New service development process in international markets Case: Technopolis in St. Petersburg

Abstract

This research analyses how special characteristics of international markets affect new service development (NSD) process of a Finnish science park operator. The case study aims at giving insight how international markets affect NSD process and providing with suggestions for future research in order to build up a model on new international service development (NISD).

The case company's NSD process differs from the conventional NSD models with regards to its non-linear approach and extensive usage of external network with a special emphasis on customer-orientation. The research indicates that there are different customer needs in international markets also for existing customers from the home market. Institutions have delayed case company's NSD process and it has had to employ local workforce to build up local network. More research is needed on different types of services, industries and cultures and most of all on general level on various stages of international NSD.

keywords: new service development process, international services, service innovation, customer-orientation, technology park, science park

1 INTRODUCTION

In 2005, service exports accounted one fifth in the world trade (WTO 2006). However, the total value-added contributed by services is around 70% and rising in domestic economies. This is due to nature of services and the consequent difficulties in international trade, when service suppliers need often to be in proximity with their customers. Therefore, more and more companies establish affiliates overseas. (OECD 2007.) As a result, most of the FDI is already estimated to be allocated in service sector with the further declining share of manufacturing sector (UNCTAD 2006).

Despite of important and increasing role of services in the global economy, there has been relatively little research focusing on service innovations in international markets. It has been noted (Johne & Storey 1998, 219; Chryssochoidis & Wong 2000, 40) that the importance of the subject is likely to increase even further as a result deregulation of markets, global competition and internationalising customers put more pressure on companies. Most of literature on new service development focusing only on a single country may have biased results and the conclusions might have been only true for a single country (Alam 2006, 235). “Of immediate practical importance is how service quality can be best managed across borders by companies which operate internationally” (Johne & Storey 1998, 219).

In this paper the feasibility of the existing knowledge of new service development is investigated by means of a case study. The case study aims at analysing how the special characteristics of international markets affect the new service development process of a Finnish service provider specialising in science parks. In order to answer to the research question, the case study seeks answers to the following sub-questions:

- How do customer needs vary across borders?
- How do case company's services vary across borders?
- How do case company's internal and external network have impact on new service development?

The objective of this research is to shed understanding on how case company has organised its new service development process in St. Petersburg. This is done:

- in order to give insight how cross-cultural / international markets affect new service development process
- in order to provide with suggestions for future research as to be able to build up a model on new international service development (NISD), which could help managers to better organise their NSD processes in a foreign location

2 LITERATURE ON NEW SERVICE DEVELOPMENT PROCESS

The terms “new service development” (NSD) and “new product development” (NDP) have often been used interchangeably but Johne and Storey (1998) have made the distinction that whereas NPD refers to the development of tangible products which are new to the supplier, and may sometimes be expanded to include NSD, new service development consists only of the development of services which are new to the supplier.

The generally accepted differences between goods and services suggest that it is rational to have different approaches towards their development processes. For instance, Johne and Storey (1998, 186) emphasise the close interaction between the service provider and customers, which makes new service development more complex than the development of new tangible products. In general, the main characteristics which make

services different from tangible products are intangibility, heterogeneity, perishability and inseparability. On the other hand what makes international services different from domestic services is that “they involve something crossing national boundaries and they involve some type of engagement with a foreign culture”. (Clark & Rajaratnam 1999.)

Johne and Storey (1988, 245) refer to the work of Lovelock (1984), which found factors which distinguish new service development from tangible product development, particularly in idea generation, in importance of “product fit”, and in service blue prints. In general this means screening the ideas within and outside the company, fit the new services and customer segments with existing service offerings and customer groups, and to design the services with employees in mind, as well.

Traditional theories of innovation provide different interpretations for what innovation is. Sundbo (1997) has divided them into three groups according to the fundamental question they seek to answer: how do innovations evolve. These theories argue that innovation can be a result of (1) technological development, (2) individual entrepreneurship or intrapreneurship, or (3) by a strategic decision and further development of the innovation throughout the company.

