Crowdsourcing the public participation process for planning projects. *Planning Theory*, Vol. 8, No. 3, pp. 242–262.
- Brax, S. (2005) A manufacturer becoming service provider – challenges and a paradox. *Managing Service Quality*, Vol. 15, No. 2, pp. 142–155.
- Bruno, A. & Leidecker, J. (1984) Identifying and using critical success factors. *Long Range Planning*, Vol. 17, No. 1, pp. 23–32.

- Bäck, A., Näkki, P., Ropponen, T., Harju, A. & Hintikka, K.A. (2012) From design participation to civic participation – Participatory design of a social media service. *Int. J. of Social and Humanistic Computing*, (forth coming).
- Chandler, A.D. (1962) *Strategy and structure*. MIT Press, Cambridge, Mass.
- Chase, R.B. (1981) The customer contact approach to services: Theoretical bases and practical extensions. *Operations Research*, Vol. 29, No. 4, pp. 698–706.
- Chesbrough, H. & Rosenbloom, R. (2002) The role of the business model in capturing value from innovation: evidence from Xerox Corporation's technology spin-off companies. *Industrial and Corporate Change*, Vol. 11, No. 3, pp. 529–555.
- Chesbrough, H. & Schwartz, K. (2007) Innovating business models with co-development partnerships. *Research Technology Management*, Vol. 50, No. 1, pp. 55–59.
- Chesbrough, H. (2011) Bringing Open Innovation to Services. *MIT Sloan Management Review*, Vol. 52, pp. 2, pp. 85–90.
- Chia, R.C.H. & Robin Holt, R. (2011) *Strategy without design – The silent efficacy of indirect action*. Cambridge: Cambridge University Press.
- Cova, B. & Salle, R. (2008) Marketing solutions in accordance with the S-D logic: co-creating value customer network actors. *Industrial Marketing Management*, Vol. 37, No. 3, pp. 270–277.
- Dandavate, U. (2006) Innovaatiotoiminta yhteisluomisen avulla. In: Ruokonen, A. (Ed.). *Muotoilun johtaminen. Johtamisen käsikirjat*, Helsinki: Kauppalehti.
- Day, G.S. (1994) The capabilities of market-driven organizations. *Journal of Marketing*, Vol. 58, No. 4, pp. 37–52.
- de Brentani, U. (1991) Success Factors in Developing New Business Services. *European Journal of Marketing*, Vol. 25, No. 2, pp. 33 – 59.
- de Brentani, U. (1995) New Industrial Service Development: Scenarios for Success and Failure. *Journal of Business Research*, Vol. 32, No. 2, pp. 93-103.

- de Brentani, U. and Cooper R. G. (1992) Developing Successful New Financial Services for Businesses. *Industrial Marketing Management*, Vol. 21 (July 1992), pp. 231–241.
- Den Hertog, P. (2010) *Managing Service Innovation: Firm level dynamic capabilities and policy options*. Utrecht: Dialogic Innovatie & Interactie.
- Designing services with innovative methods (2009) Miettinen, S. & Koivisto, M. (Eds.). Kuopio Academy of Design, University of Art and Design, B93.
- Dittrich, K., Duysters, G. & de Man, A-P. (2007) Strategic repositioning by means of alliance networks: The case of IBM. *Research Policy*, Vol 36, pp. 1496-1511.
- Doganova, L. & Eyquem-Renault, M. (2009) What do business models do? Innovation devices in technology entrepreneurship. *Research Policy*, Vol. 38, pp. 1559–1570.
- Donofrio, N., Sanchez, C. & Spohrer, J. (2009) Collaborative Innovation and service systems: Implications for institutions and Disciplines. In: Grasso, D. & Burkins, M. (Eds.). *Holistic Engineering Education: Beyond Technology*, New York, NY: Springer. Pp. 243–270.
- Dyer, J.H. & Nobeoka, K. (2000) Creating and managing a high-performance knowledge sharing network: the Toyota case. *Strategic Management Journal*, Vol. 21, No. 3, pp. 345–367.
- Eckersley, M.D. (2008) Designing human-centred services. *Design Management Review*, Vol. 19, No.1, pp. 59–65.
- Edgett, S. (1994) The Traits of Successful New Service Development. *Journal of Services Marketing*, Vol. 8, No. 3, pp. 40 – 49.
- Edvardsson, B. & Olsson, J. (1996) Key concepts for new service development. *The Service Industries Journal*, Vol. 16, No. 2, pp. 140–164.
- Edvardsson, B., Gustafsson, A. & Roos, I. (2005) Service portraits in service research: a critical review. *International Journal of Service Industry Management*, Vol. 16, No. 1, pp. 107-121.
- Eisenhardt, K.M. & Martin, J.A. (2000) Dynamic capabilities: What are they? *Strategic Management Journal*, Vol. 21, No. 10–11, pp. 1105–1121.

