Paving the Road for Excellence in Industrial Services: Initial Findings from Upper Austria

Margarethe Überwimmer, Pavel Štrach, Valentina Andrea Visser, Christian Stadlmann, Robert Füreder

Upper Austria University of Applied Sciences, Degree programme Global Sales and Marketing, Wehrgrabengasse 1-3, A-4400 Steyr, AUSTRIA

KURZFASSUNG/ABSTRACT:
The ideas of customer satisfaction and quality have long been prominent product and service marketing research agendas, typically examined in consumer (B2C) markets setting. Much less attention has been paid to the multi-faceted nature of industrial (B2B) markets and its increasingly predominant service nature. The paper presents the development of 12 dimensions of service excellence, which enable companies to design industrial services with presumably high levels of resulting customer satisfaction and provide needed additional stimuli for further business development. The research is based on a literature meta-analysis and a qualitative study among 15 informants – representatives of leading industrial solutions providers in Upper Austria.

1 INTRODUCTION
Customer satisfaction stands among the most researched concepts in marketing (Benett et al., 2005). Satisfaction has long been discussed in marketing literature arriving to axioms such as the disconfirmation theory (Oliver, 1980, 1981), which implies that consumers contrast their expectations to the actual product performance. According to Fournier and Mick (1999) satisfaction is related only to the post-purchase consumer-product interaction, while others (Iacobucci et al., 2003) perceive shopping experience within the boundaries of customer satisfaction. Although common models show that customer satisfaction is both the outcome of customer’s purchasing experience as well as product interactions, research studies typically distinguish between product and service attributes and focus either on services (e.g. Wirtz and Bateson, 1999; Cronin et al., 2000, Miranda et al., 2005, Anderson et al., 2008) or on material products (e.g. Thompson et al., 2005; Wang and Wallendorf, 2006; Wangenheim and Bayon, 2007). There has been also a lot written on the challenges of measuring customer satisfaction in industrial settings (e.g. Homburg and Rudolph, 2001; Yamanandram and White, 2006), where a customer is represented by many individuals across different departments (which may have diverging goals and needs), attributes of products and service are complex, and a customer base is likely to be more diverse than in B2C market situations (Rossomme, 2003).

Beyond the complex nature of satisfaction, companies in industrial sectors face various hurdles in making the transition from product to service-dominant logic (Lusch and Vargo, 2006). Building service capabilities requires development of new resources, skills, competencies, practices, and/or structures (Jacob and Uлага, 2008; Kowalkowski, Witell and Gustafsson, 2013). Four core resources necessary for transitioning from products to services seem to be (1) use of products and data derived selling physical goods, (2) product development and manufacturing base, (3) experiences sales force and well established distribution network, and (4) an established service organization (Uлага and Reinartz, 2011). In making meaningful use of these specific resources, firms, which succeed in providing industrial services, excel in (1) service-related data processing, (2) risk assessment and mitigation, (3) service design capability, (4) ability to sell industrial service solutions, and (5) ability to implement industrial service solutions across the organization (Uлага and Reinartz, 2011).
The example of General Electric starting to sell actual usage time of jet engines instead of providing the engines themselves eventually resulted in a 50 percent revenue increase between 2004 and 2007 (Fischer, Gebauer and Fleisch, 2014) and shows how a service-driven mindset contributes to competitiveness of companies. Just as any new business venture, moving into services brings along inherent risks of failure or at least obstacles (Krishnamurthy, Johansson and Schlissberg, 2003; Reinartz and Uлага, 2008; Uлага and Reinartz, 2011). Uлага and Love-land (2014) identify four key transition challenges which enterprises have to overcome, namely (1) the magnitude of change, required to transform sales into services; (2) unique elements of selling service solutions as opposed to selling industrial products; (3) the link between these differences and the sales proficiencies; and (4) potential individual variation among high-performing service-focused salespeople in comparison with sales reps focused exclusively on products.

The aim of this paper is to uncover key factors, which drive commercial success in business-to-business services in mature industries, which might have been traditionally believed to be more anchored in products. The presented study builds on a two-stage exploratory qualitative methodology – on a systematic literature review and 15 semi-structured interviews with managers of mid-sized and large mechanical engineering companies in Upper Austria. Findings, limitations and further research avenues conclude the study.