There has been some dispute over times, whether it is reasonable to make the distinction between new (tangible) product and service development. Sundbo (1997, 433) has noted that existing literature does not even discuss whether innovations in services can be understood in terms of the theories developed for manufacturing sector. For instance, the conventional theories may not suit well the service sector, as in his opinion innovation does not have to be radical, and instead management of innovation process has come closer to (although not equal to) the phenomenon of organisational learning. Radical innovations have as such also been found less successful than small incremental changes for service firms (de Brentani 1991), which encourages us to talk about new services rather than innovations in their conventional meaning.

Cooper (1987) has taken part in the innovation discussion by evaluating what is actually new about a new product. He states that “newness” can be defined in two senses: a product is either new to the company or new to the market, which follows the product-market strategy of Ansoff (1958, 394).

Cooper (1987) has suggested a number factors, which affect the success of an NPD process, such as:

- unique and superior products
- strong market orientation
- synergy in number of areas including technology and marketing
- in-depth understanding of customer needs and customer testing
- top management support for innovation process
- sound marketing plan
- market studies early in the development process and definition of a target market

Although Cooper’s categorisation was initially targeted for product market, Scheuing and Johnson (1989, 31) have similarly represented a new service strategy matrix, which represents four major new service strategy options for a company.

Exhibit 1 New service strategy matrix (Scheuing & Johnson. 1989, 31)

Markets / Offerings	Existing buyers	New buyers
Existing services	Share building	Market extension
New services	Line extension	New business

Dating back to some 20 years, the research on service innovation development process is as such a relatively new field of interest compared to the research on NPD processes. The first models made for NSD were mostly targeted in service researchers and the first papers with managerial perspective were introduced only in the beginning of 1990s. Fitzsimmons and Fitzsimmons (2000) have grouped the NSD models into three categories showing their relation to the models offered for NPD processes:

1) Partial models concerned only with specific stages in the NSD processes
2) Translational models which are based on the NPD stages of Booz et al (1982)
3) Comprehensive models which aim at providing holistic model of NSD processes

One of the first translational models was the normative model of NSD by Bowers (1989), which suggests three ways (idea generation, service development and evaluation, and market testing) how new service development may be improved within an organisation. According to the model and his research findings, it is suggested that it is likely that a new service is introduced for a customer for the first time only during the commercialisation stage.

Exhibit 2 A normative model of new service development by Bowers (1989, 18)

1) develop a business strategy
2) develop a new service strategy
3) idea generation
4) concept development and evaluation
5) business analysis
6) service development and evaluation
7) market testing
8) commercialisation

Bowers (1989, 16) has noted already some 20 years ago that service industries differ from the Booz-Allen & Hamilton's NPD model, when they do not tend to engage in a formalised idea generation, product development and testing, or market testing. As a conclusion, he criticises the linear model suggested by his research findings, saying that the "research suggests that service organisations employ a process of new service development that is not open to marketplace influences". Methods to have a new service development process, which would incorporate consumer reactions and criticism, would in his opinion consist of routine search of ideas outside the company, developing the

services with the assistance of contact personnel and consumers, and putting the new service in a market test. (Bowers 1989, 19–20.)

Johne and Storey (1998, 184) have noted that the literature on new service development has emphasised the role of expertise and cooperation of individuals during and after the service development. In fact, since the study of Bowers (1989), the models of holistic NSD processes have also included feedback loops and, for instance, the model represented by Scheuing and Johnson (1989) has been considered to be particularly valuable because it illustrates various internal and external activities which are needed throughout the NSD process (Fitzsimmons & Fitzsimmons 2000, 14).

Exhibit 3 Normative model of new service development by Scheuing & Johnson (1989, 30)

marketing objectives →	1.	formulation of new service objectives and strategy	← environmental analysis
internal sources →	2.	idea generation	← external sources
	3.	idea screening	
customer contact personnel →	4.	concept development	← prospects
	5.	concept testing	
budget development →	6.	business analysis	← market assessment
	7.	project authorisation	
operations personnel →	8.	service design and testing	← users
operations personnel →	9.	process and system design and testing	
	10.	marketing program design and testing	← users
all personnel →	11.	personnel training	
	12.	service testing and pilot run	← users
	13.	test marketing	← users
	14.	full-scale launch	
	15.	post-launch review	

Whereas Scheuing and Johnson (1989) consider both internal and external activities affecting the NSD process, Alam and Perry (2002) have concentrated in their model on solely customer-orientation. The model is useful from the sense that it empirically tests how customers can be involved in NSD projects already in the very early stages of the process. The model however, does not test the relationship between customer input at various development stages and new service success, which makes it difficult to assess to what extent the customer input in NSD process is rational at all.

