

Solution sales process blueprinting

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Abstract: By utilizing the blueprinting technique, this study develops a sales process framework that visualizes different activities, actors, and customer touch-points in the sales process. Multiple-case method was utilized for collecting data from eight Finnish manufacturers that are implementing servitization. This study draws on diverse data, including information from websites and face-to-face interviews with 18 company representatives. Our results show that firms also interact with customers during post-sales delivery to acquire and disseminate new information. The main actors having direct encounter with customers are the sales people, but early engagement of the project and design divisions help them serve and understand customers better. However, the process blueprint reveals the need for improvements in the firms' sales process design, in order to better integrate the service function into the selling phase and to enhance the opportunities for post-sales customer support. The identified managerial practices indicate that the entire sales process revolves around early engagement of solution providers to participate in the technical negotiation and design with the customer before needs are realized, or investment decisions are made. Additionally, the sales process blueprint visualizes displays the different customer touch-points and how various actors in provider's organization interact to deliver value for customers. Lastly, the blueprinting framework offers a guide to managers to re-orientate their sales process around those the identified fundamental practices for long-term customer relationship development.

Keywords: Solution Selling, Blueprinting, Relationship selling, Servitization.

1 Introduction

Increasing competition in the industrial markets has forced many manufacturers to move from products to solutions (LaForge et al. 2009; Shepherd & Ahmed 2000; Ingram 2004). Succession in the solutions business requires a transition in the sales process towards a service-centred logic and relationship management approach (Storbacka et al. 2009; Vargo & Lusch 2004; Moncrief & Marshall 2005). That is, solution providers have to engage with the customers to jointly identify customers' problems and needs (Brady et al. 2005), to provide post-sales support and win customers' long-term commitment (Tuli et al. 2007; LaForge et al. 2009; Storbacka et al. 2011). Thus, the sales philosophy has shifted from a product- to a value-centric perspective (Galbraith 2002; Moncrief & Marshall 2005), where companies have to revisit the traditional depiction of the sales process (Sheth & Sharma 2008).

The literature on sales process models depicts major stages of the sales process (Moncrief & Marshall, 2005; Töytäri, Brashear Alejandro, Parvinen, Ollila, & Rosendahl, 2011; Brady, Davies, & Gann, 2005; Storbacka, 2011) and studies the effects of solutions sales to company outcomes, such as innovativeness and performance. However, the existing research gives very little attention to the micro activities in the seller – customer touch-points that forms the central locus for understanding and identifying the unique attributes of individual customer; which facilitates both strategic and tactical decision-making process in delivering customized solutions as well as developing personalized customer relationship (Bitner et al. 2008). Although previous studies have shown that service mapping provides organizations with a visible platform to understand how customer demands can be better served by developing service practices (Kingman-Brundage et al. 1995), none of the existing studies uses any modelling technique to map the activities in detail. Instead, studies tend to simplify the sales process. Therefore, a need exists to study the solution sales process in detail to understand the micro activities of solution sales.

By utilizing a process mapping technique, known as blueprinting, this study develops a process framework that visualizes the actors-activity mix and customer touch-points in the sales process. Through 18 face-to-face interviews with sales managers/directors of eight Finnish solution providers, this study aims at identifying the micro-activities on which the interdependent buyer-supplier sales relationship is built and how these (activities) are intertwined to establish long-term sales opportunities. This study extends the existing research on solution sales processes (Storbacka 2011; Töytäri et al. 2011; Brady et al. 2005) by answering the following research question: how do solution providers organize the sales micro-activities to create value while adapting their sales processes to recognize and fulfil their customers' ongoing needs? The identification of the critical micro-activities pertinent to the effective implementation of solution sales process as well as the visualization of the interplay between multiple actors in supplier and customer organizations enhance our understanding of the changing roles of customers during solution delivery regarding the changing organizational structure of the provider organization. These circumstances shed light on how joint provider-customer activity implementation affects the establishment of long-term sales relationship.

2 Conceptualizing industrial customer solution

There is presently a little consensus among academia about the concepts of solution and solution selling (Töllner et al. 2011). The disparity of opinion is unequivocally a by-product of the complexity of the term “solution” that is partly due to the waves of terminologies that have made their ways into the marketing literature (Nordin & Kowalkowski 2010). Regardless of the multiple terminologies, what appears to be the central tenet amongst authors is the creation of value through a product-service combination that is targeted at meeting customer’s specific needs (Baines et al. 2017; Bustinza et al. 2017a, 2017b; Vendrell-Herrero et al. 2018a; Bigdeli et al. 2018). Particularly, the service-dominant (S-D) logic research emphasizes service as the core of the bundled offering and an important avenue to establish or ensure a long-term relationship with customers (Vargo & Lusch 2004; Cova & Salle 2008).

