

# INTERACTION IN INDUSTRIAL PRIVATE-PUBLIC SERVICE RELATIONS

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## **Abstract**

The role of services and their significance to the economic growth and employment is constantly increasing. At the same time the organization of public services in many countries is facing challenges and there are changes foreseen in the division of service production between the public and private sector service providers. To increase understanding of interaction between private and public sector actors in an industrial service setting the paper introduces a case from Finland. The study applies an embedded single case study approach. The private-public setting of interaction creates some issues for the suppliers to consider. Interaction in relationships is highly influenced by the organizational characteristics and network position of the public customers.

## **Introduction**

Firms in the manufacturing industry provide a large number of services such as installing, repairing and maintaining machines, devices and equipment, providing spare part service and training customers to use machines and systems that have been delivered. These may mount to up to a considerable percentage of their billing in many companies. Furthermore, services are of vital importance to the competitive advantage of firms in situations where the physical product components of the offering do not distinguish one firm from the other. Today, services are more and more taking the head role in creating customer perceived value.

The marketing and management of industrial services have received relatively limited attention in the industrial marketing literature (Matthyssens and Vandenbempt 1998) even though the interest has grown in recent years among some researchers (e.g. Mehta and Durvasula 1998; Mittilä 2000; Järvelin 2001; Kumar, Markeset and Kumar 2004). However, there is evidence that services are the most important piece of solutions as companies are outsourcing their production. Also the largest proportion of in-house activities is shifting towards the service component. (Davies, Brady and Hobday, 2007)

The organization of public services in many countries is facing challenges and there are changes foreseen in the division of service production between the public and private sector service providers. The necessity of public organizations to improve cost-effectiveness and quality, and complex and intractable social problems have already led public organizations to increase their co-operation with organizations of public, private and voluntary sector (Keast, Mandell, Brown and Woolcock 2004, p. 364; Bahle 2003, p. 15; Brown and Potoski 2003, p. 153). Co-operation is still in its infancy in many public

service productions while there are longer traditions in some other services. In order to improve the productivity and the quality of industrial services and to manage private-public service relationships, there is a need for systematic research on services, service processes and service relations both in manufacturing industries and in public services.

### **Purpose and Methodology**

To increase our understanding of the interaction between private and public sector actors in an industrial service setting the purpose of the paper is to scrutinize six relationships between a Finnish high-tech company and its public sector customers.

The study applies a case study approach, a research strategy, which can involve either single or multiple cases to arrive at conclusions about certain phenomena, or to recognise complex interrelations and ambiguities of social life (Eisenhardt 1989, p. 534; Gummesson 2001, pp. 34-35). The evidence of this study is primarily qualitative (interviews) aiming at to build a picture about the phenomenon in an embedded single case.

The paper is organized in the following way. After the introduction, the concept of service as well as interaction and network approaches are shortly discussed and the analysis framework presented. Then the case organizations are introduced and interaction between the actors is analysed. Finally, the conclusions are drawn.

### **Theoretical Framework**

The theoretical framework of the paper draws from the Nordic School view of service marketing and the work of the IMP (Industrial/International Marketing and Purchasing) group. In the Nordic School view of service marketing, marketing is viewed more as market-oriented management than as a specialist function only. Also, the relationship process nature of contacts between service providers and their customers is a cornerstone of the Nordic School of service research. Therefore, the term service management has often been used instead of service marketing to emphasize the overall management and process nature of marketing in the service context. (Grönroos 1998).

Services have been characterized and defined since the 1960s. American Marketing association presented the following definition: “Services – activities, benefits or satisfactions – which are offered for sale, or provided in connection with sale of goods“(American Marketing Association 1960). Kotler and Boom (1984) created the following definition: “A service is any activity that one party can offer to another that is essentially intangible and does not result in the ownership of anything. Its production may or may not be tied to a physical product”. Grönroos (1990) presented that “A service is an activity or series of activities of more or less intangible nature that normally, but not necessarily, take place in interactions between the customer and service employees and/or physical resources or goods and/or systems of the service provider, which are provided as solutions to customer problems.”