Exhibit 4 Customers' input in new service development process by Alam and Perry (2002, 527)

New service development stages	Activities performed by the customers
1. strategic planning	feedback on financial data
2. idea generation	state needs, problems and their solution, criticise existing service, identify gaps in the market, provide a wish list (service requirements), state new service adoption criteria
3. idea screening	suggest rough sales guide and market size, suggest desired features, benefits and attributes, show reactions to the concepts, liking, preference and purchase intent of all the concepts, help the producer in go/kill decision
4. business analysis	limited feedback on financial data, including profitability of the concepts, competitors' data
5. formation of cross-functional team	join top management in selecting team members
6. service design and process system design	review and jointly develop the blue prints, suggest improvements by identifying fail points, observe the service delivery trial by the firm personnel
7. personnel training	observe and participate in mock service delivery process, suggest improvements
8. service testing and pilot run	participate in a simulated delivery process, suggest final improvements and design change
9. test marketing	comments on the marketing plan, detailed comments about their satisfaction of marketing mixes, suggest desired improvements
10. commercialisation	adopt the service as a trial, feedback about overall performance of the service along with desired improvements, if any, word of mouth communications to other potential customers

What may be slightly controversial to these models encouraging external linkages, are the empirical research findings of Sundbo (1997), which showed that the external networks, including customers, were relatively weak in the successful innovation processes of financial services and tourist companies, whereas a catering firm was successfully involving customers in the process. This suggests that more information is needed on how external networks should be involved in the innovation process in order to increase the success rate of innovations.

de Jong and Vermeulen (2003, 850) have instead suggested two evolutionary satges of better organising NSD as an outcome of their review on successful NSD processes. Their model emphasises the role of people and the creative environment in which people are able to develop new services. Although it also explicitly represents two

stages of NSD, they explicitly criticise the current literature on NSD using linear models, whereas in reality "almost no empirical evidence can be found for service innovations passing through discrete stages" (de Jong & Vermeulen 2003, 854).

Exhibit 5 Evolutionary stages of better organising NSD by de Jong and Vermeulen (2003, 850)

Stage 1: Managing key activities People - involvement of frontline-employees - presence of product champion - management support Structure - funnel tools - multifunctional teams - availability of resources - pre-launch testing - market research and launch	(innovation process) -> implementation
Stage 2: creating an innovative climate People - external contacts - sharing information - autonomy of employees Structure - strategic focus - training and education - internal organisations and task rotation - information technology	-> initiation and implementation

Recently, Hansen and Birkinshaw (2007) presented the innovation value chain[1] for managers as a tool to view innovation efforts and results throughout the three phases of the innovation process, namely idea generation, conversion and diffusion. They state that in all three phases managers must undertake six critical activities: internal sourcing, cross-unit sourcing, external sourcing, selection, development and company-wide spread of the idea (Hansen & Birkinshaw 2007, 122).

[1] The value chain is a result from the findings of five large research projects, which consisted of interviews with more than 130 executives, survey of 4000 nonexecutive employees and analysis of 120 new-product-development project and 100 corporate venturing units.

Hansen and Birkinshaw (2007) do not separate product innovations from service innovations but instead offer the value chain concept for both. The research is focused on multinationals but it does not explicitly indicate the challenges caused by the international setting versus that of purely domestic innovation sourcing, conversion and diffusion. However, the challenges erected by decentralised organisations and geographical dispersion are considered to make cross-unit collaboration and idea diffusion difficult, which emphasises the importance of studying NSD processes in an international context.

Chryssochoidis and Wong (2000) were one of the fist ones to study the challenges of MNCs in their NSD processes, as they were interested in understanding the causes of delays in service innovation launches across international markets. Their research managed to indicate factors, which affect the timeliness of service innovation introduction: service innovation synergies with existing resources (human capital, technological resources, distribution channels), sufficiency of marketing resources, extensive usage of "soft" organisational mechanisms and proficiency in the development process. They also note that timely service innovation launches are focused on existing rather than new customer base (Chryssochoidis & Wong 2000, 39).

