

Organizing customer-oriented service business in manufacturing

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Abstract This study examines the organization of service business in manufacturing. Earlier literature has emphasized the positive effects of a separate service unit. Our comparative case study indicates that a separate unit as such does not guarantee success in service business. An essential issue is how customer interaction and the continuous flow of customer information have been secured. Sales personnel have often been regarded as the main actor in the creation of customer intelligence. Based on our study we argue that attention should also be paid to field technicians and other operative personnel as a channel for customer information.

Keywords Industrial services · Organizing service business · Customer knowledge · Service operations management

1 Introduction

The term ‘servitization’ has been used to describe the phenomenon where the firms previously known as manufacturers add services to their total offering (Chase and Garvin 1989; Vandermerwe and Rada 1988). Manufacturing firms face the challenge of combining two different business goals: making technologically superior products and making sure that customers use them as designed (Markeset and Kumar 2003). The latter is pursued through the provision of

different types of services. Recently, a body of literature has grown extensively to point out how servitization has changed the way in which companies deal with customers, carry out their business processes, and make profit. Research has also revealed some problems and obstacles that firms run into when trying to change their strategic direction towards services. One of the major concerns is the operational management of services (Baines et al. 2009; Gebauer 2008; Gebauer et al. 2005; Oliva and Kallenberg 2003).

After sales services usually form the first step in servitization (Markeset and Kumar 2003; Oliva and Kallenberg 2003). When the firm notices the economic potential of services, the total offering is expanded and additional services, such as training and consultancy, are included. Along with the growth and versatility of service business, *the organization of the service production* becomes a central issue, including the decision of ‘make or buy’ (Fill and Visser 2000; Mahmoodzadeh et al. 2009). If a company chooses to externalize its service production, it may make different types of contracts with third parties and deliver services via partners or subcontractors. If an in-house production is preferred, one alternative is to establish a separate service unit. The other alternative is that manufacturing and service activities are carried out hand in hand—the organization being based on different types of manufacturing functions.

In the case of in-house production, the establishment of a service unit with a profit and loss responsibility has been generally recommended (Araujo and Spring 2006; Gebauer and Friedli 2005; Oliva and Kallenberg 2003). A central reason is that in a separate unit services become visible, measurable and controllable. Achieving these aims is more difficult in a decentralized service organization, which has to operate in relation to and in coordination with a set of varied performance criteria, such as customer satisfaction, employee satisfaction and business success (Gebauer et al. 2005).

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On the other hand, the establishment of a separate service unit requires a major investment, which many companies are unwilling to make at the beginning of the servitization journey—especially during the times of recession and economic downturn. Taking into account the investment challenge, as well as the general issues linked to organizational growth, the rationale behind a separate unit should be convincing. The existing literature has, to a great extent, focused on the manageability and other benefits resulting from a separate unit as such, without problematizing the nature and function of the unit. However, it seems probable that there is not one but several alternative ways in which the unit and its tasks may be organized. The lack of deep and thorough analysis of *detailed organizational solutions in the context of a separate service unit* is an apparent research gap in the existing literature.

The present paper aims to narrow this gap, focusing particularly on the ways in which different solutions affect customer-orientation—an issue that several researchers judge as one of the main success factors for companies (e.g. Hoover et al. 2001; Kim and Mauborgne 1999). We discuss this topic on the basis of both literature and our own case study. We have crystallized our research aim in three interlinked questions. Firstly, which kinds of differences can be found in the organizational solutions that industrial companies apply when they establish a separate service unit? Secondly, how are these solutions linked to a customer-oriented approach? Thirdly, does the success of service business differ in companies applying different organizational solutions?

We have structured our paper as follows. After this introduction, we continue with a theoretical review where we first briefly describe the phenomenon of servitization and the main types of industrial services. Thereafter we examine the importance of customer understanding and ways to acquire it. We end up our theoretical discussion with a short summary concerning the benefits and challenges of a separate service unit in manufacturing organizations. In section 3, we present the methodology and conduct of our case study: the selection of cases, and the collection and analysis of data. Section 4 includes the empirical results. Here we compare the two selected case companies regarding the organizational solutions in their service units; we also analyze the consequences of these solutions for customer-orientation and the success of service business. The final section includes our concluding discussion.

2 Theoretical framework

2.1 Servitization of manufacturing

The increasing importance of services in manufacturing firms is a phenomenon whose antecedents stretch back 150 years (Schmenner 2009). In 1988, Vandermerwe and

Rada introduced the concept ‘servitization’ to describe this phenomenon. They mentioned several reasons for the transfer of industrial business towards services. For instance, through services firms can lock out competitors, lock in customers, and/or increase the level of differentiation.