The service phenomenon is very interactive by its nature. In the physical product manufacturing industry, production and consumption follow each other in a sequence with an empty time space between the two processes. Here, the role of marketing as a function is to bridge the gap between production and consumption. In the service context the service process and the consumption process parallel each other and cannot be separated. However, some part of the service process, such as preparation of equipment

for the installation, may take place before the consumption process starts, and the consumption process may sometimes continue to some extent after the service production process has ended. According to Grönroos, the role of marketing is not as straightforward as in the case of physical products. (Grönroos 1998).

Due to the interactive and relational process nature of industrial services, the modified IMP Interaction Model to industrial markets (Håkansson 1982) is adopted here as an analytical tool. The focus of the Interaction Approach is on a two-party relationship but the approach can also be applied to a multi-party relationship. Research using the Interaction Approach has concentrated on the interaction process between the buyer and the seller at the company level. Further work by the IMP Group has produced another research approach, The Network Approach, which focuses on relationships in business markets. It is anchored in the recognition that industrial markets can be represented as exchange relationships between multiple organisations (Möller 1993). The approach draws its intellectual content mainly from the notion of inter-organizational resource dependence, the theory of social structure and exchange, and systems theory. Within the IMP network studies the focus has mainly been on inter-firm linkages while political factors have not been considered formerly. (Welch and Wilkinson 2002, p. 2) The broader contextual setting has got more emphasis later and also the political embeddedness has been considered and forms of it have been specified in recent years (ibid, pp. 3 - 4). Few examples of studies examining interactions and relationship of a service firm and a public authority can also be found (e.g. Easton and Poad 2003).

The theoretical framework of this study is modified from the Interaction Model (Håkansson 1982). It is depicted in Figure 1.

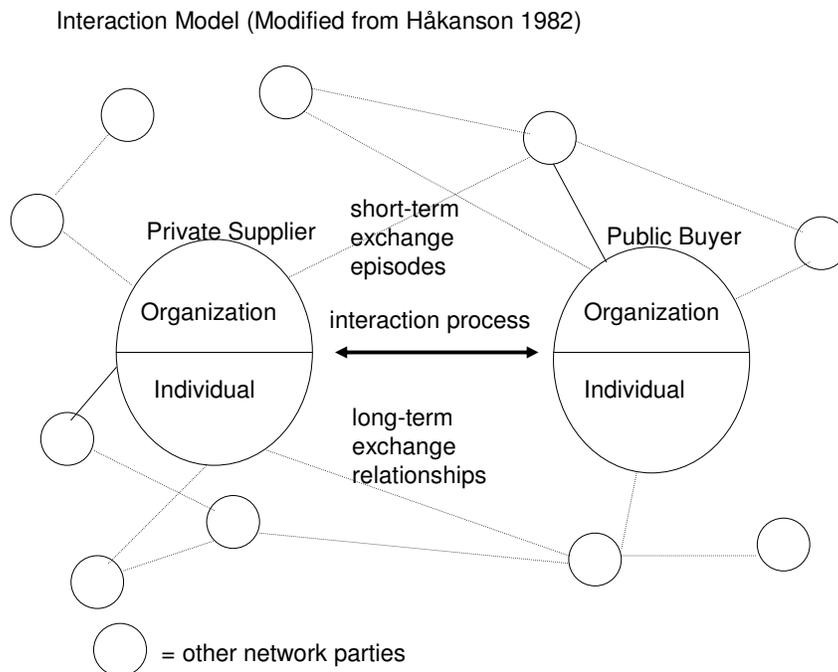


Figure 1. Analytical framework of the study

The analytical model recognises two aspects of the interaction process: the episodes which involve exchange between two parties, and the long-term aspects of a relationship which affect and may be affected by each episode. The four elements which are exchanged include product or service exchange, information exchange, financial exchange, and social exchange.