- Engwall, M., Magnusson, P. Marshall, C., Olin, T. & Sandberg, R. (2001) Creative approaches to development: Exploring alternatives to sequential stage-gate models. Fenix WP 2001:17. Stockholm School of Economics.
- Fulton Suri, J. (2008) Informing our intuition. Design research for radical innovation. Rotman Magazine, Winter 2008, pp. 52–57.
- Gadde, L.E. & Håkansson, H. (2001) Supply Network Strategies. Chichester, John Wiley & Sons.
- Gardial, S. F., Clemons D. S., Woodruff R.B, Schumann, D.W. and Burns, M. J., (1994) Comparing Consumers' Recall of Prepurchase and Postpurchase Evaluation Experiences. *Journal of Consumer Research* 20 (March), pp. 548-560.
- Gebauer, H. & Fleisch, E. (2007) An investigation of the relationship between behavioural processes, motivation, investments in the service business and service revenue. *Industrial Marketing Management*, Vol. 36, pp. 337–348.
- Gebauer, H. & Friedli, T. (2005) Behavioural implications of the transition process from products to services. *Journal of Business & Industrial Marketing*, Vol. 20, No. 2, pp. 70–78.
- Gebauer, H., Edvardsson, B. & Bjurko, M. (2010) The impact of service orientation in corporate culture on business performance in manufacturing companies. *Journal of Service Management*, Vol. 21, No. 2, pp. 237–259.
- Gebauer, H., Friedli, T. & Fleisch, E. (2006) Success factors for achieving high service revenues in manufacturing companies. *Benchmarking: An International Journal*, Vol. 13, No. 3, pp. 374–386.
- Gebauer, H., Kreml, R. & Fleisch, E. (2008) Service development in traditional product manufacturing companies. *European Journal of Innovation Management*, Vol. 11, No. 2, pp. 219–240.
- Gerstner, L. (2002) Who says elephants can't dance? Inside IBM's historic turnaround, Harper Business, New York.
- Geyskens, I., Steenkamp, J.-B., Scheer, L.K. & Kumar, N. (1996) The effect of trust and interdependence on relationship commitment: a trans-atlantic study. *International Study of Research in Marketing*, Vol. 13, No. 4, pp. 303–317.

- Golfetto, F. & Gibbert, M. (2006) Marketing competencies and sources of customer value in business markets. *Industrial Marketing Management*, Vol. 35, No. 8, pp. 904–912.
- Gottfridsson, P. (2009) Actor roles in the service development process. *Journal of Public Transportation*, Vol. 12, No. 1.
- Grant, R.M. (1996) Toward a knowledge-based theory of the firm. *Strategic Management Journal*, Vol. 17, pp. 109–122.
- Groth, J.C., (1994) The exclusive value principle: a concept for marketing. *Journal of Product and Brand Management*, Vol. 3 No. 3, pp. 8-18.
- Grönroos, C. (1994) From marketing mix to relationship marketing: Towards a paradigm shift in marketing. *Management Decisions*, Vol. 32, No. 2, pp. 4–20.
- Grönroos, C., (2000) *Service Management and Marketing: A Customer Relationship Approach*, 2nd ed., Wiley, Chichester.
- Grönroos, C. (2008) Service logic revisited: who creates value? And who co-creates? *European Business Review*, Vol. 20, No. 4, pp. 298–314.
- Grönroos, C. (2009) *Palvelujen johtaminen ja markkinointi [Service Management and Marketing]*. 3rd ed., WSOY, Helsinki.
- Gulati, R., Nohria, N. & Zaheer, A. (2000) Strategic networks. *Strategic Management Journal*, Vol. 21, pp. 203–215.
- Gummesson, E., Lusch, R.F. & Vargo, S.L. (2010) Transitioning from service management to service-dominant logic: Observations and recommendations. *International Journal of Quality and Service Sciences*, Vol. 2, No. 1, pp. 8–22.
- Gwinner, K.P., Gremler, D.D. & Bitner, M.J. (1998) Relational benefits in services industries: the customer's perspective. *Journal of Academy of Marketing Science*, Vol. 26, No. 2, pp. 101–114.
- Halinen, A. & Törnroos, J.-A. (1995) The meaning of time in the study of industrial buyer-seller relationships. In: Möller, K. & Wilson, D. (Eds.). *Business Marketing: An Interaction and Network Perspective*. Norwell, Mass., Kluwer Academic Publishers. Pp. 493–529.

- Halinen, A. & Törnroos, J.-Å. (2005) Using case methods in the study of contemporary business networks. *Journal of Business Research*, Vol. 58, No. 9, pp. 1285–1297.
- Halonen, M., Kallio, K. & Saari, E. (2010) Towards co-creation of service research projects – A method for learning in networks. *International Journal of Quality and Service Sciences*, Vol. 2, No. 1, pp. 128–145.
- Hamel, G. & Breen, B. (2007) *The future of management*. Boston Mass.: Harvard Business School Press.
- Hartley, J. (2005) Innovation in governance and public services: Past and present. *Public Money & Management*, Vol. 25, No. 1, pp. 27–34.
- Heikkinen, M.T, Mainela, T., Still, J. & Tähtinen, J. (2007) Roles for managing in mobile service development nets. *Industrial Marketing Management*, Vol. 36, pp. 909–925.
- Heinonen, K., Strandvik, T., Mickelsson, K.-J., Edvardsson, B., Sundström, E. & Andersson, P. (2010) A Customer-dominant logic of service. *Journal of Service Management*, Vol. 21, No. 4, pp. 531–548.
- Heinonen, K., Strandvik, T., Mickelsson, K.-J., Edvarsson, B., Sunström, E. & Andersson, P. (2009) Rethinking service companies' business logic: Do we need a customer-dominant logic as a guideline? Working paper 546. Hanken School of Economics, IB Bokhandel, Helsinki.
- Helfat, C.E. & Peteraf, M.A. (2003) The dynamic resources-based view: capability lifecycles. *Strategic Management Journal*, Vol. 24, No. 10, pp. 997–1010.
- Hemp, P. & Stewart, T. (2004) Leading change when business is good. <http://hbr.org/2004/12/leading-change-when-business-is-good/ar/1>
- Hite, J.M. & Hesterly, W.S. (2001) The evolution of firm networks: from emergence to early growth of the firm. *Strategic Management Journal*, Vol. 22, No. 3, pp. 275–286.
- Hitt, M. & Ireland, R.D. (1985) Corporate distinctive competence, strategy, industry and performance. *Strategic Management Journal*, Vol. 6, No. 3, pp. 273–293.
- Hoffman, N. (2000) An examination of the “Sustainable Competitive Advantage” concept: Past, present, and future. *Academy of Marketing Science*, No. 4.