Hence, following Tuli et al. (2007, pg. 1), solution is defined as “a set of customer-supplier relational processes comprising (1) customer requirements definition, (2) customization and integration of goods and/or services and (3) their deployment, and (4) post-deployment customer support, all of which are aimed at meeting customers’ business needs.” This definition suggests a long-term customer-supplier relationship that is activated before the creation of the actual bundled offering and maintained through continuous interactions with customers after the offering is delivered (Tuli et al. 2007; Brady et al. 2005; Vendrell-Herrero et al. 2018b, Visnjic et al., 2017, 2018). The definition also supports the assertion that customers are active participants in value creation and solution design (Cova & Salle 2008; Vargo & Lusch 2008).

2.1 Industrial solution sales process

Solution selling is typically seen as an interactive process, where the solution is co-produced and value is co-created with the customers (Le Meunier-FitzHugh, Baumann, Palmer, & Wilson, 2011; Le Meunier-FitzHugh & Piercy, 2010; Storbacka et al., 2009). Scholars typically organize the sales activities around the major milestones within the sales process while recognizing the need for cross-functional (Storbacka et al. 2011) and cross-firm interactions (Cova & Salle 2008). However, most of the existing frameworks are activity-based without demonstrating the interplay between different actors performing those activities (Brady et al. 2005; Töytäri et al. 2011). Although the sales processes vary across industries, companies, salespeople, and circumstances, most of the frameworks appear to share similar patterns that can

be grouped under 5 themes: 1) information acquisition, 2) preliminary negotiation, 3) actual negotiation and value proposition, 4) offering deployment and value verification 5) maintain and support customer operations (Table 1).

<INSERT TABLE 1 ABOUT HERE>

The focus of information acquisition is to identify suitable customers whose needs match the providers' offerings (Eades 2003; Storbacka 2011). This is an important stage for securing access to relevant stakeholders in customer organization (Tuli et al. 2007; Töllner et al. 2011), which also form the basis for the "preliminary negotiation" where the main goal is to stimulate customer's interest towards the providers' offering (Moncrief & Marshall 2005; Roune et al. 2011; Töytäri et al. 2011). The actual negotiation involves the collaborative effort of different actors in the provider's organization (e.g. selling teams) to develop value proposition with the customer (Liozu et al. 2012; Storbacka et al. 2013). Due to the intangibility of the service component of solutions, value quantification is challenging. Hence, the selling team must work with customers' buying centre to co-develop evaluation metrics that are relevant for the measurement of solution performance (Brady et al. 2005; Storbacka 2011).

The last two stages of the sales process take place simultaneously and are initiated after the supplier and the customer reach mutual contractual agreements (Brady et al. 2005). Tuli et al. (2007) referred to deployment as the delivery and installation of products to the customer's environment and offering of personalized services to modify the product bundle continually to fulfil the customer's specific and dynamic requirements. Because value creation is a derivative of customer's daily utilization of the product (Vargo & Lusch 2008), long-term integration into the customers' process offers the provider an opportunity to render strategic support services for the customer's ongoing value creation process, which also presents opportunities to capture and verify value through, for instance, customers' feedback (Storbacka 2011; Töytäri et al. 2011). Aside from meeting customers' specifications and delivering by agreed time and budget, ensuring customer's satisfaction was also echoed as a critical success factor in value assessment (Brady et al. 2005).

2.2 Blueprinting the sales process

Blueprinting is a mapping technique for the visualization of a dynamic process to document the interactions and interdependencies between steps, levels, and points of divergence within the process (Shostack 1984; Shostack 1987). Unlike other process design techniques (e.g., flowchart, data flow diagram) (Aguilar-Savén, 2004), service blueprint considers the service process from the customers' perspectives. This approach enables a better understanding of the customer value and processes as well as provides a multilevel visualization of different activities and stakeholders that are involved in the process, thereby, facilitating the identification of potential sources of failure and innovative opportunities (Bitner et al., 2008). Figure 1 summarizes the activities identified in the reviewed sales process frameworks. The five lines allow proper visualization of the sales activities based on the interactions and boundaries between different actors within the provider organization and with customers.