2 SYSTEMATIC LITERATURE REVIEW

The literature review was conducted in line with the systematic approach proposed by Levy and Ellis (2006). The literature meta-analysis identified 58 items (see Appendix), which appeared during last decade in leading marketing journals or were published as books. Backward and forward keyword search was applied to EBSCO and ScienceDirect databases. Based on the systematic approach, ten foundational elements of industrial service excellence were identified by previous empirical studies, namely: organizational structure, service-oriented organizational culture, strategic service focus, continuous development of services, sales force capabilities, network and relational capabilities, customization, strong value proposition, value co-creation, and ability to price services.

2.1 Organizational Structure

A number of researchers emphasize the necessity of adapting the organizational structure to allow for effective and efficient solution provision (e.g. Jacob and Sievert, 2010; Oliva and Kallenberg, 2003; Uлага and Reinartz, 2011). There needs to be a shared perception of common purpose in industrial services. Overcoming the traditional product-centric structures and notions is a key success factor in providing industrial services (Windahl and Lakemond, 2006). Separating industrial services from other corporate functions (such as manufacturing for instance) demonstrates the impact of services on the entire organization in financial terms as well as otherwise (Oliva and Kallenberg, 2003). A suitable organizational model for provision of industrial services builds on the distinction of capability-based back-end units and customer-based front-end units, also called industrialization and commercialization units (e.g. Foote et al., 2001; Storbaka, 2011).

Front-end units create solutions and demand for these solutions, sell them to customers and are compensated based on the value-in-use they create for customers. The back-end units, on the other hand, function as internal suppliers to front-end units; while at the same time continue selling individual, unbundled products and uncomplicated straightforward services to customers (Foote et al., 2001).

Organizing for industrial solutions means connecting various corporate units and allowing them to operate cross-functionally (Storbacka et al., 2013). Kowalkowski, Witell and Gustafsson (2013), who investigated the trend towards increased reliance on services from the perspective of small and medium sized companies (SMEs), note that SMEs are not likely to run a separate service organization unit as they lack the critical mass necessary for such a business unit to be
profitable. Successful organizational set-up for industrial services in SMEs may be just a (sales)person dedicated to industrial solutions and being in the position of service platform.

2.2 Service-Oriented Culture

Service-oriented culture is the key prerequisite of the service-dominant logic (Gaiardelli et al., 2014; Gebauer, Fleisch and Friedli, 2005). Traditional manufacturing companies might be driven by efficiency and economies of scale and fear that variety and flexibility are expensive. Applying service-dominant logic means implanting a culture, in which service is the ultimate driver of innovation, customization, and variety, which lead to corporate profits (Gebauer, Fleisch and Friedli, 2005). Managers are responsible for injecting the service culture into their organizations (Jacob and Ulaga, 2008). Such culture has to be cultivated over years and requires managerial service awareness. Employees being inflicted with service culture spread it throughout the organization and infect others (Gebauer and Friedli, 2005; Salonen, 2011).

Companies excelling in industrial services need to move by market orientation and their customers. Providing industrial services means developing and supplying the best solution for an individual accounts. Customer centricity cannot be done only merely by creating an after-sales service organization; services must become a company-wide initiative with wide cross-functional support (Windahl and Lakemond, 2006) and shared service spirit.

Service-oriented culture results commonly a shift away from traditional sales- and volume-driven remuneration systems for sales people (Tuli, Kohli and Bharadway, 2007). Compensation schemes could for example be more reflective of customer satisfaction with services measured across the entire service life cycle. On the individual level, attractive incentive systems should reward long-term factors such as cooperative employee behavior, supplier-internal cost reduction or creation of new, innovative solutions.

2.3 Strategic Service Focus

Industrial services need to be an integral part of corporate strategy (Brady, Davies and Gann, 2005). Managers need to support industrial services in a strategic way (Gebauer and Friedli, 2005), being aware of its business potential, and be willing to take on the risks it entails. Gebauer, Fleisch and Friedli (2005) further emphasize the need to a service-oriented strategy, which is clearly formulated and executed. The procedure of strategic analysis, development and implementation shall be subject to continuous monitoring and a feedback loop.