- Holmlid, S. & Evenson, S. (2008) Bringin service design to service sciences, management and engineering. Service science, management and engineering education for the 21st century. Pp. 341–345.
- Hoover, W.E., Eloranta, E., Holmström, J. & Huttunen, K. (2001) Managing the demand-supply chain. Value Innovations for Customer Satisfaction. New York: John Wiley & Sons, Inc.
- Horovitz, J., (2000) The Seven Secrets of Service Strategy. Financial Times-Prentice Hall, Harlow.
- Howe, J. (2008) Crowdsourcing: Why the power of the crowd is driving the future of business. Crown publishing, New York.
- Huber, F., Herrmann, A. & Morgan, R.E., (2001) Gaining competitive advantage through customer value oriented management. The Journal of Consumer Marketing, Vol. 18 No. 1, pp. 41-53.
- Human, G. & Naudè, P. (2009) Exploring the relationship between network competence, network capability and firm performance: A resource-based perspective in an e merging economy. Management Dynamics, Vol. 18, No. 1, pp. 2–14.
- Hyötyläinen, R. & Nuutinen, M. (2010) Johdanto: palveluliiketoiminnan mahdollisuudet ja haasteet. In: Hyötyläinen, R. & Nuutinen, M. (Eds.). Mahdollisuuksien kenttä – Palveluliiketoiminta ja vuorovaikutteinen johtaminen [Introduction; opportunities and challenges of service business. In Field of Opportunities – Service Business and Interactive Management]. Teknologiateollisuus, Tampere. Pp 13–20.
- Håkansson, H. & Ford, D. (2002) How should companies interact in business networks? Journal of Business Research, Vol. 55, No. 2, pp. 133–139.
- Håkansson, H. & Snehota, I. (1995) Developing relationships in business networks. London, Routledge.
- IBM (1994) Annual report 1994 <http://www.ibm.com/annualreport/>.
- IBM (1996) Annual report 1996 <http://www.ibm.com/annualreport/>.
- IBM (2001) Annual report 2001 <http://www.ibm.com/annualreport/>.
- IBM (2002) IBM Global Services: A Brief History <http://www-03.ibm.com/ibm/history/documents/pdf/gservices.pdf>.

- IBM (2006) Annual report 2006 <http://www.ibm.com/annualreport/>.
- IBM (2006) Expanding the innovation horizon: The global CEO study 2006. IBM Corporation.
- IBM (2010) Annual report 2010 <http://www.ibm.com/annualreport/>.
- Á
- Inkpen, A.C. & Tsang, E.W.K. (2005) Social capital, networks and knowledge transfer. *Academy of Management Review*, Vol. 30, No. 1, pp. 146–165.
- Iwamura, A. & Jog, V. (1991) Innovators, organization structure and management of the innovation process in the securities industry. *Journal of Product Innovation Management*. Vol. 8, No. 2, pp. 104–116.
- Jackson, D. & Humble, J. (1994) Service excellence – The role of information technology. *Managing Service Quality*, Vol. 4, No. 4, pp. 36–40.
- Jarillo, J.C. (1988) On strategic networks. *Strategic Management Journal*, Vol. 9, No. 1, pp. 31–41.
- Jarratt, D. (2004) Conceptualizing a relationship management capability. *Marketing Theory*, Vol. 4, No. 4, pp. 287–309.
- Johannesson, J. & Palona, I. (2010) The dynamic strategic capability. *International Business Research*, Vol. 3, No. 1, pp. 3–12.
- Johanson, J.J. & Mattsson, L.-G. (1987) Interorganizational relations in industrial systems: A networks approach compared with the transaction-cost approach. *International Studies of Management & Organization*, Vol. XVII, No. 1, pp. 34–48.
- Johnsen, R.E. & Ford, D. (2006) Interaction capability development of smaller suppliers in relationships with larger customers. *Industrial Marketing Management*, Vol. 35, No. 8, pp. 1002–1015.
- Johnson, G., Melin, L. & Whittington, R. (2003) Micro strategy and strategizing: Towards an activity-based view. *Journal of Management Studies*, Vol. 40, No. 1, pp. 3–22.
- Kale, P., Dyer, J.H. & Singh, H. (2002) Alliance capability, stock market response, and long-term alliance success: the role of the alliance function. *Strategic Management Journal*, Vol. 23, No. 8, pp. 747–767.

- Kallio, K., Lappalainen, I., Kuure, E. & Lindström, A. (2011) A learning perspective for managing service innovation process in a value network. Paper for the Encounters Conference, Porvoo Finland, April 2011.
- Kaplan, A.M. & Haenlein, M. (2010) Users of the world, unite! The challenges and opportunities of Social Media. *Business Horizons*, Vol. 53, No. 1, pp. 59–68. <http://openmediart.com/log/pics/sdarticle.pdf>.
- Karpen, I., Bove, L., & Lukas, B. (2012) Linking service-dominant logic and strategic business practice. A conceptual model of a service-dominant orientation. *Journal of Service Research*, Vol. 15, No. 1, pp. 21-38.
- Khalifa, A. Z., (2004) Customer value: a review of recent literature and an integrative configuration. *Management Decision*, Vol. 42, No.5, pp. 645-666.
- Kijl, B., Bouwman, H., Haaker, T. & Faber, E. (2005) Developing a dynamic business model framework for emerging mobile services. ITS 16th European Regional Conference, Porto, Portugal, 4–6 September, 2005.
- Kim, W.C. & Mauborgne, R. (1999) Strategy, value innovation, and the knowledge economy. *Sloan Management Review*, Spring, pp. 41–54.
- Kindström, D. (2010) Towards a service-based business model – Key aspects for future competitive advantage. *European Management Journal*, Vol. 28, pp. 479-490.
- Kline, S.J. & Rosenberg, N. (1986) An overview of innovation. *European Journal of Innovation Management*, Vol. 38, No. 1, pp. 275–305.
- Koivisto, M. (2009) Frameworks for structuring services and customer experiences. In: Miettinen, S. & Koivisto, M. (Eds.). *Designing Services with Innovative Methods*. Kuopio Academy of Design, University of Art and Design, Helsinki B 93. Pp. 136–149.
- Komulainen, H., Mainela, T., Sinisalo, J., Tähtinen, J. & Ulkuniemi, P. (2006) Business model scenarios in mobile advertising. *International Journal of Internet Marketing and Advertising*, Vol. 3, No. 3, pp. 254–270.
- Kotter, J. (1995) Leading change: Why transformation efforts fail. *Harvard Business Review* 59–67.
- Kovacs, G. & Spens, K.M. (2001) Abductive reasoning in logistics research. *International Journal of Physical Distribution & Logistics Management*, Vol. 34, No. 2, pp. 132–134.