<INSERT FIGURE 1 ABOUT HERE>

The line of interactions represents the touch-point between the customer and the frontline employees of the solution provider. Activities below the line of visibility are invisible to the customers. The actions of the frontline employees (salespeople) are separated from the back-office employees (e.g. production engineers) by the line of internal interactions. Hence, activities below the line are rendered by the back-office as supporting activities to facilitate a frontline encounter with the customer (Fließ & Kleinaltenkamp 2004). Activities below the line of order penetration are determined by the provider's unique capabilities that facilitate understanding of the customer business. Finally, the line of implementation is the "management zone" involving activities that are not only associated to a specific sale process but are utilized to coordinate series of processes in the provider's organization (Fließ & Kleinaltenkamp 2004).

While the above process blueprint provides a more detailed representation of the solution sales process than existing frameworks in the sales literature, the obvious limitation is the difficulty in distinguishing activities that are carried out simultaneously by multiple actors at different layers of the blueprint. For

instance, during proposals preparation, customer information is jointly analysed by the sales – frontline employee, and the proposal, technical designers, as well as project team – back-office employees (Brady et al. 2005). Additionally, the framework overlooked the need to specify the multifunctional nature of the back-office responsibilities as a means to open-up the provider organization for a better understanding of the sales process. Considering these limitations, an industrial service blueprinting (ISB) has been developed (Biege, Lay, & Buschak, 2012). The ISB takes the multidimensionality of solution selling into consideration and allows the representation of simultaneous and overlapping activities. However, unlike Biege et al. (2012) who utilized the ISB to describe the changes in the value chain process of machine tool builders transitioning to service providers, the present study applies the framework in the context of project-based solution providers. This decision is partly motivated by the call for studies investigating how manufacturing organizations utilized different organizational alternatives to integrate service-providing units into their core manufacturing businesses (Biege et al. 2012).

3 Methodology

3.1 Research Strategy

This article aims to gain deeper insight into the micro activities of solution sales process, hence adopting a qualitative research strategy is fit for this study (Paiola, Saccani, Perona, & Gebauer, 2013; Saunders, Lewis, & Thornhill, 2009). In particular, this research employs an exploratory multiple case study (Storbacka et al. 2009; Storbacka et al. 2013; Paiola et al. 2013). By following an inductive inquiry to analyse the relationships between the sales processes of eight Finnish companies, the current study develops a comprehensive overview of the solution sales process. The inductive approach has been supported by sales research as a feasible option for case study research particularly for manufacturing firms that are transiting to services (Baines et al. 2017).

3.2 Case selection

A theoretical sampling approach was utilized for case selection following the qualitative case study research method (Bryman, 2012; Eisenhardt & Graebner, 2007). We used a heterogeneous purposive sampling strategy

(Patton, 1990), which maximizes variation in data collection and allows us to identify the best practices from companies with sufficiently diverse characteristics. Following Kindström (2010), the case companies were purposefully selected based on the following criteria:

- The case must have a background in manufacturing with tangible products;
- Must have undergone or is currently undergoing the transition from manufacturing to solution provision;
- Must focus on integrated offering through bundling of products and services; and
- Must be willing to share relevant information and participate in this study.

Consequently, eight global solution providers with headquarters in Finland were selected. Two of the companies operate in pulp and paper industry, two in power and energy, one in lifting and material handling, two in logistics and transport related industries and one company provides services in weather control technology. The companies' service portfolio ranges from after-sales to project services and turnkey solutions. These are large organizations with 2014 annual turnover between 29 million and 33 billion. While five of the companies are well-established solution providers, three are undergoing the transition to solution providers and have taken major initiatives such as organization restructuring as well as an expansion of service portfolio into project services and customer process automation. The variety of industries assessed provided a large data set that ultimately increased the validity and accuracy of this qualitative research (Jack & Raturi 2006; Saunders et al. 2009). Firms are identified as Alpha, Bravo, Charlie, Delta, Echo, Foxtrot, Golf, and Hotel to maintain anonymity.

3.2 Data collection

The data collection lasted from October 2014 – March 2015 and was conducted by the authors through face-to-face interviews with sales executives with an average of 11 years in managerial positions (Table 2). Extensive information search was also conducted on the official webpages of the companies, and internal documents (e.g. official sales process models and

annual reports) were utilized to increase the interview data for improved reliability and data triangulation (Huikkola et al. 2013; Jack & Raturi 2006). The interview data was returned to the respondents for quotation clarification and confirmation for data accuracy (Oliva & Watson 2011).