In the newer literature, we can identify three main groups of reasons for servitization: 1) economic reasons, 2) customer needs, and 3) the competitive advantage that services can provide (Neely 2008; Baines et al. 2009; Martinez et al. 2010; Oliva and Kallenberg 2003). Economic reasons include the observation that services have higher margins than goods (Anderson et al. 1997), and they provide a more stable source of revenue than goods due to their resilience against the economic cycles (Quinn et al. 1990). Customer needs are linked to servitization in many ways. One of the most important factors is increasing specialization: customer organizations want to focus on their core competences and outsource non-core functions, such as maintenance, to the provider of the capital equipment (Oliva and Kallenberg 2003). Competitive reasons are based on several specificities of services: they are difficult to imitate, they are less capital dependent, and they are a way for manufacturers to escape the typical problems of mature business (Wise and Baumgartner 1999; Shepherd and Ahmed 2000; Davies et al. 2006; Davies 2004).

Even though servitization of manufacturing seems reasonable from the perspectives of both the supplier and the customer, it implies major challenges. Studies indicate that only a few manufacturing companies have been successful in the transfer towards services (Oliva and Kallenberg 2003). The reasons for the problems are, among others, differing opinions within the company about the economic potential of services (Neely 2008), and the lack of qualified resources for service provision (Neu and Brown 2005). In addition, weaknesses in strategic decision-making may lead companies to hesitate in the adoption of a strong service orientation (Baines et al. 2009). Recent studies have examined the managerial implications of these challenges. Baines et al. (2009) analyzed the efficient delivery of products and services in terms of human resources, quality control, product/service range, performance measurement, supplier relations and customer relations. Neely (2008) has emphasized that companies should not only increase the number of services in their total offering, but should focus on shifting the mindset, transforming relationships from transactional to relational, and developing service offerings that genuinely meet customer needs. Sawhney et al. (2004) has highlighted the last point in particular: customer-centricity is essential in the development of product-service offerings.

2.2 Types of industrial services

The issue of customer-centricity also plays a vital role in the change of the content of industrial services. Along with

the trend of servitization, different types of industrial services have emerged. When manufacturing firms enter the service business, the first step has usually been the provision of repair and maintenance of products (the installed base). Here the service portfolio may still be quite small and easy to manage. Nowadays, manufacturers increasingly take further steps. On the basis of sustainability thinking, the life span of machines is lengthened through sophisticated solutions (Oliva and Kallenberg 2003; Neely 2008). An even bigger change is the transfer towards ‘pure’ services, such as process optimization and the training of customers. These expansions are based on customers’ needs and expectations, but mean that the management of service portfolios becomes more complicated and demanding. According to Martinez et al. (2010), manufacturers have to pass several strategic, operational and social tests before they are ready to move from basic services to advanced levels of servitization. Changes are required in the corporate culture and in internal processes and capabilities. Also a more strategic stance and much broader interaction between the supplier and the customer are needed.

Industrial services have been categorized in various ways. A traditional classification is based on the relationship to sales: whether the service is offered before, during or after the sale (Londe 1976). Kotler (1997) distinguished two broad categories: maintenance and repair services, and business advisory services. Recent research has focused on the nature of the customer relationship and the target of the service (Tuli et al. 2007; Mathieu 2001). In her classification, Mathieu (2001) took into account the direct recipient of the service, the intensity of the relationship, and the level of customization that was required in the delivery. Based on these factors, she divided services into two groups: services supporting the product (SSP) and services supporting the customer (SSC). Paloheimo et al. (2004) have further divided SSC into services that support the use of products in the customer’s processes, and those that support the customer’s business.

We apply a similar approach, dividing SSC into SSCP (services supporting the customer’s processes) and SSCB (services supporting the customer’s business). The last mentioned category is identical with the definition of Paloheimo et al. (2004), but the former is broader: we do not consider the processes that are linked to the use of specific products but the customer’s production processes more generally. In this form, the categorization enables us to point out the growing knowledge-intensity in industrial services, when they develop from product-related offerings to offerings that require the understanding of the customer’s production processes, and further, of the customer’s business. Table 1 summarizes our categorization in terms of the purpose of the service, the type of the relationship with customers, and the type of information required. A

company example is also provided for each of the three types of services.

The table shows that the transfer from product related to business related services includes *a tightening relationship with the customer*. This favors and also requires deep and broad customer understanding: the change in the nature of necessary information is considerable. In the following, we summarize recent views concerning the acquisition of customer information and its elaboration into customer understanding.