Another study which refers to the subject is a research by Alam (2006) who studied NSD strategies and processes of financial service firms in two different countries, namely Australia and the USA[2]. His findings suggest that firms in both countries use different strategies in developing new services i.e. some of the key NSD practices may be common regardless of a home country or culture whereas others should be adjusted for national context. He further suggests that customers should be involved in the idea generation and test marketing phase.

[2] The US and Australian sampling frame consisted of 274 and 262 firms, respectively.

3 METHODOLOGY

Research seeking answers to “why” and “how” –typed questions are the ones that usually best suit a case study approach, which focuses on understanding the dynamics present within a single setting (Eisenhardt 1989; Yin 1996). In this research the objective is to increase the understanding of new service development in international context by means of a pilot case study. The paper aims at developing the existing theoretical understanding, and uses the pilot case for assessing the existing new service development models to service companies’ operations in a foreign location.

The chosen case company Technopolis is an interesting source of data since it has a pioneer position in St Petersburg as a modern and foreign technopark operator as the market is still in the phase of early development. The research context is also interesting from the point of view of the research of the new service development, as it provides an opportunity to investigate the entry of a Finnish service company in Russian market which differs in many respects from the domestic market of the company and requires consideration of developing new the services to local conditions.

In this case the data was collected mostly by means of telephone interviews with chosen persons in the case company and secondary sources including published interviews and articles concerning the case company. The first telephone interview was conducted with Kari Mikkonen, who at the time was the vice president of Technopolis Plc and responsible for the Russian Operations, in December 2006. The second interview was conducted in April 2007 with the director of Technopolis St Petersburg, Peter Coachman. Also company documents such as websites were used when necessary. The sources of data have been listed in the references and the data concerning the company used in the following chapters has been obtained from the sources of the list.

4 NEW SERVICE DEVELOPMENT OF THE CASE COMPANY IN A FOREIGN LOCATION

4.1 Development of science parks in St. Petersburg

Science and production complexes involving a large higher education establishment, scientific research institution and an industrial enterprise existed in St. Petersburg already during the Soviet period. The considerable high-technology capacity of the complexes was, however, used primarily in the defence, space and nuclear power sectors and the interaction was not based on market ties and small- and medium-sized companies were mostly not participating in the activities. (Boltramovich et al., 2004; Lisitsyn 2007.) In 1990s the traditional ties were disrupted leading to a considerable decline in the innovation potential of St. Petersburg (Boltramovich et al., 2004).

Both the government and private companies are currently investing efforts towards the development of the innovations which is believed to be one of the main competitive strengths of St. Petersburg in the future. The efforts have, however, been criticised of not being well coordinated and having insufficient funding. (Boltramovich et al., 2004.) According to Lisitsyn (2007) despite the increasing demand for research and technology and relatively strong educational and scientific basis in St. Petersburg the linkages between science and knowledge-intensive business is still rather weak.

The federal government offers support especially for the so-called state science centres, developed on the basis of large research institutes and industrial enterprises, and the already existing centres in St. Petersburg are linked to the defence industry, leading to low level of transparency and the insufficient readiness to establish broad international contacts. On the other hand, the government is trying to facilitate the

development of science parks, offering infrastructure and high concentration of qualified staff for small innovation companies. Such science parks have only begun to emerge in the recent years in leading scientific centres in Russia, including St. Petersburg. (Boltramovich et al., 2004.) Kihlgren (2003) points out that science parks in St. Petersburg offer a very limited degree of consulting services which is problematic considering the concept of science parks, which includes assisting new entrepreneurs as an essential part. The high demand for office space in St. Petersburg also enables high profits without servicing high tech companies. Other problems hindering the development of the innovation structure are, however, insufficient funding and shortage of specialists in the field of innovation engineering and management (Boltramovich et al., 2004).