<INSERT TABLE 2 ABOUT HERE>

3.3 Analysis Process

A two-step data analysis method was adopted (Beverland & Lindgreen 2010). Firstly, each case was analyzed separately in order to highlight the unique activities in their sales processes, followed by a cross-case analysis targeted at identifying similar pattern of actions in the way the companies interact with their customers and how they implement their sales processes (Beverland & Lindgreen 2010; Huikkola et al. 2013). The interviewees' direct quotation responses were utilized to reduce interpretation error (Oliva & Watson 2011). Finally, the roles of different players in the sales process and how the micro activities are linked together, as well as the different customer touch-points in the sales process were presented using the ISB framework.

4 Results /Findings

4.1 The micro-activities underlying solution sales process: Within case analysis

The micro activities that are specifically related to the solution sales processes of the firms are presented in Table 3. The activities are grouped in alignment with the five themes identified when reviewing the literature. However, due to the findings from the qualitative interviews, the themes were slightly modified. For instance, we noticed that the major focus of the information acquisition theme was to identify opportunities, consequently; the theme was renamed as "information acquisition and opportunity identification". Likewise, most of the respondents stressed the danger of wrongly interpreting customer's needs, which demands sales managers' engagement in opportunity validation activities, with the customers, to clarify their assumptions while also promoting their solutions. Hence, the second theme was renamed as

“opportunity validation and offering positioning”. Finally, since none of the companies is involved in customer operation management. The last theme was renamed as “sales follow-up and customer retention”.

<INSERT TABLE 3 ABOUT HERE>

4.2 Identifying similar pattern of activities between case firms: Cross-case analysis

Most of the activities highlighted in the sales process, represented in the grey area of the blueprint, were conducted in collaboration with the customer (Figure 2). The case companies are actively using each point of contact to gather customer intelligence, and some have developed questioning tools that are adapted to each stage of the encounter. The decision gates represented by rhombuses serve as important sources of capability development and differentiation for the case firms. For instance, despite having pre-set conditions for acceptable contract requirements, case Delta mentioned their flexibility to include competitor’s product or technology to adapt and modify their contract negotiation to individual customer’s priority. This type of practice could help the company to enhance their negotiation capabilities. Whereas, in the case of Foxtrot, the company has a defined borderline for acceptable and non-acceptable contracts, which signifies some level of rigidity.

“The decision to tender may not necessarily end up that we give a tender if we realize we don't even have the engineering solutions to cope with those projects. ...if we don't reach an agreement that satisfies both customer and us or is it outside the scope of what is negotiable; then there is simply kind of no bid.” (F2)

As highlighted in Figure 2, the business concentration and customer solutions of the case firms are typically focused on services such as system installation and commissioning, equipment maintenance, and consulting services relating to the technical negotiation phase of the sales process. Evidently, most of the services of the companies are still product-oriented services. Hence, confirming previous studies (Oliva & Kallenberg 2003; Rabetino et al. 2015, 2017), the shift of manufacturing firms into full customer operational management is still difficult for most the manufacturers.

<INSERT FIGURE 2 ABOUT HERE>

4.2.1 Information acquisition and opportunity identification

The most common activity under the information acquisition theme is a regular visit to the customer by a dedicated salesperson. The companies are also actively engaging in direct marketing activities, (e.g. through exhibitions, conferences, phone calls, social media, and continuous webpage update), to promote their offerings and boost their market visibilities. Although information technology was identified as a facilitator of communication, all case companies stressed the importance of establishing physical contacts (e.g. through frontline sales) with customers as a valuable way to ensure early identification of the customer's needs and for establishing a personalized relationship.

"This is the business you have to have personal contacts. I can't make an offer without visiting a customer or going through their systems or the material in their logistic systems" (B2)

"We have front-end sales organization in almost every country that are visiting customers and getting this kind of [market] information" (E1)

Customer categorization and prioritization appears to be at the centre of information acquisition. The most commonly identified metrics for prioritizing and categorizing customers are sales or production volume, profitability potential, perceived risk (technical or country risk), availability of resources to meet the customer's need, and the quality of existing relationship with the provider. Some companies also concentrate their information acquisition on the customer's customer. For instance, by combining information obtained from a direct visit with analysis of customer's annual report, Delta can understand their customer's strategies, market position and value proposition to the customers' customer.

"So it depends on the potential of the customer... First of all their financials, what are their strategies as well, how are they positioning themselves towards their customers. And then we are trying to see how we can link our values to the values they perform to their customer." (D2)

Opportunity profiling and customer organization mapping are initiated by salespeople through internal marketing and by orchestrating resources from other functions (mainly design and project division) to mutually gather facts that are then presented to the top management for review and approval. Rather than focusing only on CEO or top management decision makers (Eades 2003), case companies target certain individuals, tagged by Adamson, Dixon, and Toman (2012) as “decision influencers” that may sometimes be positioned at the operation level.