2.3 Ways of acquiring customer information

Awareness of the significance of customer information is rapidly growing, and several mechanisms have been built to acquire this information (Lesser et al. 2000). The perspective of relationship marketing, which is the oldest tradition in this area, has pointed out that using customers as informants enables customer segmentation and also increases the loyalty of customers (Zablah et al. 2004; Grönroos 1990). Among the methods of acquiring customer information, different types of questionnaires and feedback mechanisms have been most common. The need for versatile information has been emphasized in this context: both facts about the profile of customers (demographic data and business figures), and sufficiently behavioural and relationship information should be included (Xu and Walton 2005). Information should be gathered not only *of* the customers, but also *from* the customers (Rowley 2002)—customer information often includes weak signals about the future, enabling the analysis of potential customers.

Recently, the importance of *client interface* as an arena for the acquisition of versatile customer information has come to the fore. Proponents of this view usually highlight customer value and customer experience, which are difficult to study via market research exercises. Utilizing the service encounter is much more efficient: it is a direct and natural information channel for the tackling of real-life experiences (Kaasinen et al. 2010). This view is actually founded on one of the basic characteristics of services: the inseparability of production and consumption (e.g. Sundbo 1994; Kelley et al. 1990). In practice, this characteristic is not equally apparent in all services, and the development of ICT has even made possible the spatial and temporal differentiation of production and consumption to some extent. Yet, we can conclude that customers play a much more central role in the production of services than in the production of material goods. They act as a resource—providing information—and as a co-producer—performing work (Lengnick-Hall 1996).

The integration of production and consumption also means that in theory customer-centricity is embedded in a service transaction. This notion does not, however, guaran-

Table 1 Categorization of industrial services (adapted from Kotler 1997; Mathieu 2001; Paloheimo et al. 2004)

	SSP	SSCP	SSCB
Purpose of the service	Enable the proper functioning of the product	Ensure the optimal usage of the product in its operational environment, minimize shutdown time of the plant	Enable the growth and success of customers' business
Type of relationship with customers	Transactional relationship	Performance partner	Strategic partner
Type of information required for the delivery	Basic information of the products and customers	Broader information of the products and customers as well as of production processes and operative environment	Broad information of customers' value chain and the ways in which different types of services may benefit it; information of customers' strategy
Examples of services in the category	On call repair, spare parts	Preventive maintenance, scheduled inspection, availability contracts, modernization	Consultancy, training, financial solutions, business optimization, integrated solutions
Examples of service providers in the category	Stannah group: after sale services (repair and maintenance of stair lifts)	Metso group: process optimization services (e.g. plant diagnostics and upgrades)	SKF group: engineering consultancy services (e.g. design optimization)

tee positive customer experience and genuine customer value in practice. On the contrary, due to the multiplicity and complexity of customer needs, maintaining a good and uniform quality is particularly challenging in services (Grönroos 1990). Information gathering is not sufficient for answering this challenge; in order for it to be applicable customer information has to be *elaborated and interpreted* within the organization. The formation of shared understanding is often much more demanding than the gathering process as such; however, it is crucial for successful practical operations and for the organizational strategy (Nordlund 2009). Customer information is usually stored in the company's customer relationship management (CRM) systems. CRM focuses on building and maintaining a portfolio of customer relationships and in this way facilitates the development of customer intelligence (Zablah et al. 2004). However, CRM is often used in quite a narrow way in organizations: it is related to the sales and marketing functions in the first place. The business strategy aspects and broader analyses are often forgotten (Ala-Risku 2009).

There is very little specific literature concerning the methods of acquisition of customer information in industrial services. One specific stream of research has grown to point out the importance of installed base information in the industrial context (Ala-Risku 2009). This research has mainly focused on the information concerning individual equipment, not the other needs of the customer. However, on the basis of the more general literature summarized above we can conclude that there is no reason why the need for the efficient flow and efficient use of customer information would not concern other service issues as well. The interaction between the front office personnel working at the customer interface and the back office personnel

carrying out supporting and developing functions is a prerequisite for success in service business (Shostack 1984). The front-office personnel—who daily interact with the customers—are also an important source of ideas for the development of new services and for the improvement of the existing ones (Alam and Perry 2002). The new technological customer-interfaces, like crowd sourcing and blogging, can be used as a support for the idea generation.

2.4 Benefits and challenges of a separate service unit

As mentioned at the beginning of this paper, the debate on the separate service unit has emerged when the variety of services has increased in manufacturing firms. In practice, many of these firms start service operations parallel with manufacturing, i.e. the service development and delivery are allocated to those employees whose main tasks are in the field of manufacturing operations. A point favoring this solution is that services built around physical goods require the knowledge and expertise of product designers and engineers. Thus, when a company's service portfolio is focused on SSP (or when a company starts to move to SSCP), an organizational combination of manufacturing and services is natural.