### **The Case**

The supplier company, *Insta Group* (formerly Instrumentointi<sup>1</sup>), established in 1960, is a growing high-tech company with increasing international operations. Insta Group helps its customers ensure and develop the performance of their operations. They supply and maintain defence, security, automation and information technologies for demanding environments.<sup>2</sup>

Insta's core market areas are Defence and Security Technology (Insta DefSec), Industrial Automation Technology (Insta Automation) and Information Technology (Insta Visual Solutions). The case relationships come from Insta DefSec and Insta Automation. At the time of the study defence and security technology were provided by Avionics Division and Special Systems Division. The mission of Avionics Division is to support the Finnish Defence Forces by selling devices for communication and navigation, as well as electronic equipment needed in their operational and supportive systems. The Avionics Division is an agent of an American device and systems manufacturer. It is also responsible for maintenance and modification services and takes care of the maintenance concept design of avionics device and equipment.

The other division of Defence Technology, Special Systems Division, originates from the Avionics Division where the first deliveries of special systems were accomplished in 1984. At the time of study there were four functional subsections: air defence technology, simulation systems, security systems for demanding environments, and command-and-control systems.

The Installation Division is a part of Insta Automation, the other part being the Design Engineering Division. Industrial automation is used in several industries and processes, such as the mechanical wood processing industry, power plants and stations, paper and pulp industry, waterworks and waste waterworks, chemical industry, conveyor systems and warehouse systems, dairies and food industry. Industrial automation consists of instrument and electric installation, including installation of ventilation and hydraulic equipment, cabling, etc. Typically, industrial automation is the last phase in a construction project and is preceded by building and plumbing installations.

The public sector customers in this study are the Finnish Air Force, the Air Patrol Squadron of the Border Guard, the Finnish Security Police, the National Police School of Finland, Finnair Plc and Neste Oil Corporation. Next, they will be shortly introduced.

*The Finnish Air Force* was founded as an independent service as early as 1918. The main peacetime mission of the Finnish Air Force consists of airspace surveillance, identification flights and production of readiness formations for wartime conditions. During a crisis the main task is defensive counter-air fighter operations. The Aircraft and Weapon Systems Branch of the Air Force is in close cooperation with the aviation industry, universities of technology and other universities, and foreign manufacturers.

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<sup>1</sup> At the time of the study, the company still operated under the name Instrumentointi.

<sup>2</sup> <http://www.insta.fi>

Patria Aviation, Finnair and Insta Group are the central repair shops with which the Air Force works. They have a remarkable role in the Air Force's maintenance system because they conduct the most important scheduled maintenance, inspections and modifications, major damage and other repairs, and component repairs. They also provide maintenance of electronics and mechanical equipment, programming, and related modifications.<sup>3</sup>

*The Air Patrol Squadron* of the Border Guard is responsible for Finland's internal security and subordinate to the Ministry of the Interior. The main functions of the Border Guard are guarding of the land borders and the territorial waters, passport control at the border crossing points, ports and airports, as well as performing of rescue operations, especially at sea. In the past few years, the functions and structure of the Border Guard have been reorganised to respond to the changes in the immediate surroundings. The four Border guard districts, the two coast guard districts and the Air Patrol Squadron are responsible for controlling border and sea areas within their respective area.<sup>4</sup> The focal customer unit is an independent administrative unit within the organisation. It provides flight and rescue services to all guards. This is done by maintaining fully equipped helicopters and trained staff. The unit receives its financial resources from the state budget.