“...customer companies vary a lot. Some companies do make decisions on a technical level, and they send it to CEO for signature and approval.” (E1)

“Sometimes the decision maker is not the top guy in the organization, right? Therefore, the CEO of the shipping company might say, ok, I will go with whatever the fleet director says. (D2)

The information acquisition activities uncover the boundary spanning role of salespeople in acquiring customer information, coordinating resources within own organization and stimulating support from other functions for opportunity profiling. This situation indicates the resourcefulness of sales organization and confirms findings from previous studies (Guenzi 2002; Luca et al. 2011; Marshall et al. 1999).

“...let's say that we have somehow identified that, there is a certain need for this customer for a given solution... the sales responsible calls a meeting which includes all the different stakeholders inside our company, like the business unit people, the project people, if needed the technical experts. ...And if we make a go decision on that one, then we start working the case” (H2)

The findings pointed to the blurring boundary between marketing and sales functions (LaForge et al. 2009; Le Meunier-FitzHugh & Piercy 2010) as the respondents indicated that the salespeople take more marketing responsibilities.

4.2.2 Opportunity validation and offering positioning

The starting point of influencing the customer is through physical meetings between the salespersons and the relevant decision-makers in the customer organization. These meetings are specifically for validating the technical details about the new opportunities from the customer. It avails the salesperson a

valuable opportunity to answer specific questions to identify the customer's situational requirements for tailor-made solutions. Hence, consultative selling and listening skills become apparent capability for salespeople (Vargo & Lusch 2004).

"After receiving this information we start with the layout, so we make a layout proposal of them [customers], and then we normally have a meeting with them, and we discuss the layout and clarify more detail their needs" (A1)

"If we don't understand it clearly from the customer, then we will need to have these initial meetings, where we are having a dialogue, understanding more about this kind of solution. ... All these kind of things would be very significant input for us to tailor the value quantification" (D1)

What appears as the core activity is early engagement with customers in the co-planning of technical design, before their investment. The customers usually have limited knowledge of what they want so early engagement gives the opportunity to influence the customer and to enhance the possibility of the provider's competitiveness during invitation for tender.

"...the fact is that if you are not involved in these discussions in the early phase when the customer is thinking of building the solution project, you practically have no chance in tenders." (H1)

"...we try to show the customers that if we make it like this, then you could have this kind of savings for this system. But the problem is that if we can't discuss this early enough with the customer, they have made their decision for the mill layout already, we are not getting so much advantage" (A1)

In line with Davies, Brady, & Hobday (2006, 2007), two business logics were identified during the technical layout: (a) gaining better positioning and planning post-sales services based on specifications of the provider's equipment; (b) embedding various players' technologies into a single offering. Whereas the former seeks customer's lock-in, the latter emphasizes on the customer's best interest and act as integrators by combining own systems with competitor's products to deliver flexible and more efficient solutions to the customer.

*"...if we have our system inside the customer's company, **they have no other chance** than take us to the service company because we have the best knowledge, we have the*

spare parts for them, and we can guarantee that this system works as we have promised.” (B2)

“When we design solutions, we don't exclusively use our products. We design with our competitor's products also. And we do it with the mind-set that if the customer entrusts us to be the architect to his projects, then we have to put the customer's needs and wishes a priority, not our priorities.” (D2)

Some of the companies have developed questioning tools that are utilized to steer customer's openness, and those without design capabilities have acquired design organizations to gain control of the entire sales process. Some companies also offer the technical layout design as a separate consulting service and customers are required to pay an agreed fee. This finding demonstrates the critical role of the technical negotiation for both the providers and the customers.

“...while we are a company that wants to sell an integrated solution; we have acquired companies in design to support this strategy... the design is also a part of our offering and something we have, to be the architect of the project, and be able to influence what kind of requirements and solutions are there.” (D2)

“We make a feasibility study for example for the whole factory. So actually the feasibility study means that ok, pay us a small amount of money, let us say 30,000 or something, and we make this feasibility study. We investigate what should they do for their material handling and packing systems in their factory.” (A2)

4.2.3 Negotiation and value proposition

During negotiations, the case firms assess customer's commitment and ensure mutual understanding of the potential price of the project by submitting a preliminary budget offer before developing the official tender. However, the decision to submit a tender demands critical assessment of the customers' official specification against the provider's capability and technology, aside from the potential profitability of the case. Hence, many respondents claim to conduct an internal review of customer's specification before tender preparation. Depending on the structure of a provider organization and available resources, as well as the size and complexity of the customer's specifications, the sales manager, in collaboration with the project, design, and tender manager do a typical tender preparation.