Extending the service portfolio to SSCB is often the point which causes a critical change: it may force the company to separate manufacturing and service functions organizationally. The share of services in the company's turnover is usually considerable at this stage, which speaks for the division of functions.¹ In addition, manufacturing

¹ It is also possible that the further extension of service business stops here. The managers may see additional services to be beyond the scope of their competencies, for instance (Oliva and Kallenberg 2003).

and services aim at different goals at least to some extent. Manufacturing activities typically focus on efficiency, economies of scale, and the belief that variety and flexibility are costly, whereas service business is often based on customization and the belief that flexibility and variety create profits (Bowen et al. 1989). These different goals put conflicting pressures on individuals trying to perform well in both functions. As a result, employees usually choose to fulfill the requirements of manufacturing, one reason being the human tendency to seek continuity rather than change. In a separate organization, the individuals are better committed to the goals of service business.

Also the classic views on the benefits of the interplay between differentiation and integration speak in favor of a separate unit. According to Lawrence and Lorsch (1967), this interplay increases the chances of survival in complex organizations. In the context of servitization, this can be interpreted to mean that establishing a service unit and making sure its integration with manufacturing units may influence positively the company's performance. However, the nature of the interaction between the unit and the corporate management is crucial in order to avoid the so-called 'principal-agent problem': the benefits of service business—including customer-orientation—may be evident from the viewpoint of the management (the principal) but not from the viewpoint of the unit (the agent). Information asymmetry is common and particularly problematic in situations that include insecurities (Eisenhardt 1989a). The service unit may consider some activities too risky and deep customer relationships too time-consuming. Thus, the way in which the service unit is built and its activities linked to the whole is essential. If the solutions are not successful, the greater 'visibility' of service business in a separate unit may even aggravate the 'principal-agent' problem compared to a situation where service activities are distributed throughout the organization.

In the following we examine the above-described benefits and challenges on the basis of our case study. We compare two different organizational solutions linked to a separate service unit and examine their linkages to customer-centricity and to the success of service business.

3 Methodology and description of the cases

Descriptive case study methodology has been a common approach in the studies of servitization at the company level (Yin 2009). Lately, researchers have called for explanatory case studies to elucidate the challenges of servitization in more detail (Oliva and Kallenberg 2003; Gebauer et al. 2005). Our case study, presented in this paper, focuses on two Finnish, internationally operating manufacturing companies. We selected the case methodology as it provides the

opportunity to obtain deep understanding of research topics that are still unclear in many respects (Eisenhardt 1989b). Our topic is a typical example of this kind of a situation. Thus, the case approach is the best alternative despite its weaknesses in relation to generalizability, relatively high costs and the time-consuming nature (Eisenhardt and Graebner 2007). Our case application is mainly descriptive, but it also includes preliminary explanatory analysis based on comparison of the two cases.

3.1 Case selection

We considered several factors in the selection of the case firms. Firstly, we limited our study to such manufacturing firms which have announced in the public domain that service operations will be their main strategic focus in the near future. Secondly, we sought companies which aim to become so-called solution providers, meaning that they would ultimately include also SSCB types of offerings in their portfolio. We judged the 'state' of the service business of companies on the basis of annual reports 2006. The following quotations of the mission statements of the selected companies show that the above-mentioned criteria were fulfilled in them:

(Our aim is to be) a leading global provider of solutions, technologies and services (mission statement of company A).

(Our) core business is to provide intelligent solutions and services (mission statement of company B).

As the third criterion, we looked for cases that enable comparison, i.e. for companies that have a separate service unit but show differences in the success of their service business. During the study, these differences were traced back to differences in detailed organizational and process arrangements. We were able to find illustrative examples regarding this criterion, too. Case A seemed to have major problems even in the design of individual services and in the outlining of the service portfolio. Case B was able to transform its business model, create new services, manage service operations and transform its organization culture towards service acceptance very rapidly.