- Kowalkowski, C., Kindström, D. & Brehmer, P.O. (2011) Managing industrial service offering in global business markets. *Journal of Business & Industrial Marketing*, Vol. 26, No. 3, pp. 181–192.
- Lancioni, R.A. (2000) New developments in supply chain management for the millennium. *Industrial Marketing Management*, Vol. 29, No. 1, pp. 1–6.
- Lappalainen, I., Apilo, T. & Mäkitalo-Keinonen, T. (2010) Typology of user-driven innovation – how can customers and end users be involved in companies' innovation process. 11th International CINet Conference. Zürich, Switzerland, 5–7 September.
- Lawson, B. & Samson, D. (2001) Developing innovation capability in organisations: A dynamic capabilities approach. *International Journal of Innovation Management*, Vol. 5, No. 3, pp. 377–400.
- Leonard-Barton, D. (1992) Core capabilities and core rigidities: a paradox in managing product development. *Strategic Management Journal*, Vol. 13, pp. 111–125.
- Leszinski, R. and Marn, M.V., (1997) Setting value, not price, *The McKinsey Quarterly*, No. 1, pp. 99-115.
- Linstone, H.A. & Turoff, M. (Eds.). (1975) *The Delphi method: Techniques and applications*. Reading, MA: Addison-Wesley.
- Lorenzoni, G. & Lipparini, A. (1999) The leveraging of interfirm relationships as a distinctive organizational capability: A longitudinal study. *Strategic Management Journal*, Vol. 20, No. 4, pp. 317–338.
- Lundgren, A. (1995) *Technological Innovation and Network Evolution*. Routledge, London.
- Lusch, R.F. & Vargo, S.L. (2006) Service-dominant logic: reactions, reflections and refinements. *Marketing Theory*, Vol. 6, No. 3, pp. 281–288.
- Mager, B. (2004) *Service Design: A Review*. Köln: Köln International School of Design, 2004. ISBN 3-9808573-5-2.
- Mager, B. (2009) Service design as an emerging field. In: Miettinen, S. & Koivisto, M. (Eds.). *Designing Services with Innovative Methods*. Kuopio Academy of Design, University of Art and Design, Helsinki B 93. Pp. 28–43.

- Maglio, P., Kieliszewski, C.A. & Spohrer, J. (Eds.). (2010) Handbook of service science. Springer, New York.
- Magnusson, M., Boccadell, P. & Börjesson, S. (2009) Managing the efficiency-flexibility tension in innovation: strategic and organizational aspects. *Creativity and Innovation Management*, Vol. 18, No. 1, pp. 1–6.
- Magnusson, P.R. (2003) Benefits of involving users in service innovation. *European Journal of Innovation Management*, Vol. 6, No. 4, pp. 228–238.
- Mathieu, V. (2001) Service strategies within the manufacturing sector: benefits, costs and partnerships. *International Journal of Service Industry Management*, Vol. 12, No. 5, pp. 451–475.
- McIntyre, A. (2008) Participatory action research. *Qualitative Research Methods Series*, Vol. 52. Thousand Oaks, CA: Sage Publications.
- McKenna, R. (1991) Marketing is everything. *Harvard Business Review*, Vol. 69, No. 1, pp. 65–79.
- Mele, C., Spena, T.R. & Colurcio, M. (2010) Co-creating value innovation through resource integration. *International Journal of Quality and Service Science*, Vol. 2, No. 1, pp. 60–78.
- Menor, L.J. & Roth, A.V. (2007) New service development competence in retail banking: construct development and measurement validation. *Journal of Operations Management*, Vol. 25, No. 4, pp. 825–846.
- Menor, L.J., Tatikonda, M.V. & Sampson, S.E. (2002) New service development: areas for exploitation and exploration. *Journal of Operations Management*, Vol. 20, No. 2, pp. 135–158.
- Meroni, A. & Sangiorgi, D. (2011) Design for services. MPG Books Group, UK.
- Mezias, J., Grinyer, P. & Guth, W. (2001) Changing collective cognition: a process model for strategic change. *Long Range Planning*, Vol. 34, No. 1, pp. 71–95.
- Miettinen, S. (2009) Service Designers' Methods. In: Miettinen, S. & Koivisto, M. (Eds.). *Designing Services with Innovative Methods*. Kuopio Academy of Design, University of Art and Design, Helsinki B 93. Pp. 60–77.
- Miles, I. (1999) Services in national innovation systems: From traditional services to knowledge intensive business services. In: Kuusi, O. & Shienstock, G.