Along with the definition and pursuit of a solution strategy, and a shift in managerial mind-sets, metrics also need to be adapted to the specifics of the solution business. While the product logic is driven by revenue, the central concern for service business should be profits made (Johansson, Krishnamurthy and Schlissberg, 2003).

2.4 Continuous Development of Services

Industrial services cover the entire life cycle of an integrated product and service bundle (Roegner, Seifert and Swinford, 2001). Whereas new product development (NPD) and new service development (NSD) tackle mostly just the development stage, in which new offerings are created (Kindström and Kowalkowski, 2009), successful implementation of industrial services require a continuous approach spanning well beyond the initial developmental exercise and usually starting with emphasis on customer problems. It is what Davies and Hobday (2005) call the integrated solutions life cycle or what Tuli, Kohli, and Bharadway (2007) label as the process-centric view on customer solutions.

2.5 Sales Force Capabilities

Any service-driven company relies on its salespeople to compellingly portray and introduce unique industrial services to customers (Terho et al., 2012). Selling industrial services is a two-way collaborative task, in which both sales representatives and their customers actively participate. Terho et al. (2012) identify three fundamental dimensions of successful selling in industrial services (p. 178): (1) understanding customer’s business and the related value creation oppor-
tunities, (2) proactive crafting of value propositions, and (3) communicating the value potential to the customer. Salespeople should possess specific skills, capabilities, and experience, demonstrate behavioral qualities and attitudes, and personality characteristics which go beyond the salesperson skills (Salonen, 2011; Uлага and Reinartz, 2011). Such superior service-selling competences include but are not limited to higher levels of trustworthiness, self-confidence (Jacob and Sievert, 2010), ability to move beyond one’s comfort zone (Uлага and Reinartz, 2011), competence to partner-like relationships (Krishnamurthy, Johannson and Schlissberg, 2003), internal and external networking capabilities, appropriate questioning techniques to analyze customer needs (Tuli, Kohli and Bharadwaj, 2007), ability to serve as an advisor to a customer (Doster and Roegner, 2000), or sell outcomes, rather than tangible products, while being able to deny responsibility for complete customer profitability (Uлага and Loveland, 2013).

Beyond capabilities and competences, Uлага and Loveland (2013) identified seven key personality traits of salespeople excelling in selling industrial services: (1) customer service orientation, (2) learning orientation, (3) teamwork orientation, (4) intrinsic motivation, (5) general intelligence, (6) emotional stability, and (7) introversion. Industrial services may require a completely new salesperson that is willing to listen, be highly reflective, and attentive to others, rather than pushy or ostentatious. Reinartz and Uлага (2008) provide an example of Schneider Electric, which (when transitioning into a solution provider) found out after extensive training efforts that many salespeople resisted the change and had to be replaced. It seems that fluctuation rates up to 80 percent are commonplace when making the transition to industrial services (Uлага and Loveland, 2013). Service-focus on superior outcomes, customer loyalty and other long-term factors may not be compatible with the outdated product sales mindset.

2.6 Network and Relational Capabilities

Industrial services are complex and require integrated approach both from a commercial and operational perspective. Providers realize often soon that they are unable to manage and execute all activities linked to customized product-service bundles on their own (Möller and Törönen, 2003). Service-oriented industrial companies are faced suddenly with significantly increased levels of complexity. And increased complexity requires network capabilities (Koh tamäki et al., 2013) to closely cooperate with or even integrate suppliers into the service provision (Davies et al., 2007). Several industrial service companies take on a role of becoming system integrators – addressing complete customer needs (Davies and Hobday, 2005) on one and coordinating supplier networks (Meier et al., 2002) on the other one. Industrial service providers shift the center of gravity to themselves and build a network, which becomes their core competence.

Professional coordination of all parties involved in providing industrial services - such as suppliers, internal organization units, or the customer’s staff – is at the heart of successful networking. Furthermore, customers usually prefer to refer to one central contact point for all inquiries (Krishnamurthy, Johannson and Schlissberg, 2003). Network and relational capabilities might be evident in open-book policies or extranet platforms (Storbacka, 2011) which link all involved parties together and enable relevant data to be shared.