3.2 Case descriptions

Company A is a mining technology provider that offers services linked to its installed base. Company B is a forklift company whose portfolio includes many types of services. Company B is smaller than company A, and in order to have research units that are comparable in size, we selected only one division from company A for our study. In terms of service business, the companies have many similarities. Both had created several service concepts in their portfo-

lios. Both had also started servitization at the approximately same time: the first ambitious goals including the transfer to a ‘solution provider’ were announced during 2006. Both companies had established a separate service unit, led by after sales managers, i.e. the employees involved in service activities do not have manufacturing responsibilities. An important difference is that *company B had made a strategic choice to carry out product maintenance with its own resources, whereas company A had outsourced the operational workforce*. Due to this difference, the number of employees in the service unit of company B was clearly bigger than in the unit of company A. Another difference was linked to the variety of services. Both companies had some SSP, SSCP and SSCB services at the concept level. However, *only company B had done actual business in SSCB services*: it offered training services and the optimization of the clients’ logistics fleet, for instance.

Also the products around which the service portfolios had been built in the case companies differ in one important respect: the linkage to customers’ core processes is different. Company A provides technology that plays an essential role in the production processes of the mining sector, whereas company B offers equipment linked to customers’ supporting functions: forklifts for customers’ warehouses in different sectors. Consequently, in the early stages of the study we supposed that company A needs sensitive customer information for its service development, whereas company B’s information needs are more neutral. It even seemed plausible to conclude that the main reason for the problems of company A was just here: their customers were unwilling to share their business knowledge with the equipment provider. Later on we realized that the situation was not that simple: also company B developed tight linkages with its customers’ core processes, when it adopted SSCB offerings. It needed access to information that touches the business strategy of customers, and some of its employees even worked on customers’ premises. Actually, the crucial difference was the organization of field operations: whether they were carried out by the service unit (company B) or whether the unit existed for managerial purposes only (company A).

3.3 Data collection and analysis

The data was collected within two broader research projects.² This particular study was carried out in 2007–

² The case study presented in this paper has been carried out within two research projects in Finland: Innovation Integrated in Service Operations (ISO) and Kibification of Industrial Services (KIBSIS). The corresponding author was a researcher in the former project (completed) and is the project manager in the latter (still continuing). More information about these projects can be found on the website: <http://www.bit.tkk.fi/Projects>.

2009 and is mainly based on 36 interviews: 20 in company A and 16 in company B. The data also includes observations at company workshops, company documents and some public data. We pursued triangulation by using multiple sources of evidence: interview data, workshop memorandums and archives (Yin, 2009).

The interviews were semi-structured; they were carried out face-to-face and lasted from one and half to 2 h. The informants included organizational actors from different hierarchical levels and functional areas (Eisenhardt and Graebner 2007). The interview questions consisted of three main topics. The first topic included questions about the nature of the companies’ service portfolio, the nature of service processes and customer relationships, and success in service business. The second topic focused on organizational arrangements: how the service unit operations were organized, which tasks were carried internally vs. externally, who were responsible for the management and delivery at different stages of the service processes, and how the development of new services was carried out. The third topic concerned the acquisition, management and use of customer information, including the contents that the interviewees considered important in this information.

All interviews were recorded and transcribed. We analyzed the data according to the procedures developed for comparative case studies (Eisenhardt 1989b), using open coding approach (Strauss and Corbin 1998). The above-mentioned topics formed the structure according to which the responses of the interviewees were grouped. Due to the conversational nature of the interviews, the original material did not follow the interview protocol sequentially, but important points regarding a specific topic came out in different contexts. We first analyzed the case companies individually, and then compared them and identified differences. After completing the data analysis, we presented the results to company representatives in interactive sessions. In this way, we pursued an increase in the validity of the results: the company representatives had the opportunity to provide feedback and suggest corrections if we had misunderstood some characteristics in their services.

For the illustration of the results, we adopted *the service blueprinting technique*. It is a suitable tool to clarify the roles and responsibilities of, and the interaction between, the customer and the service provider. Blueprinting is a method originally invented by Shostack (1982) to visualize service processes. Recently it has been ‘revitalized’ and further developed by Bitner et al. (2008). A blueprint is a two-dimensional picture of a service process: the horizontal axis represents a chronology of actions conducted by the customer and the provider, and the vertical axis distinguishes between different areas of actions. In its basic form, a blueprint includes the following types of action areas: customer actions, actions of front-office staff, actions of

back office staff, support processes, and management processes. In individual studies, the action areas can be modified to illustrate the topic in the best possible way. We used this option by dividing the staff members of the provider organization into more detailed occupational groups.

4 Research results

4.1 Differences in the tasks of the service units: case 'repair service'

In both case companies, service operations had started hand in hand with product manufacturing, the first step being the provision of repair and maintenance services. Separate units for service development and delivery were established later. Even though the service business had grown considerably by this stage, company B made a decision to develop maintenance operations in-house. These tasks were allocated to the service unit so that external technicians would be needed only occasionally. Also company A has been growth-oriented in its service business, but unwilling to invest in maintenance staff. The basic maintenance operations are seen to be outside the business scope in such a high-tech engineering firm it is like. Thus, company A has outsourced the main part of its field operations in different countries to local partner companies and kept in the service unit only special technicians to deliver services such as optimization, inspection and modernizations.