“They are not all the time the same people, who are making the bids. It depends on the resource question who is nominated to which sales project.” (C2)

*“...if we consider that yes, that request is **something** that we can do, then we start preparing the proposal that is done with a proposal team, the sales manager, solution architects, technical expert and tender specialist, and project manager.” (H2)*

By involving the design and project manager already in tender preparation, a company can enhance the accuracy of important components of the tender, for instance, price calculation, material specification, and equipment measurements. An interesting initiative that signifies the risk-taking capability of case Delta and stresses the importance of early involvement of the project team is the commencement of project execution phase even before the contracts is signed. In this way, the company reduces the delivery time, which is obviously one of the criteria for measuring project success (Brady et al. 2005).

“...because project office is always somehow involved in this building phase, they know what to expect, they have already prepared. They have allocated needed resources already, so it's not a surprise to them.” (H1)

“We try to get project management engaged already in the sales stage ... And sometimes we find it either necessary or clever to start certain activities in advance, we actually might start discussing with sub-suppliers, or we might do some engineering even though we don't have the contract... we take a little bit of a risk. But it's something that we see it's better to do than to be under the gun and be a little bit behind the curve later on.” (D2)

Pricing is an important aspect of the negotiation and based on the discussion with the respondents; a winning price is not always the lowest price. Perhaps, due to the lack of centralized value demand among solution customers and the difficulties to combine the different aspects of project sales, the highly recommended value-based pricing is not adopted by any of the companies except case Golf that utilizes a subscription model based on certain performance targets, which has been agreed with customers. As identified in previous works (Töytäri et al. 2011; Kaario et al. 2003); the main challenges pointed out by the respondents that limit the adoption of value-based pricing are the lack of willingness from customers and the difficulty to quantify value which is subject to the complexity of the solution. However, a new element that evolves in this study is the willingness of the provider to take risks.

“As a company, we have not expanded our risk-willingness along with our capability having grown to be a solution provider.” (D2)

*“I think we use this [**value-based pricing**] only in some countries, so I would like to say that we are confident enough in our products, that we could use them in all deals, but it depends on the attitude of the front-line or the local country in how they see this. And as well, customers aren't always asking for that.” (F1)*

The value proposition is based on a mix of arguments between transactional factors (e.g. product features, technology, reliability, and price), and relational factors; mainly lifecycle cost savings, reputation and trust, as well as the promise of up-time intervention. The value of maintaining a relationship with old customers is also stressed as an important factor in value proposition because many of the respondents claim to justify capability to offer a superior offering by using reference cases of previously executed projects.

“...one value is that we have the whole product portfolio, everything comes from us. And we are present locally... we have a big company that customer can trust, premium quality, wide product portfolio, strong service and after-sales and good reputation.” (H1)

*“...normally we are bringing customers [**new**] to visit our reference units so that they can see by themselves what kind of supplies we can execute, and they can discuss with our customers [**old**] to get the feedback how we have supplied and how we have managed in the project execution, and how well performance guarantees have been fulfilled.” (C1)*

In few of the cases, the service organization is invited to the contract negotiation with the customer. This practice facilitates the kick-off of service negotiation even before the project execution. Involving service organization at this stage could facilitate the integration of project and service sales; help the maintenance and service department to develop early engagement and familiarize with the customers, and increases the possibility of securing post-delivery services agreement beyond the traditional warranty period.

“We will contact our service department, and somebody is coming there, joining the sales team, and he is making operation and maintenance or service proposal besides the great preparation because then he has to be aware of equipment size and he can do the sizing of the service operations and maintenance agreement... And when we are here making the deal, that's when the service and operation and maintenance sales are starting, but maybe the final deal is made during the project execution” (C3)

The last activity is the sales order review and official handover from sales to the project office. This step usually involves detail clarification of customer's requirement, contractual conditions, project schedule, budget planning, and resource allocation. Few cases also organize kick-off celebration before project execution, which includes members of the sales, project and design organizations. By engaging in such social exchange and interactions, there is a high possibility of stimulating interpersonal relationship to develop a more cohesive working environment between members of the organization (Flaherty & Pappas 2009).

"After we have a contract then we have our internal process where we hand over the case to our project office. So then sales phase is over, we have the contract. If it's a big case, we have some champagne and congratulate, and then we hand over the project to project office." (H1)

4.2.4 Solution deployment and value verification

During solution deployment; which includes activities, such as, project planning, material procurements, system designs, system engineering and installations, the frontline role between the sales and the engineers (technical and project engineers) switches. The engineers engage in lead interactions with the customers in a series of design meetings, which indicate that information acquisition is a continuous process. Providers maintain close contacts with customers during project execution to give a progress report, notify possible changes and, most importantly, clarify confusing assumptions on project technicalities.