4.2 Technopolis as a service provider in Russia

Technopolis Plc. (former Oulu Technology Park Ltd.) was established in 1982 as the first science park in Scandinavia. Today Technopolis employs 9,000 people and is one of the largest technology centre operators specialising in the provision of operating environments for technology intensive companies in Europe in terms of the number of clients. Currently, there are around 12 000 people employed by 930 companies and other organisations working in the Technopolis technology centres which are located in five locations in Finland: Oulu, Helsinki region, Lappeenranta, Jyväskylä and Tampere. Technopolis is also the largest company in Finland specialising in providing operating environments for high tech companies and offering services including premises and business and development services.

Technopolis business idea can be explained by the service concept it has developed for the needs of technology companies. The concept consists of three areas,

namely premises, business services and development services. Technopolis technology centres provide their customer companies with premises that can be designed for the needs of each company. Business services are produced by Technopolis together with its partners. The services are aiming at improving companies´ cost-efficiency and increasing the flexibility of their operations. The services include for example legal, accounting, patenting, translation and communications services. Development services, on the other hand, are designed to help customer companies to build their competitiveness and resources to succeed in international markets. They are developed for start-up companies or companies on the verge of strong growth, but also for those that are already established in international markets. In addition, Technopolis offers its customers regional attractiveness programs and incubator and business development services. Technopolis also provides consulting services, as well as related planning and training services.

A couple of years ago the company made a strategic decision to expand its operations to Russia. The decision to expand to Russia and namely to St. Petersburg was affected by the quantity of Finnish companies in the region and also by the concentration of high-tech companies in this city. Potential customers in St. Petersburg are the Russian and international high-tech companies from the ICT-sector. The company is currently involved in several projects in Russia and the activities will be briefly described in the following sections.

After the decision to internationalise to Russia, negotiations with the Russian federation concerning the participation of Technopolis in the special economic zone of Neudorf in St. Petersburg region were started The negotiations for this project have, however, been frozen, by the state since 2006. By June 2006 Technopolis submitted a draft of an investment agreement between the three participants, the federation, the city of St. Petersburg and Technopolis and the company is still waiting to be approved as an

operator of a technopark in the special economic zone. The company was, however, prepared for the slow progress of the project and therefore launched several other projects simultaneously.

The second project of Technopolis in St. Petersburg involves cooperation with St. Petersburg State University of Telecommunications and Ministry of Information Technologies and Communications which according to the company has proved to be more business oriented than the agency for special economic zones. The ministry has also hired Technopolis to consult in the creation of the concept of the technoparks, for the other cities they plan to build technoparks in. At the moment the partners are finalising negotiating on terms of ownership and if the negotiations are concluded successfully the project should develop into building a technopark in the ICT-university in St. Petersburg.

The third step of the international expansion was finalised in December 2006 when the company purchased 4,6 hectares of land near the Pulkova airport from the private market. After closing the deal the company has started the process of acquiring all necessary approvals, permits and investigations in order to obtain the permission to build. Technopolis plans to establish a technology park with about 80 000 square meters of office premises and parking places. The location was selected due to its proximity to the airport and good connections to the city centre. Pulkova Technology Park will be designed as a platform for Finnish and international companies interested in starting or expanding their operations in St. Petersburg and also for Russian companies internationalising. This technology park is being designed as a hub for international business activities providing customer companies with flexible, tailor-made premises, business services and development services. The technology park concept has been developed for over twenty years and which is designed to meet the specific needs of

technology companies. The model for the Pulkovo technopark is similar to Vantaa technopark, which is situated close to the Helsinki airport.

The fourth important step in the internationalisation process was the creation of an innovation centre in St. Petersburg. The innovation centre was created mainly to serve the Finnish companies needing support in establishing their operations in St. Petersburg. Technopolis also hopes that the clients of the centre might become their future tenants in the technopark to be built in the region later. The centre is also a manifestation of the intentions of the company to seriously establish themselves in Russia and start to create a position in the market. For this project the company has rented a whole store from an existing business centre quite close to their construction site in the Pulkova area and they are now providing services and renting the space for a modest price. They are also renting very small spaces for the purposes of small companies for which otherwise finding a space less than 100 square meters in St. Petersburg would be almost impossible.