These arrangements have had impacts on several types of services in the case companies. In the following, we analyze the repair service as a detailed example. As a 'basic' service, it illustrates clearly the differences between the companies. Because it was the first service in both of them, it has also acted as some kind of a 'model' for the development of business with other services. Figures 1 and 2 present the blueprints of the process of repair service in the case companies: company A's process is illustrated in Fig. 1 and company B's process in Fig. 2.

Figure 1 shows that the service unit in company A consists of a call center, sales personnel, special technicians, and service developers. Field services are managed and carried out by partner companies. Customers can contact either company A's call center or sales personnel, or directly the operating actor: a local partner. Also in the cases in which a customer contacts company A, the service request is immediately transferred to a suitable partner that takes care of the delivery of the service. Thus, in ordinary cases company A has direct contacts with its customers only at the beginning of the service process. In very complicated cases, company A's specialist technicians, who work in the headquarters, may travel to the customer site.

However, this solution is not preferred because it is expensive from the viewpoint of both the provider and the customers.

In company B, whose repair service is illustrated in Fig. 2, the service unit includes field managers, technicians and supportive IT (ERP system) in addition to those functions found in company A (call center, sales and development). Contacts with customers can start in several ways: via the call center, sales personnel, managers or operational staff. Despite these multiple channels, the allocation of work takes place efficiently on the basis of the ERP system which includes data of earlier customer relationships and current operations. Thus, tasks are allocated to technicians not only on the basis of their workload, but their earlier contacts with specific customers are taken into account. This is important because technicians are responsible for the main part of interaction with customers during the actual service process: they schedule the work together with the customer, carry out the repairs, and finally inform the customer about the causes of the problems. On the other hand, technicians also continuously interact with the field management and service development functions of their own company. This practice enables the flow of up-to-date information about customer concerns and troubles to the managers and developers. Finally, causes of malfunctions are systematically recorded in the IT system, which reinforces the follow-up of the condition and specific characteristics of customers' equipment.

Summarizing, we can say that the abundant contact points with customers in company B create an opportunity for fruitful interaction during the whole service process, from the initial order until the end of the repair task. In company A, a major part of customer interaction takes place with the partner companies, some of which do not have a strong incentive to develop the service. A specific problem is that company A has not negotiated with its partners a reporting system which would provide it with information about customer problems and the solutions made. The following interview statement from company A's service manager is illustrative: *'I understand that in fact we don't have really good and active sales. They [competitors] have good specialists for products. So, we cannot sell, we cannot even provide service...we don't have contact with the customer.'*

4.2 Broader issues of customer-orientation in the case companies

The interviews indicate that the difference in the organization of maintenance services in our case companies reflects a deeper difference in the attitudes regarding the interaction with customers and the significance of customer understanding. Whereas company B considered it very useful to maintain a