"We arrange meetings with our customer. And of course I'm [sales manager] in that and the project manager and maybe design manager from our side, and project group from our customer's side to make a kick-off meeting... if it's a big project, let's say after two months that they [project and design group with customers] have some design meetings. In addition, after when the manufacturing phase is going, they have visits on-site, on our workshop. Or when installations are going, we have meetings on-site." (B1)

Many of the respondents stressed the importance of utilizing customer database for progress reporting and information sharing. Additionally, few of the companies engage in risk minimizing practices by the nomination of

monitoring groups for quick identification of failure, which can provide immediate intervention to ensure effective project delivery.

"I will get the project report every week... And of course, we have our data system there, where I can see every time what the cost of the project is." (B2)

"In very massive projects, there is project steering group... Sales, a person from the P&L responsible segment, some service managers, someone from finance even follow up how the cash-flow is going... to monitor and steer, so that if something goes wrong, actions are taken immediately and not after one or two months." (H1)

The preliminary evaluation of the system is the last set of activities under this theme. Although there are different practices among companies, the central argument from respondents is the need to conduct factory assessment before delivering the system to the customers to ensure that the customers are satisfied and their requirements are met. Companies also conduct an internal assessment to identify and document new practices that can be replicated for future solutions; failure analysis is done to avoid recurrence.

"Normally we test some critical equipment before sending to the customer. Then when we have these test-runs in our factory, the customer came there, and they inspect the line and functions. And when they are happy, then we will ship the equipment to the customer." (A1)

"We have our internal meeting when the project is finished. And we check good practices, what was good in this project, what kind of new solutions that we can use afterward." (B1)

"If we have projects that we have lost and we have very often a lost-case analysis. So what went wrong and what kind of lessons learned can we take with us." (D2)

4.2.5 Sales follow-up and customer retention

There is a wide range of options for post-delivery activities, which is mainly determined by the type of contracts or existing relationship with the customer as well as the number of resources within the customer organization or network. For companies serving customers with slow adoption of solution offerings project commissioning signifies a periodic break in the relationship. Whereas more advanced companies have pre-defined service agreements with

customers and during commissioning, the service organization takes over the customer engagement.

“What typically happens in project business is that when the project ends the relationship grows dormant.” (H1)

“From the start of the project commissioning up to the end of the warranty time, and after that also depending on what kind of contract we have. Some customers want to have only two or three years contract at first for operation and maintenance, and some about ten first years, depending on the case.” (C1)

Regardless of the differences between the cases, there is a consensus about post-sales follow-up activities. Satisfaction and loyalty surveys were the key activities identified for assessing customer's satisfaction after the system has been in operation for a period. At this point, the sales process is restarted by dedicating specialized salespersons to regularly visit the customer to monitor the system usage and stimulate future sales.

“... after we have delivered the project and it's accepted, we send a questionnaire to the customer to know if he is satisfied with our sales phase and the material we have sent to him and if he is satisfied with our project realization. And then the customer gives us feedback, and we try to learn on that.” (B2)

“...in our company, even if you are a new guy, you are assigned a few customers. In a way you partially own them, and you are responsible for visiting them to maintain profitability with those customers ... At least by visiting some of the customers, we assume that we can increase our retention rate.” (F2)

In cases with predefined performance-based targets, the continuity of the relationship with customers depends on the ability to fulfil the promised value. To ensure compliance with the pre-set targets and possibly improve relationship efficiency, companies use remote monitoring technology. Previous studies have promoted monitoring technologies as means to prevent failure or avenue to facilitate systematic information gathering and analysis as well as for real-time opportunity identification (Artto et al. 2011; Oliva & Kallenberg 2003; Paiola et al. 2013; Storbacka et al. 2013).

“Normally, it is written in the contract, and there is a certain percentage, for example, availability, we need to fulfil 98 percent. And we show in the end before handing over the project; we need to fulfil all this. Otherwise, they will take a penalty from us... in many cases we have an Internet connection to our system.” (A1)

“Customer requests, in some cases, for availability contracts. And to have little bit concrete on your promises, there will be a contract saying that it must be at least so and so much and, if we are doing worse, then there are some sanctions and, if it's better, there is a possibility to have an additional bonus.” (E2)

Although having complete control and responsibility of equipment operation is still uncommon, the companies can position themselves for strategic information gathering and customer retention through the combination of regular visits to the customer location and the use of monitoring technologies. However, for companies depending only on the manual collection of information through salespeople's regular visits, the quality of information is contingent on the questioning skill and reporting capability of the salesperson.