2.7 Customization

There is an inherent dichotomy between customization (individual approach) and standardization (repeatability). To ensure cost efficiency, firms aim at standardizing services to the highest degree possible (Salonen, 2011). To address unique customer needs, industrial services are subject to high levels of customization. Providers of industrial services reconcile the dichotomy by means of customization whereby pre-developed modules are combined to form a unique service offering (Davies, Brady and Hobday, 2007; Roehrich and Caldwell, 2012). There is a learning path for service companies in offering the appropriate levels of customization. Usually, solutions that were developed for individual customers can later be broken down into standardized modules and components, and re-combined into new, tailor-made service (Davies, Brady and Hobday, 2006). Such modules and component can be even grouped in a hierarchical way
and lead to design of service platforms (Storbacka, 2011). Yet another benefit is related to service modularization: it makes it easier for both customers and salespeople to understand the offering (Jaakkola, 2011) and for companies to price the service.

### 2.8 Value Proposition

Vargo and Lusch (2004) argue with Grönroos (2000), that value is created throughout relationships by customers, participation of which is essential for successful service delivery. They add, however, that only partly value resides in interactions between providers and their customers. Hence, it is customers, who play absolutely vital role in receiving and experiencing the service value. Service providers are challenged with enhancing their relationships to fulfill customer expectations, and involving them in the creation of new offerings (Kindström, 2010). The value is a relational benefit, a reciprocal promise. Suppliers need to implant their own sense of value into the value proposition (Ballantyne and Varey, 2006). Only value propositions, which are of interactive and mutually beneficial nature, can be ripe for sale. The value proposition depends on the supplier-customer relationship (Brady, Davies and Gann, 2005) and immediate past experience.

On the managerial level, Ulaga and Reinartz (2011) talk about input and output based value propositions, which must be suggested by service companies. Ulaga and Eggert (2006) distinguish between product-based, service-based value, and relationship-based value propositions. Storbacka (2011) adds integration-based and customization-based value proposition to be highlighted in the context of industrial services. Regardless of a particular approach to arrive at value propositions, firms need to build further expertise and experience in communicating and highlighting the value(s) to their customers (Kindström, Kowalkowski and Nordin, 2012). Illustrating value proposition is demanding and complicated, due to untouchability of services. Lifting the burden of immaterial nature of services, authors suggest visualization (Porter, 1985) or productization and tangibilization (Jaakkola, 2011) of value propositions.

### 2.9 Value Co-Creation

"Value is not produced by one party for the other, but by the relationship itself" (Pardo et al., 2005, p. 10). Service value is co-created in interaction, through integration of resources across all network actors (Jaakkola and Hakanen, 2013). In co-creation, suppliers for instance provide resources such as specialization and professional integrity, customers share insights in their business as well as their needs. The resulting value for both sides cannot be generated without strong personal as well as organizational involvement.

Interaction can be enhanced through workshops with selected customers, strategic meetings between executives (Brady, Davies and Gann, 2005; Gebauer, Fleisch and Friedli, 2005), mutual planning with selected customers (Storbacka, 2011) or frequent and regular customer contact, which is not prompted by suppliers only. At times, it may even be the customers who generate foundational ideas for new service development and become the mutual value driving force (Aarikka-Stenros and Jaakkola, 2012).

### 2.10 Ability to Price Services

One of the obstacles that stand in the way of implementing industrial services is the difficulty of understanding true value to customers and to map the true incurred in-house cost. Reinartz and Ulaga (2008) cite an example of the French subsidiary of Merck, a supplier of pharmaceuticals, which for many years had provided free delivery to its customers. Covering transportation and insurance costs had been perceived as a given. Transportation was not itemized on any bills, customers were not aware of the value of the shipping service. When Merck decided to include the shipping fee on all bills, 90 percent of buying organizations did not even notice, and only five percent insisted on continuous provision of free delivery. The move from “free to fee” meant an insignificant price increment for customers, but a remarkable profitability upswing for the company.
Prices for unique industrial solutions need to be set on an individual basis. Comparison of benefits and sacrifices from the customer’s viewpoint remains central to determine value-in-use and thus the appropriate price of the solution (Aarikka-Stenroos and Jaakkola, 2012). Appropriate pricing requires adequate monitoring mechanisms and infrastructure for internal costing to avoid selling at underrated or even negative profits (Gebauer and Friedli, 2005). Several service providers move away from an itemized mark-up pricing (Oliva and Kallenberg, 2003). Fixed bundled service pricing implies that service providers are able to deal with operating risks and issues of equipment availability, for instance.