*The Finnish Security Police*, Suojelupoliisi (SUPO), is a police unit that specializes in the prevention of security threats of the state. The Security Police participates with other authorities in the protection of parliamentary democracy and the security interests of the society. The main tasks of the Security Police are counterespionage, counterterrorism, preventing threats to internal security, preventive security work, protection and participation in fighting international organised crime. The Security Police consists of an operational, preventive and strategic line and a cabinet.<sup>5</sup>

*The National Police School* of Finland is responsible for training for the Diploma in Police Studies and the Finnish Police Sergeant's Examination, as well as for recruitment to the profession. The School also provides vocational specialisation and continuing training.<sup>6</sup> The unit that participated in the study was the Police School located in Tampere.

*Finnair Plc* is one of the world's oldest operating airlines, established in 1923. Finnair's major shareholder is the Finnish government with a 56.3 per cent holding. Other shareholders include insurance companies, various companies and private individuals. Approximately 34 per cent of the shares are owned by foreign shareholders.<sup>7</sup> The case unit, Avionics Department, is a part of the Technical Division. It is responsible for electronics used in the aeroplanes and is divided into an engineering unit and a repair unit.

*Neste Oil Corporation* is a refining and marketing company focusing on advanced, clean traffic fuels. Neste Oil's roots are deep in the Finnish oil and energy businesses. Neste Oil's predecessor company Neste was established in 1948 and has during the years been known as Neste, Fortum Oil (Fortum's oil business) and now Neste

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<sup>3</sup> [http://www.ilmavoimat.fi/index\\_en](http://www.ilmavoimat.fi/index_en).

<sup>4</sup> [http://www.raja.fi/rvl/home.nsf/pages/index\\_eng](http://www.raja.fi/rvl/home.nsf/pages/index_eng)

<sup>5</sup> <http://www.poliisi.fi/poliisi/supo/home.nsf/pages/indexeng>

<sup>6</sup> <http://www.poliisikoulu.fi/poliisi/poliisikoulu/home.nsf/pages/indexeng>

<sup>7</sup> [http://www.finnairgroup.com/group/group\\_1.html](http://www.finnairgroup.com/group/group_1.html)

Oil Corporation.<sup>8</sup> The case unit under focus, Neste Engineering, is Neste's in-house engineering resource. It is primarily responsible for design engineering and carrying out investments that ensure the corporation's technological competitiveness. In addition, the unit develops, applies and commercialises technologies developed in co-operation with production plants and research units.

## **Interaction in the Case Relationships**

### *Product/Service Exchange*

The products of Avionics Division are communication equipment, navigation devices, defence electronics and components. In the maintenance and repair unit, aeroplane electronic devices like gyroscopes, aneroid meters, electric mechanical meters, oxygen equipment, communication and navigation equipment, as well as electronic calculators, are taken care of. Additionally, the maintenance of ship electronics and defence electronics belongs to the service palette. In accordance with this, the division provides documentation which includes technical instruction books, their translations and copying.

Products of the Special Systems Division are simulators and simulation systems, gun control systems and anti-aircraft (AA) gun modernisation, IT (information technology) security systems and products, air defence command, control and data link systems. Also, the maintenance (e.g. software updating and physical maintenance) and repair servicing of these products is taken care of by the division.

The division operates on two levels: On one level there are projects producing the solution a customer wants and on the other level there is ready equipment and devices developed during previous projects which are sold as such. In addition to that, the division offers repair and maintenance services, spare parts, education, installation and documentation services. Actually, there is no equipment without documentation.

The product supplied by the Installation Division is usually a project, which involves checking instruments acquired by the buyer, providing material for installation, installing the instruments, testing and introducing them. In addition to projects, the division offers repair and maintenance services to different industries.

The product/service palette of the supplier is wide changing from physical products to pure services. The offerings may be systems, solutions or projects in addition to goods or services. Accordingly, other exchanges vary on the bases of the offering.

### *Information Exchange*

Due to the role of governmental customers the information exchanged in the case relationships is partly highly confidential. Therefore, the trustworthiness of the supplier is critical.