Company A

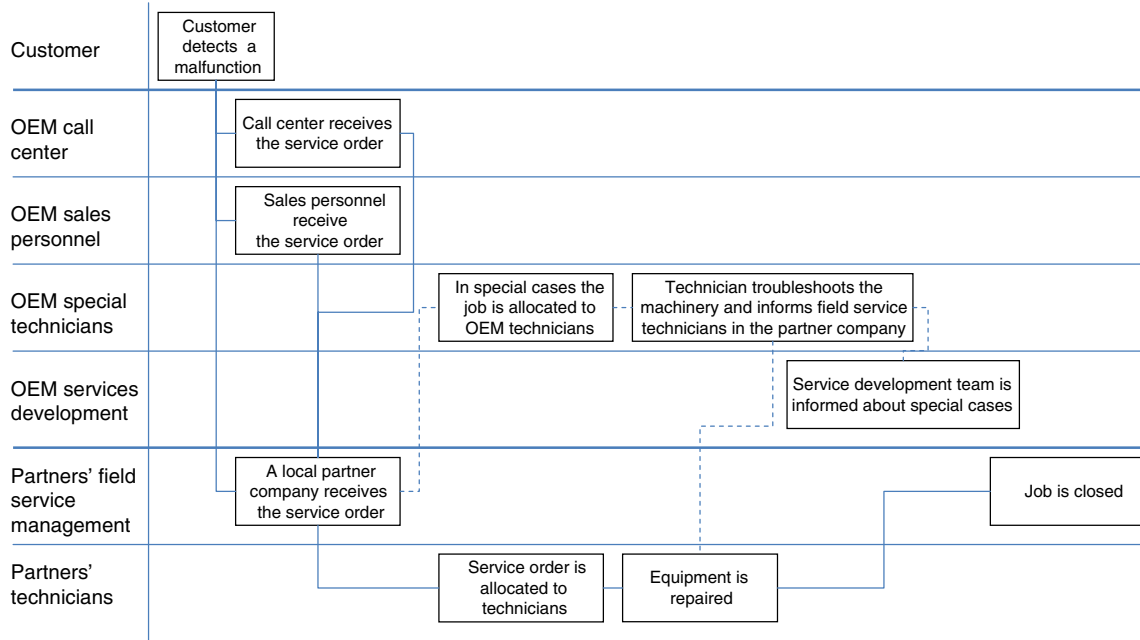


Fig. 1 Blueprint describing the process of repair service in company A

database about the customers' equipment, company A saw that it was the customers' responsibility to be aware of the condition of their equipment.

In company A, the knowledge level of the condition of the installed base and of the factors affecting it is generally weak. Some of the project engineers directly stated that they had never met the customers of their company. The maintenance supervisor told that there are several customers whom the company has not contacted at all after the delivery of the equipment. The after sales

manager judged that, because the company had not been able to deliver maintenance services itself, the customers had been compelled to learn operations in-house or to use other providers. According to him, many customers think nowadays that the services provided by the original equipment manufacturer (OEM) are overcharged or unnecessary.

In company B, the field operations ensure the contact with the customer monthly—even weekly. This company has arranged the field personnel so that each maintenance

Company B

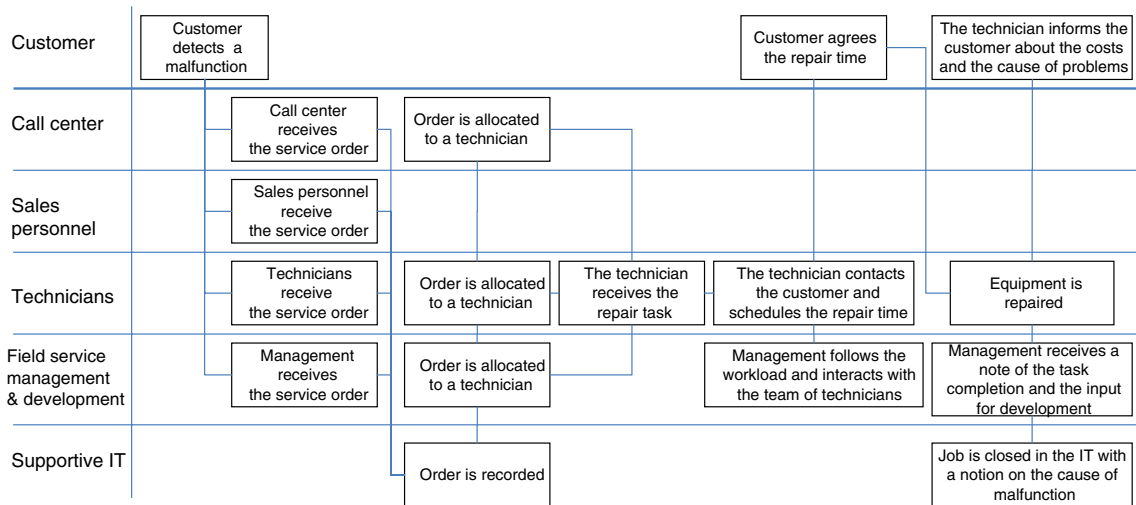


Fig. 2 Blueprint describing the process of repair service of company B

worker has his own customer base. Customers are well familiarized with the person who carries out their machinery work; communication of the problems associated with the equipment is easy and natural. As a result, the maintenance organization is able to anticipate customer needs without separate surveys. In the case of many customers, company B knows clearly how their equipment will behave during its life cycle, since the field workers have observed it and its use for years.

Another important arrangement in company B is that the personnel working at the customer interface are able to report customers' problems to their managers who cooperate closely with the service development team. In this way, the response time regarding customer needs in a more general sense is shortened dramatically. *Customer concerns can be immediately taken into account in the service design*, i.e. instead of mere tailor-made solutions, the company can create generalizable ideas.