The innovation centre has already attracted some Finnish organisations in the premises. Some of the innovative clusters the company sees as potential in the future and is also itself interested in developing partnerships are the energy cluster and aviation cluster, which is natural due to the proximity of the airport. The company also wants to serve the existing clients in their technoparks in Finland as well as other Finnish companies and help them, especially small and starting businesses and even larger companies not yet established in Russia to move into the country. The centre also helps Technopolis to form good relationships with the companies who might later become their clients in the Pulkova technopark and create networks for future cooperation.

The latest phase of the international development so far has been Technopolis decision to establish the local organisation, since it was realised that by running the

operation from Finland the goals of the company in Russia could not be achieved. Therefore the establishment of a local company and hiring local employees to be responsible for the Russian operation was necessary. The organisation allows the company to be more operative and to react more rapidly. The local management has also been able to deepen the cooperation with Russian partners and create the network of Russian and Finnish partners.

4.3 New service development of Technopolis in St. Petersburg

The service concept designed by Technopolis is quite new to the Russian market. Pointed out by Kihlgren (2003) among others the science centers in St. Petersburg have been concentrations of scientific excellence rather than service organisations providing a wide range of business support and especially management support and consulting have been largely lacking in traditional science centers. The service concept can therefore be regarded as new to the market following the definition of Cooper (1987). The model for the Pulkovo technopark is Vantaa technopark which differs from common business centers mainly by a wider range of services available in single location. The level of modern services and operating environments differentiates the service concept of Technopolis from the traditional science centres in St. Petersburg. The company sees a lot of potential for their service concept in Russia, since according to them there is a lack of a single technopark operating with a similar concept on the market. The company's perceived competitive advantages are excellence service, the premises designed and built for the purposes of high-tech company and participation development programs.

The infrastructure of most the office space in Russia has not been built for the purposes of the ICT industry and usually does not comply with the specific needs of the

sector. Many of the office buildings have been originally designed for other purposes and for example former factories and residential buildings have been transformed into office use and although the buildings are redeveloped they have not been designed for the purposes of ICT companies, which can cause problems due to impropriate infrastructure for instance. Office space provided by Technopolis are located and designed for the purposes of ICT industry which can give them a competitive advantage in Russia especially. The company has also conducted enquiries among potential customers concerning their needs, partly in order to market their services and found out that their opinion had not been asked before and therefore the services developed before might not suit their needs.

Tehcnopolis sees the customer orientation essential in service development and business services will be designed to enable customers to focus on their core businesses. The customers can therefore be seen as an important part of the service development which supports the customer oriented new service development model of Alam and perry (2002). In Finland the services include everything from catering and cleaning to legal services and event management. The service range is constantly developing and changing in accordance with customer needs. In St. Petersburg the service package will be strongly localised, and will take into account the special features of the St. Petersburg business environment and there is therefore need for the development of new services designed to serve the customers in this market. Technopolis had to make adaptations to local environment in its service concept. For instance, it has been necessary to incorporate transportation services in the service package it offers its customers in its innovation centre in Russia. Furthermore, for Finnish companies entering Russia, support services related to establishing a company in Russia, accounting, legislation and recruiting are essential. The entire service concept will be

localised and also development services will be totally different from Finland, because of differences in Russian legal and operating environment.

Considering the services developed by the company for the Russian market from the point of view of the new service strategy matrix of Scheuing & Johnson (1989) it can observed that the activities include features of all of the strategy options introduced simultaneously. The company is extending the market of the existing service concept developed in Finland, but also making extensions to it to meet the local demand. The company also wants to serve its existing customers and provide them with a new operating environment in a different locations. Also completely new cooperation models are developed such as the innovation centre to assist the customers in internationalisation. A strict division of the new service development in any one option would be difficult in this case and it might also indicate that in this context developing services might require many strategic approaches simultaneously.

Partner network is essential for the development of Technopolis's services in general as most of the realisation of the business support services offered for companies are outsourced. In order to start operations in Russia, Technopolis had to build a network of cooperation partners for providing the services to their customers. These companies include e.g. consulting companies, law firms, transportation companies etc.