The legal base of the Avionics Division-Air Forces relationship is defined in a general agreement. It defines the general commercial terms for the co-operation, for instance, the limits of the yearly profits for the supplier. In this way, the public customer tries to ensure that the service provider does not benefit too much from the relationship. The agreement is completed yearly by negotiations concerning topics like the amount of

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<sup>8</sup> <http://www.nesteoil.com/default.asp?path=1,41,537,2396>

devices that need repair and the price per hour. On the other levels of the relationship information exchanged is more work-related.

According to the supplier, the main dependence in the Avionics Division-Finnair relationship is on information. The customer provides the supplier with general knowledge of aviation infrastructure and culture. Perhaps the most important dependence of the supplier party on the buyer can be seen through the utilisation of the manuals provided by the customer. As a service unit, Avionics Division does not own any planes itself. Thus, to be able to act, they need the manuals and revisions to be provided by some firm. Should the relationship end, their access to the manuals would end, as the updated manual is valid for only a year. In this relationship, in addition to the work-related information exchange on the operational level, people responsible for the relationship contact each other and exchange information on ways of operating, licenses, competencies, etc. approximately every two months. Furthermore, issues concerning flying security and governmental regulations are discussed.

The role of information exchange has been crucial also in the Special Systems Division-Police School relationship. Already before starting the simulator definition project, huge quantities of information on the organization, functions and the particular education program of the customer was transferred to the supplier party. The supplier, in return, transfers information about the possibilities created by technology development.

In the Installation Division-Neste relationship mutual goals are settled on for the project, not for the whole relationship. During the project, daily contact is common; otherwise the project manager of the customer calls at least once a week. A working diary is kept in every project. On the basis of this diary, deviations from the contract are controlled and the settlement is negotiated at the end of a project. Evaluation during the project takes place in the field meetings every two weeks during which the current situation is written down, focused plans for the next two weeks are made, issues needing discussion are negotiated, etc. The information exchanged concerns work-related issues and especially the supplier company's issues. Being a public company, the customer does not easily give official information. However, because of the good personal relationships, unofficial information can be exchanged.

### *Financial exchange*

The financial exchange in the relationships with the governmental customers is totally dependent on the state budget. Therefore, it is difficult to forecast the amount of financial exchange in the long run.

In the repair service business, the predictability of work flows – and, thus incomes – is low. In the project business, Neste, for instance, makes the potential suppliers compete with one another yearly over the installation and design engineering contracts, in addition to separate projects. On the other hand, there may be considerable deviations from the original contract which affect the total sum of a project.

In the Avionics Division-Air Force relationship the limits of the yearly profits for the supplier are agreed upon. The agreement is completed yearly by negotiations concerning topics like the amount of devices that need repair and the price per hour. Also in the Avionics Division-Finnair relationship prizes for work and material invoicing are negotiated yearly. In this relationship the yearly workload and financial exchange is low while the value of the interaction for the supplier lies on the information and manuals.

The customer values the spatial closeness, the competence and speed, and the price level of the supplier.

### *Social Exchange*

Social exchange encompasses, at the organisational level, the role and personal relations of the influencers in the focal relationships – for example the relations between the managing director of the supplier company and the higher level managers and directors of the customer companies. For instance, in the defence technology industry, the top management of the supplier company has tight contacts with the top management of Defence Forces, i.e. the body of generals, ministry and the local top of the hierarchy. In this sector, relationships at the top level play a critical role even though the actual bargaining is done at a totally different level.

At the industry level, social exchange materializes in personal relations with the representatives of the third parties in the projects – for example the supplier personnel's relations to consultant supervisors (Neste) and the personnel of other contractors on the construct premises. The infrastructural relations of the people in the relationship parties are a part of the social exchange both at the industry and at the macro level. In the focal case, the relations of the supplier's managing director and marketing manager to authorities and politicians are examples of these.