- (Eds.). Transformation Towards a Learning Economy. The Challenge for Finnish the Innovation System. Sitra 213. Helsinki. Pp. 57–98.
- Mintzberg, H. & McHugh, A. (1985) Strategy formation in an adhocracy. *Administrative Science Quarterly*, Vol. 30, No. 2, pp. 160–197.
- Mintzberg, H. (1990) The design school: Reconsidering the basic premises of strategic management. *Strategic Management Journal*, Vol. 11, No. 3, pp. 171-195.
- Monroe, K.B., (1990) Pricing. Making Profitable Decisions, 2nd ed., McGraw-Hill, London.
- Morgan, F., Deeter-Schmelz, D. & Moberg, C.R. (2007) Branding implications of partner firm-focal firm relationships in business-to-business service networks. *Journal of Business & Industrial Marketing*, Vol. 22, No. 6, pp. 372–382.
- Morgan, R.M. & Hunt, S.D. (1994) The commitment-trust theory of relationship marketing. *Journal of Marketing*, Vol. 58, No. 3, pp. 20–38.
- Moritz, S. (2005) Service Design: Practical Access to an Evolving Field. Köln International School of Design. Cologne: University of Applied Sciences.
- Möller, K. & Halinen, A. (1999) Business relationships and networks: managerial challenge of network era. *Industrial Marketing Management*, Vol. 28, No. 5, pp. 413–427.
- Möller, K. & Rajala, A. (2007) Rise of strategic nets – New modes of value creation. *Industrial Marketing Management*, Vol. 36, No. 7, pp. 895–908.
- Möller, K. & Svahn, S. (2009) How to influence the birth of new business fields – Network perspective. *Industrial Marketing Management*, Vol. 38, pp. 450–458.
- Möller, K., Rajala, A. & Svahn, S. (2005) Strategic business nets – Their type and management. *Journal of Business Research*, Vol. 58, No. 9, pp. 1274–1284.
- Nenonen, S., & Storbacka, K. (2010) Business model design: conceptualizing networked value co-creation. *International Journal of Quality and Service Sciences*, Vol. 2, pp. 43-59.

- Norman, R. & Ramirez, R. (1994) *Designing interactive strategy*. Chichester, John Wiley & Sons via Blois, K. & Ramirez, R. (2006) Capabilities as marketable assets: a proposal for a functional categorization. *Industrial Marketing Management*, Vol. 35, No. 8, pp. 1027–1031.
- Normann, R. (2002) *Service management – Strategy and leadership in service business*. 3rd ed. Chichester, Wiley.
- Norros, L. & Nuutinen, M. (2002) The concept of the core task and the analysis of working practices. In: Boreham, N., Samurçay, R. & Fischer, M. (Eds.). *Work process knowledge*. Routledge, London. Pp. 25–39.
- Norros, L. (2004) Acting under uncertainty. The core-task analysis in ecological study of work. VTT Publications 546. VTT, Espoo. <http://www.vtt.fi/inf/pdf/publications/2004/P546.pdf>.
- Nuutinen, M. & Iloäki, S.-K. (2008) Developing industrial service capability: change process from product-oriented culture to service-oriented culture. In: *Proceedings of the 2nd International Conference on Applied Human Factors and Ergonomics. AHFE 2008, Las Vegas, US, 14–17 July 2008*. USA Publishing. Las Vegas.
- Nuutinen, M. & Lappalainen, I. (2009) Revealing barriers to service innovations in two manufacturing companies – An organizational culture point of view. In: Huizingh, K.R.E., Conn, S., Torkkeli, M. & Bitran, I. (Eds.). *Proceedings of the 2nd ISPIM Innovation Symposium, December 6–9, 2009, New York City, USA*.
- Nuutinen, M. & Lappalainen, I. (2010) Teknologiayritykset matkalla kohti palveluliiketoimintaa: Palvelukyky ja -kulttuuri muutoksen johtamisen tulkkina' [Technology companies on the way towards service business: Service capability and culture in change management]. In: Hyötyläinen, R. & Nuutinen, M. (Eds.). *Mahdollisuuksien kenttä – Palveluliiketoiminta ja vuorovaikutteinen johtaminen [Field of Opportunities – Service Business and Interactive Management]*. Teknologiateollisuus, Tampere.
- Nuutinen, M. & Lappalainen, I. (2012 – Accepted for publication). Towards service-oriented organisational culture in manufacturing companies. *International Journal of Quality and Service Science*.
- Nuutinen, M. (2005a) Expert Identity construct in analysing prerequisites for expertise development: A case study in nuclear power plant operators' on-the-job training. *Cognition, Technology & Work*, Vol. 7, No. 4, pp. 288–305.