Other cooperation partners in Russia are Finnish private and governmental actors such as Finpro, Sitra, Ministry of Trade and Industry, and various Finnish cities which Technopolis had relationships already in its pre-international stage. Technopolis has created partnerships with the city administration of St. Petersburg as well as other public sector actors, such as Russian Ministry of Information Technologies and St. Petersburg State University of Telecommunications. Nevertheless, the partnerships with Russian public sector actors have been characterised with bureaucracy related to for instance entering the Special Economic Zone. The relationships with the local public

administration is, however, very important in the service development as the regulations of operations and participation in cooperation projects with the public administration offers opportunities for new service development. The most visible examples of the effect of the public administration on the service development and the operations in general are the negotiations of the participation of the company in the special economic zone. The technology park operator was aiming to develop their service concept in a new kind of environment, but the negotiations have been halted by the administration. The support of the public sector is in this case a very important factor in the development of the service concept in this location also as a source of information and cooperation partner.

5 DISCUSSION AND CONCLUSIONS

Case study indicates that the new service development in the company under investigation differd quite considerably from the conventional NSD models and the activities follow more the models with success factors of service firms. In fact, linear model of NSD process has been criticised since the early model of Bowers (1989), and almost no empirical evidence has been found to encourage using it as a tool to manage the NSD process (de Jong & Vermeulen 2003). New service development process should not be seen as an independent process but as a continuum, where previous activities have affected the shape of the process. For example, Technopolis' operation in St. Petersburg are a result of 20 years of service development.

The process cannot be anyway seen as a linear process as they have many overlapping NSD process simultaneously in St. Petersburg. These overlapping projects affect each others for instance via common customer base and should be interpreted in a bundle rather than linear mode. This is due to different services offered face different

challenges but are still linked to each others via staff, customer of another member of company's external network. It is also seen in the case study that not all stages are individual but overlapping. For instance enquiries concerning customer needs are not made only for finding out the market gaps but also to market their own services.

As Technopolis' NSD process in St. Petersburg was found to have features of all of the strategy options presented in Scheuing & Johnson's (1989) new service strategy matrix, it indicates the need of more holistic understanding of how to manage NSD processes. This takes us closer to the NSD stages of de Jong and Vermeulen (2003) and innovation value chain of Hansen and Birkinshaw (2007), which encourage to make the best out of internal and external (people and structure) resources in different stages of process.

The case study shows that Technopolis is customer-oriented, as it modifies its services according to customer needs and a part of the services are seen to be produced jointly with its customers. However, it is not solely the customers in which they can rely on. Therefore it is encouraged to have more holistic view on the external sources in different stages of NSD process. However, the customer-input was recognised already in the very beginning of the process. Network approach towards new service development may make process more embedded in the system and therefore it may be more difficult to be copied than what services are in general considered.

One of the key findings of the case study is that there are different needs for companies when operating overseas. This is not only due to different companies, when also existing Finnish customers have country specific service needs.

Institutions and bureaucracy have delayed the process, which can be common in international markets but may be also more country and culture specific feature. It must be however noted that delay of NSD process was partly expected in Technopolis and it cannot be used as a sole factor measuring success of NSD process. Anyway, the case

partly confirms the idea that some NSD practices should be adjusted for national context, as suggested by Alam (2006). The international context of NSD process emphasises the importance of new resources needed by the company. Of particular importance seems to be local workforce, which is able to build local network and thus combine internal and external network for NSD process.

The research findings may be very industry-specific, as seen in Sundbo (1997) and therefore more research is also needed in different fields and types of services. In fact, it is not even shown whether it is reasonable to aim at finding one model which fits all services. Future research should study more the network approach of the NSD processes, as Technopolis is as a node partly developing new services for its customers and acting on its behalf as an external operator as well. A little is also known how much the motives for and location of FDI affect the NSD process. For instance, location may have tremendous effect on the customer segments such as aviation cluster in Pulkova Technology Park. As a part of Technopolis' services are outsourced, this should be given a special attention, how services can be developed in cooperation with the outsourcee. One more interesting question which can be raised from the case is whether Technopolis takes some of the services it provides in St. Petersburg back to home.

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Kari Mikkonen vice president of Technopolis Plc responsible for the Russian Operations telephone interview 19.12.2006

Secondary empirical data:

Finnish Science Park Association, www.tekel.fi

OSP International: IT Industry and Market News from Russia and the CIS www.ospint.com

Technopolis, www.technopolis.fi