An intangible element of the social exchange is the image, i.e. the reputation of the relationship party. It has an effect on the potential trade of the parties, as could be identified in the Avionics Division-Finnair relationship. In Neste, in addition to the word-of-mouth reputation, social exchange between the workers of the suppliers and the customer representatives is used to check the practice of the supplier companies during the projects.

### *Relational Aspects*

Typical for all the case relationships is the multilevel structure of the relationships. Accordingly, they are many-headed relationships with individual actors equipped with different competences and skills. Therefore, interaction and exchange take multiple forms and different styles.

The Avionics Division adjusts its operations to the Air Force Depot's requirements due to the fact that the Depot is the major client of the division whose whole operation and future is dependent of the Depot. Because Depot is a public organisation, its ways of working are bureaucratic and the supplier has to adjust to Depot's order, material and spare part systems as well as its funding. The effects of the adjusting can be tracked on all the organisational levels. On the other hand, Depot adjust its operations when it tries to keep the workload stable in the Avionics Division and thus, according to its own funding either increases or decreases the share of Avionics Division. This kind of adaptation characterizes the relationship because both parties see themselves as being a unified part of the larger whole. As a matter of fact, in national crises, the Avionic Division becomes an integrated part of the Finnish Defence Forces.

The existence of this relationship to a large extent dictates the existence of the supplier's other relationships. Due to the position of the supplier in the national defence and security network, low profile and total confidence is required and valued by the customer. Also in the Finnish Security Police's case, the customer is satisfied with the

low profile of the supplier company. For the future of this relationship, the supplier's trustworthiness is the key issue; the customer does not want to be a reference for the supplier. Furthermore, it wants to be sure that information gained in the relationship does not leak. Thus, other relations of the supplier have a critical effect on the future of the focal relationship.

The most important issue in the development of the Special Systems Division-Police School relationship is the supplier's ability to respond to the needs and challenges expressed by the customer. In the branch, the number of competing solutions has increased and thus the contract-based cooperative relations do not ensure further cooperation after the project is accomplished. The customer lets the suppliers compete over new deals.

The relationship between Insta's Installation Division and Neste has existed since 1960s while design engineering services have been purchased from the supplier company from 1980s. The customer is an intermediary whose final customer is the oil refinery, but the refineries sometimes buy projects directly from the suppliers to save costs. Thus, in some cases the parties of the relationship compete with each other over a contract. The respondents considered the relationship as a co-operative one even though the customer company makes the potential suppliers compete with one another yearly over the installation and design engineering contracts, in addition to separate projects. Cooperation exists in mutual planning and considering better ways to act, despite the state of official contracts.

## **Conclusions**

The service phenomenon is very interactive by its nature. Industrial services take many forms and they are executed in different relations. The role of marketing in industrial services is not as straightforward as in the case of physical products. Marketing function turns more into the management function of customer relations.

As to the exchange, the interdependency between the product/service exchange, i.e. the total offering, and other exchanges became clear in the study. The role of documentation in making the invisible service more visible was an interesting finding of the study. Another interesting finding was that economic issues are not always the decisive measures in the supplier-customer relationships. On the other hand, the importance of information sharing and trustworthiness were evident in the context of the study. Social exchange both at the macro, meso and micro levels seemed to facilitate the interaction.

The private-public setting of interaction creates some issues for the suppliers to consider. Interaction in relationships is highly influenced by the organizational characteristics and network position of the public customers. In this study, two types of public customers were identified. First, there are governmental customers whose business is regulated by the state budget. There, the political direction and control are direct. The bureaucratic operation of governmental organizations sometimes disturbs the smooth operation. It causes, for example, increased waiting times and forces the process to follow the "official way". Second, public companies like Finnair and Neste can act more businesslike. There, the government can only use its shareholder power. However, national security issues played a big role also in these service relationships.

The study at hand was conducted in a highly regulated context. The results have to be interpreted against that background. To further increase our understanding of industrial services and private-public service relations, research on other private-public settings is welcomed.

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