3 QUALITATIVE INQUIRY AMONG UPPER AUSTRIAN MECHANICAL ENGINEERING COMPANIES

It has been a challenge for companies in mature industries to adopt service-dominant logic for their business. Mechanical engineering sector is anecdotally reported as the prime example of such a mature industry, whereas opportunities for major service innovation and implementation exist. European Service Innovation Centre (ESIC) initiative named three Upper Austrian business-to-business companies to have already implemented service-dominant logic and become European-wide best case examples for demonstrating successful strategic service orientation and innovation. Companies mentioned by ESIC and other businesses suggested by the professional and academic media sources were included in the purposeful sample of Upper Austria mechanical engineering business-to-business firms and approached for participating in the study.

Final sample consisted of 15 informants from companies which had a strong focus on industrial services. Based on the identified key factors an interview protocol has been developed, pre-tested and fine-tuned to tackle the antecedents for successful industrial services. All interviews were recorded, transcribed and independently analyzed through MAXQDA qualitative data analysis software. Common codes included nodes and themes identified in the initial literature review and related to the dectet of dimensions derived from the literature review.

4 DISCUSSION AND CONCLUSION

The analysis suggests there are two additional dimensions of industrial service excellence: service infrastructure and service-competence of executives. It is the executives, who need to take the lead and accept the risk of venturing in the unchartered service territories. They have been the ambassadors of service-culture and communicate the importance of industrial services within and across their organization. Executives in successful industrial service companies seem to be praised with ability to use customer-focused as well as business-focused metrics and hence make systematic decisions. Many of such executive decisions lead to wise allocation of resources (Storbacka, 2011) to support fruitful new services initiatives and create the necessary infrastructure for service implementation. In spite of lacking operational detailed knowledge, executives themselves are always part of the sales process as they interact with customers and stand for communicated value propositions. There is even a suggestion that it shall be top level executives who initiate first discussions with potential customers about the value of new industrial services (Brady, Davies and Gann, 2005).

Such infrastructure relies on established networks for maintenance, constant customer support and physical presence of services. Such networks might be operated by service providers themselves, by suppliers or other external partners, but they need to be in place. The infrastructure also helps in demonstrating the service value provisions and promises to customers. Salonen (2011) is among a few, who suggest that service infrastructure is important and creates the visible side of industrial services.
Table 1. Dimensions of Industrial Service Excellence

<table>
<thead>
<tr>
<th>Nr.</th>
<th>Dimension</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Organizational Structure</td>
</tr>
<tr>
<td>2</td>
<td>Service-Oriented Culture</td>
</tr>
<tr>
<td>3</td>
<td>Strategic Service Focus</td>
</tr>
<tr>
<td>4</td>
<td>Continuous Development of Services</td>
</tr>
<tr>
<td>5</td>
<td>Sales Force Capabilities</td>
</tr>
<tr>
<td>6</td>
<td>Network and Relational Capabilities</td>
</tr>
<tr>
<td>7</td>
<td>Customization</td>
</tr>
<tr>
<td>8</td>
<td>Value Proposition</td>
</tr>
<tr>
<td>9</td>
<td>Value Co-Creation</td>
</tr>
<tr>
<td>10</td>
<td>Ability to Price Services</td>
</tr>
<tr>
<td>11</td>
<td>Service infrastructure</td>
</tr>
<tr>
<td>12</td>
<td>Service competent executives</td>
</tr>
</tbody>
</table>

The findings outlined through the two-stage small-scale qualitative study do not allow for over-generalization, however might be used for subsequent empirical verification. Further research on the topic and empirical investigation both with service providers and with their customers is clearly needed, as better constructs addressing satisfaction of industrial customers are lacking. There is a plan to develop a valid construct for measuring and comparing the industrial service excellence based on the dozen dimensions (refer to Table 1.), which would address both the satisfaction of service providers and their customers in mutual service interactions.

Industrial services are likely to steer economic growth in traditionally product-driven sectors. Ability to understand success of industrial services may provide meaningful outcomes for businesses and policy makers alike in contributing to satisfaction of customers in B2B sectors and assisting to design beneficial strategies for (trans)regional economic growth. The presented study laid down a couple of first pavers on the road to industrial service excellence.

REFERENCES