In company A, the customer contacts are dependent on a third party which does not cooperate with the services R&D of the parent company. The customer information needed is available mainly through feedback forms, questionnaires or enquiries; to some extent it could be acquired via sales personnel. The problem with the latter is, however, that customers are often unwilling to discuss confidential issues with this personnel group, whom they see as 'creators of artificial needs'. In company B, where the closest interaction between customers and the service provider takes place at the shop floor level, this kind of problem does not emerge: the maintenance workers do not sell anything. Thus, in company B up-to-date information is gained through informal daily conversations, whereas in company A information gathering requires a conscious effort (creating questionnaires, scheduling appointments etc.).

Our analysis revealed that *the field technicians may have a major role in the acquisition of customer information and in the creation of customer understanding*. Therefore an interesting question is what kind of customer information technicians usually receive and regard as important. We analyzed this issue based on the interviews in company B and identified three different types of information: *user characteristics, production conditions, and business environment*. Information about user characteristics is gained during the repair visit; the core here is how the equipment has been used—for instance, if there is misuse that causes malfunction. Information about production conditions can even come out in the context of scheduling when the customer describes where and when the equipment can be repaired. The site visit itself reveals, for instance, whether the equipment is used in ordinary or extreme conditions (cold, moist or otherwise arduous conditions). Information about the business environment is often indirect. However, technicians often become aware of the opportunities for

growth or threats of reduction, cyclical changes in the employment situation, new innovations etc.

5 Concluding discussion

Our study indicates that there are important differences in the organizational solutions that industrial companies make when they establish a separate service unit. We summarize our results by answering our research questions as follows. Firstly, we asked which kinds of differences can be found in the organizational solutions of industrial service units. Based on our study, it seems that the scope and nature of the tasks—the organization of the field work in particular—may vary considerably in these units. Secondly, we asked how the organizational solutions are linked to a customer-oriented approach. Our study revealed that a service unit can be organized to foster continuous interaction with customers, but this opportunity may also be neglected if the flow of customer information via the field organization is not secured. Thirdly, we asked whether the success of service business differs in companies applying different organizational solutions. In our study, this difference was remarkable. The case company which was customer-oriented and used its own maintenance personnel was clearly more successful than the company in which the functions of the service unit were limited to sales and some managerial and development work.

Because our study was based on two cases only, we cannot provide arguments concerning available options in industrial service business generally or discuss the prevalence of each solution. These are issues that further, more quantitatively oriented studies should tackle. What we can conclude on the basis of our results is that the existence of *a service unit does not necessarily go hand in hand with extensive service operations in-house*. The service unit may be a small organization with limited tasks. However, it can also be a big frontline organization having a central role in the creation and maintenance of customer relationships. Investigating the variety between these two extremes is an interesting topic for future research.

Additional research is also desirable regarding the impact of various solutions on the success of service business. Our study indicates that a separate service unit as such does not promote this success, but an essential issue is *how customer interaction and the continuous flow of customer information have been secured*. Company B, which emphasized customer interaction, was clearly more successful than company A, which had not direct customer linkages. This result can naturally be caused by several factors in combination, and the case study nature of our research does not enable the analysis of these factors in

detail. It seems, however, that the customer-oriented organization of the service unit is somehow linked to the success: continuous interaction with customers provides information about the needs for new equipment and services, as well as about training and consultancy needs. Thus, it not only guarantees the fulfilling of customers' desires in existing service operations, but encourages the broadening of the service portfolio to include all types of service offerings: SSP, SSCP and SSCB.

Our study highlights that *the company's own maintenance personnel* acting as a part of the service unit is an important channel in the acquisition of customer information and an important actor in the creation of customer understanding. This personnel group is also in a key position as maintainers of customer relationships: field technicians provide customers with information about new products, modernizations and upgrades, for instance, and in this way develop the prerequisites for long term cooperation. However, we cannot make the simple conclusion that these kinds of practices could not be carried out in the context of outsourced services. Company A's problems were primarily linked to the lack of customer-oriented attitude in the company itself—it had not negotiated in detail how the partners should support the customers or how they should disseminate customer information to the parent company. Thus, it is worth examining what kinds of alternatives could be found in organizing outsourced maintenance operations and how customer-orientation can be secured in different alternatives.

The present study confirms the earlier results of the importance of the service encounter as an arena for the acquisition of versatile customer information. Our specific contribution is the emphasis on the role of the maintenance personnel, whereas earlier literature has most often concentrated on the importance of sales personnel. According to our study, field technicians and other operative service personnel are an equally important resource in the industrial companies which aim to develop a customer-centric view and expand their offerings to services. These personnel strengthen the ties between the provider and the customer in everyday interaction, which very concretely reveals the concerns and development needs of individual customers. In cooperation with the provider's R&D staff, these individual observations can be elaborated to generally applicable novelties.

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