- Nuutinen, M. (2005b) Contextual assessment of working practices in changing work. *International Journal of Industrial Ergonomics*, Vol. 35, No. 10, pp. 905–930.
- Nuutinen, M. (2006) Expert Identity in development of core-task-oriented working practices for mastering demanding situations. Doctoral Thesis. VTT Publications 604. VTT, Espoo. <http://www.vtt.fi/inf/pdf/publications/2006/P604.pdf>.
- Näkki, P. & Antikainen, M. (2008) Online tools for co-design: User involvement through the innovation process. In: Karahasanović, A. & Følstad, A. (Eds.) *Proceedings of the NordiCHI 2008 workshop: New Approaches to Requirements Elicitation & How Can HCI Improve Social Media Development?* TAPIR, Trondheim, November 2008. Pp. 92–97.
- Oedewald, P. & Reiman, T. (2003) Core task modelling in cultural assessment: a case study in nuclear power plant maintenance. *Cognition, Technology & Work*, Vol. 5, No. 4, pp. 283–293.
- Oliva, R. & Kallenberg, R. (2003) Managing the transition from products to services. *International Journal of Service Industry Management*, Vol. 14, No. 2, pp. 160–172.
- Orihata, M. & Watanabe, C. (2000) The interaction between product concept and institutional inducement: a new driver of product innovation. *Technovation*, Vol. 20, No. 1, pp. 11-23.
- Osterwalder, A., Pigneur, Y. & Tucci, C. (2005) Clarifying business models: origins, present, and future of the concept. *Communications of the Association for Information Systems*, Vol. 15.
- Palo, T. & Tähtinen, J. (2011) A network perspective on business models for emerging technology-based services. *Journal of Business and Industrial Marketing*, Vol. 26, No. 5, pp. 377–388.
- Palo, T. (2011) Developing networked business models for emerging technology-based services – Underlying challenges. *Proceedings of the 27th IMP Conference, August 31 – September 3, 2011, Glasgow, Scotland*.
- Parnell, J.A. (2011) Strategic capabilities, competitive strategy, and performance among retailers in Argentina, Peru and the United States. *Management Decisions*, Vol. 49, No. 1, pp. 130–155.

- Payne, A.F., Storbacka, K. & Frow, P. (2008) Managing the co-creation of value. *Journal of the Academic Marketing Science*, Vol. 36, No. 1, pp. 83–96.
- Penrose, E.T. (1959) *The theory of the growth of the firm*. Oxford, Oxford University Press.
- Perttula, M. & Sääsikiähti, M. (2004) Product concept development as a conscious resource. *Product Design in Changing Environment 18-20 August 2004*, Tampere, Finland.
- Piercy, N.F. & Cravens, D.W. (1995) The network paradigm and the marketing organization: developing a new management agenda. *European Journal of Marketing*, Vol. 29, No. 3, pp. 7–34.
- Porter, M.E. (1996) What is strategy? *Harvard Business Review*. Nov–Dec. <http://hbr.org/1996/11/what-is-strategy/ar/1>.
- Prahalad, C.K. & Hamel, G. (1990) The core competence of the corporation. *Harvard Business Review*, May–June.
- Ramirez, R. & Wallin, J. (2000) *Prime Movers: Define Your Business or Have Someone Defined It for You*. Chichester, John Wiley & Sons via Blois, K.
- & Ramirez, R. (2006) Capabilities as marketable assets: a proposal for a functional categorization. *Industrial Marketing Management*, Vol. 35, No. 8, pp. 1027–1031.
- Reiman, T. & Oedewald, P. (2002) The assessment of organisational culture. A methodological study. VTT Research Notes 2140. VTT, Espoo. <http://www.vtt.fi/inf/pdf/tiedotteet/2002/T2140.pdf>.
- Reiman, T. & Oedewald, P. (2004) Measuring maintenance culture and maintenance core task with CULTURE questionnaire – a case study in the power industry. *Safety Science*, Vol. 42, No. 9, pp. 859–889.
- Reiman, T. (2007) Assessing organizational culture in complex sociotechnical systems. Methodological evidence from studies in nuclear power plant maintenance organizations. VTT Publications 627. VTT, Espoo. <http://www.vtt.fi/inf/pdf/publications/2007/P627.pdf>.
- Ritter, T. & Gemünden, H.G. (2003) Network competence: its impact on innovation success and its antecedents. *Journal of Business Research*, Vol. 56, No. 9, pp. 745–755.

- Rumelt, R.P., Schendel, D. & Teece, D. (1991) Strategic management and economics. *Strategic Management Journal*, Vol. 12, pp. 5–30.
- Saco, R.M. & Goncalves A.P. (2008) Service Design: An Appraisal. *Design Management Review*, Vol. 19, No. 1, pp. 10-19.
- Sampson, S.E. & Froehle, C.M. (2006) Foundations and implications of a proposed unified services theory. *Production and Operations Management*, Vol. 15, No. 2, pp. 329–343.
- Schreyögg, G. & Kliesch-Eberl, M. (2007) How dynamic can organizational capabilities be? Towards a dual-process model of capability dynamization. *Strategic Management Journal*, Vol. 28, No. 9, pp. 913–933.
- Seeck, H. (2008) Johtamisopit Suomessa. Taylorismista innovaatioteorioihin. Helsinki: Gaudeamus.
- Service Design Network (2005) Service design network manifesto. <http://www.service-design-network.org/system/files/sdn%20Manifesto.pdf>
- Shafer, S., Smith, H. & Linder, J. (2005) The power of business models. *Business Horizons*, Vol. 48, pp. 199–207.
- Smith, A.M. & Fischbacher, M. (2005) New service development: A stakeholder perspective. *European Journal of Management*, Vol. 39, No. 9/10, pp. 1025–1048.
- Snow, C.C., Miles, R.E. & Coleman, H.J. Jr. (1992) Managing 21st century network organization. *Organizational Dynamics*, Vol. 20, pp. 5–20.
- Spohrer, J. (2008) Services Sciences, Management, and Engineering (SSME) and Its relation to academic disciplines. In: *Services Science: fundamentals, Challenges and Future Developments*. Strauss, B., Engelmann, K., Kremer, A. & Luhn, A. (Eds.). Springer, Berlin.
- Stauss, B., Engelmann, K., Kremer, A. & Luhn, A. (2008) Services science: Fundamentals, challenges and future developments (Editorial). Springer, Berlin.
- Svahn, S. & Westerlund, M. (2007) The modes of supply net management: A capability view. *Supply Chain Management: An International Journal*, Vol. 12, No. 5, pp. 369–376.

- Walter, A., Auer, M. & Ritter, T. (2006) The impact of network capabilities and entrepreneurial orientation on university spin-off performance. *Journal of Business Venturing*, Vol. 21, No. 4, pp. 541–567.
- Wang, C.L. & Ahmed, P.K. (2007) Dynamic capabilities: a review and research agenda. *International Journal of Management Reviews*, Vol. 9, No. 1, pp. 31–51.
- Vargo, S. (2009) Toward a transcending conceptualization of relationship: A service-dominant logic perspective. *Journal of Business & Industrial Marketing*, Vol. 24, No. 5/6, pp. 373–379.
- Vargo, S.L. & Akaka, M.A. (2009) Service-dominant logic as a foundation for service science: Clarifications. *Service Science*, Vol. 1, No. 1, pp. 32–41.
- Vargo, S.L. & Lusch, R.F. (2004) Evolving to a new dominant logic for marketing. *Journal of Marketing*, Vol. 68, No. 1, pp. 1–17.
- Vargo, S.L. & Lusch, R.F. (2008a) From goods to service(s): Divergences and convergences of logics. *Industrial Marketing Management*, Vol. 37, No. 3, pp. 254–259.
- Vargo, S.L. & Lusch, R.F. (2008b) Service-dominant logic: continue the evolution. *Journal of the Academy of Marketing Science*, Vol. 36, No. 1, pp. 1–10.
- Webster (1971) Webster's third new international dictionary of the English language unabridged. G. & C. Merriam Company, Springfield, Massachusetts, USA.
- Verona, G. (1999) A Resource-based view of product development. *The Academy of Management Review*, Vol. 24, No. 1, pp. 132–42.
- Westerlund, M., Rajala, R. & Leminen, S. (2008) SME business models in global competition: a network perspective. *International Journal of Globalisation and Small Business*, Vol. 2, No. 3, pp. 342–358.
- Whittington, R. (1996) *Strategy as Practice*. London: Routledge.
- Winer, R.S. (2001) A framework for customer relationship management. *California Management Review*, Vol. 43, No. 4, pp. 89–105.
- Woodruff, R.B. (1997) Customer value: the next source for competitive advantage. *Journal of the Academy of Marketing Science*, Vol. 25 No. 2, pp. 139–153.

- Zahra, S.A., Sapienza, H.J. & Davidsson, P. (2006) Entrepreneurship and dynamic capabilities: a review, model and research agenda. *Journal of Management Studies*, Vol. 43, No. 3, pp. 917–955.
- Zeithaml, V. (1988) Consumer perception of price, quality and value: a means-end model and synthesis of evidence. *Journal of Marketing*, Vol. 52 July, pp. 2-22.
- Zollo, M. & Winter, S.G. (2002) Deliberate learning and the evolution of dynamic capabilities. *Organization Science*, Vol. 13, No. 3, pp. 339–351.
- Zott, C. & Amit, R. (2008) The fit between product market strategy and business model: implications for firm performance. *Strategic Management Journal*, Vol. 26, pp. 1–26.
- Zott, C., & Amit, R. (2010) Business model design: an activity system perspective. *Long Range Planning*, Vol. 43, pp. 216-226.

Title	Paths towards pioneering in service business
Author(s)	Arto Wallin, Jaana Tähtinen, Maaria Nuutinen (Eds.)
Abstract	<p>Development paths towards pioneering in service business are very complex in nature. These paths are always unique, based on the path that company has previously travelled and options available at a certain point in time. These paths are also continuously evolving because of the organizational learning process and rapidly changing competitive environment.</p> <p>This report clarifies the complex phenomena of development towards pioneer in service business, giving examples from real life on how the paths emerge and suggesting a new framework for guiding the journey towards pioneering. The study provides four kinds of contribution to the development of successful service business. Firstly, a key enabler for successful service business rests in the transition from a goods-oriented view to a service-oriented view. Transition to service-oriented view means holistic change in companies' everyday thinking, processes, relationships, capabilities, structures, management ideologies and strategies, etc. The adoption of new logic can provide a long-term advantage, thereby opening the path towards pioneering within that particular context. Furthermore, it can open up new ways to value creation by fostering innovations.</p> <p>Secondly, four case studies, which intermediate between theory and practice, are presented. These case studies offer glimpses of companies' past or on-going paths and demonstrate different ways to enhance development: service research as a shared frame of reference, co-developing services with customers and end-users, involving experts in the development of future service business and building service capability and culture through gradually tackling the main obstacles of change.</p> <p>Thirdly, five general success factors were recognised. These are: 1) service-orientation in practice, 2) close customer and network relationships, 3) collaborative development of service business and services, 4) processes and methods for management, and 5) all-embracing renewal throughout the organizations. Success in terms of these factors is presumed to enhance development towards pioneering in service business. Some of the enhancing factors can become differentiators if the company can use those to outperform its competitors. Moreover, if proper attention is not paid to these factors, they can begin to hinder the development of service business or even become barriers for development. Therefore, it is extremely important to recognize these general success factors and understand their importance to the success in service business.</p> <p>Finally, the effort towards pioneering can be further supported by approaching development from four complementary perspectives, which are the: 1) organizational culture, 2) business model, 3) value network and 4) strategy. Even though development should be as holistic as possible, it is easier to understand the challenge if the phenomenon can be viewed from different perspectives. Together with the success factors, these perspectives formulate the new framework for supporting service business development and finding one's own path towards pioneering in service business.</p> <p>To sum up, every pioneer goes through its own development path. Sometimes the successful journey through the development path is something that emerges as the result of a normal urge to keep going and surpass the competitors. Sometimes the path is a clear but fading target that motivates change and efforts but is never reached. Even though these paths may look very different up close, the broader view reveals the general success factors on these paths. Understanding and learning from these general success factors provide companies with an excellent starting point for building successful service business. It should be noted that if these success factors are not understood, they can become bottlenecks in the development of service-oriented business. Moreover, excelling in these success factors provides an excellent opportunity for establishing differentiation, thereby enabling the creation of the competitive advantage required to become a pioneer of service business.</p>
ISBN, ISSN	ISBN 978-951-38-7830-6 (soft back ed.) ISSN 2242-1211 (soft back ed.) ISBN 978-951-38-7831-3 (URL: http://www.vtt.fi/publications/index.jsp) ISSN 2242-122X (URL: http://www.vtt.fi/publications/index.jsp)
Date	April 2012
Language	English, Finnish abstract
Pages	134 p.
Keywords	Service business, pioneer, service-orientation, development, path
Publisher	VTT Technical Research Centre of Finland P.O. Box 1000, FI-02044 VTT, Finland, Tel. 020 722 111

Nimeke	Kehityspolkuja palveluliiketoiminnan edelläkävijyyteen
Tekijä(t)	Arto Wallin, Jaana Tähtinen & Maaria Nuutinen (Toim.)
Tiivistelmä	<p>Julkaisu kokoaa yhteen Proform-projektissa vuosina 2010–2012 tehdyn tutkimuksen palveluliiketoiminnan edelläkävijyydestä. Projekti keskittyi selvittämään palveluliiketoiminnan edelläkävijyyden osatekijöitä ja kehittämään neljään rinnakkaisprojektiin osallistuneen yrityksen palveluliiketoimintaa. Yhteistä projektin yrityksille oli se, että ne kaikki pyrkivät kehittämään teknologia-intensiivistä palveluliiketoimintaa, jossa palvelu muodostaa arvonluonnin perustan, mutta teknologia on myös olennainen osa palvelua.</p> <p>Tämän tutkimuksen näkökulmasta yritys on palveluliiketoiminnan edelläkävijä, mikäli se luo, kerää tai jakaa arvoa uudella tavalla siten, että siitä syntyy yritykselle kaupalliseen menestykseen johtavaa kilpailuetua. Avainsana kilpailuedun synnyttämiseen on siten erottuminen kilpailijoista. Erottuminen kilpailijoista ei tässä yhteydessä rajoitu vaan palvelutarjoamaan, vaan erottumisen mahdollistavana tekijänä voi olla esimerkiksi innovatiivisuutta korostava organisaatiokulttuuri tai uudenlainen tapa hyödyntää verkostoja.</p> <p>Polkuja edelläkävijyyteen on yhtä monia kuin on kulkijoitakin. Jotkut yritykset voivat syntyä edelläkävijöiksi kaupallistamalla uuden idean, joka jo lähtökohtaisesti poikkeaa markkinoilla olevista kilpailevista ratkaisuisista. Pitkän historian omaavien tuote- ja teknologiasuuntautuneiden yritysten kehityspotit palveluliiketoiminnan edelläkävijöiksi ovat lähtökohtaisesti paljon haastavampia. Näiden yritysten mahdolliset kehityspotit määräytyvät heidän aiemmin kulkemastaan matkastaan ja kullakin ajanhetkellä tarjolla olevista mahdollisuuksista. On myös syytä muistaa, että jokaisen edelläkävijän täytyy löytää oma polkunsaa. Seuraamalla toisten polkuja voi toki menestyä liiketoiminnassa, mutta edelläkävijäksi ne eivät yritystä vie.</p> <p>Kehittyminen palveluliiketoiminnan edelläkävijäksi on näin ollen usein monimutkainen ja pitkälinen prosessi. Tutkimuksemme tarjoaa tieviittoja matkan varrelle, joita seuraamalla yritykset tietävät pyrkivänsä oikeaan suuntaan. Tärkeintä tässä prosessissa onkin jatkuva pyrkimys parantaa toimintaa vuodesta toiseen, sillä edelläkävijä ei pysähdy ihastelemaan saavutuksia liian pitkäksi aikaa, vaan jatkaa eteenpäin kohti uusia haasteita.</p> <p>Raportti alkaa määrittämällä työn taustoja, pääterminologiaa ja tutkimuskysymyksiä. Toinen kappale tarjoaa katsauksen työn taustalla oleviin teorioihin ja kolmas kappale kuvaa lyhyesti empiirisessä tutkimuksessa käytetyt menetelmät. Neljännessä kappaleessa pureudutaan syvällisemmin neljään tapaustutkimukseen, joista ensimmäinen kuvaa IBM:n kehitystä palveluliiketoiminnan edelläkävijäksi, ja kolme muuta kuvaavat Tiedon, HiQ:n ja Bronto Skyliftin palveluliiketoiminnan kehittämistä. Viides kappale kokoaa yhteen projektissa koottua empiiristä ja teoreettista tietämystä ja muodostaa niiden perusteella palveluliiketoiminnan kehittämistä ohjaavan edelläkävijämallin. Kuudes kappale kiteyttää tutkimuksen tärkeimpiä löydöksiä ja tarjoaa lukijoille sekä teoreettisia että liikkeenjohtollisia johtopäätöksiä.</p>
ISBN, ISSN	<p>ISBN 978-951-38-7830-6 (nid.)</p> <p>ISSN 2242-1211 (nid.)</p> <p>ISBN 978-951-38-7831-3 (URL: http://www.vtt.fi/publications/index.jsp)</p> <p>ISSN 2242-122X (URL: http://www.vtt.fi/publications/index.jsp)</p>
Julkaisu aika	Huhtikuu 2012
Kieli	Englanti, suomenkielinen tiivistelmä
Sivumäärä	134 s.
Avainsanat	Service business, pioneer, service-orientation, development, path
Julkaisija	<p>VTT</p> <p>PL 1000, 02044 VTT, Puh. 020 722 111</p>

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