“We collect a lot of this information, although it's never enough. However, the point is also how much time the salesperson can dedicate. You can even have everything about the customer, but then the salesperson may not necessarily have the time and skills and everything to look and utilize that in the best way.” (F1)

5 Conclusions

5.1 Theoretical contribution

This study contributes to solution selling literature in two major dimensions. Firstly, the study adds to existing knowledge by developing a sales process blueprint that not only visualizes the micro activities in the solution sales process but also displays the different customer touch-points and how various actors in provider's organization interact to deliver value for customers. Unlike existing frameworks that mainly highlighted the major milestones in the sales process (Töytäri et al. 2011; Moncrief & Marshall 2005; Storbacka 2011; Brady et al. 2005; Kaario et al. 2003; Eades 2003), visualizing the interplay between different actors in customer value creation process presents an opportunity to gain better understanding of the sales process. This practice also sets a good basis for providing useful guidance for practical applications. As a contribution to the debate about customer inclusion or seclusion in the information and opportunity identification phase of the sales process (Töytäri et al. 2011; Tuli et al. 2007), this study finds that firms engage in opportunity validation activities to clarify assumptions about customers' needs. This

practice justifies the need for customer inclusion in the early phase of the sales process.

Secondly, with only a few exceptions (e.g. Biege et al., 2012), previous studies have mainly focused on service industry in the application of blueprint frameworks (Fließ & Kleinaltenkamp 2004; Bitner et al. 2008; Berkley 1996; Kingman-Brundage et al. 1995). Considering the benefits associated with utilizing blueprinting techniques for process modelling, for instance, it encourages customer-focused organization (Bitner et al. 2008); scarcity of studies utilizing the techniques within industrial organization context signifies a major setback for knowledge development. While Biege et al. (2012) utilized the ISB to describe the changes in the value chain process as firms' transition from manufacturing to service provider, the current study specifically focused on solution sales process and identifies the different stages of interaction between providers and customers as well as the practices adopted to integrate project and service organizations. By exploring the sales process of project-based solution providers, the present study shifts focus from the typical install based (IB) firms as the unit of analysis (Biege et al. 2012; Storbacka et al. 2013). Thus, the study identifies the specific business logics and practices concerning how project organizations respond to the difficulties of integrating service offerings into project business while building sustainable foundations for long-term customer relationships.

5.2 Managerial implications

The data collection in this study was conducted on companies operating in different industries with unique practices that can be replicated or adapted to different industrial organization settings. Hence, the study provides a rich platform for cross-industrial learning. Firstly, the newly proposed blueprinting framework offers a useful guide to managers, especially those undergoing organization restructuring, to re-orientate their organization and sales process around those activities identified as the fundamental practices for long-term customer relationship development.

Secondly, similar to Davies et al. (2006, 2007), findings from this study indicate that organizations are utilizing two different types of business logic or offering structures. One is a rigid structure in which firms exclusively propose own technologies in technical proposals as a means to guarantee post-sales purchases and impede market competition, while the other is a flexible structure that offers customers options from a variety of sources – even from competitors.

Although, there is no evidence from this study to prove that one offering structure is better than the other, benefitting from both methods can help managers develop a better understanding of their customers' needs and possibly channel their organizations towards higher profitability.

Lastly, evidence from this study shows that early engagement of service and project organization enhances cross-functional interaction in suppliers' organizations and even fosters the integration of post-sales services into the project sales. Only a few of the case companies have been able to integrate the service organizations into the project sales and their practices. Hence, managers can utilize this finding as a benchmark to reorganize their organization and sales processes.

5.3 Limitations and suggestions for further research

One limitation of the present study is its focus on solution providers for data collection. Because customers buying solutions are active partners in solution selling, and as already established by other authors (Bitner et al. 2008; Biege et al. 2012; Shostack 1987), principal players in process blueprinting; focusing only on provider organization's perspective of the sales process calls for further investigation. Thus, to develop a holistic understanding of the micro-activities in the solution sales process and complement the findings from this study, future research should focus on customer organization for data collection or even extend information search to customers' and supplier's network (Spring & Araujo 2013).

By utilizing a network perspective to analyse and identify the sales micro-activities, particularly from a longitudinal perspective, the changing roles of different actors within the sales network can be identified. We observed that the customers are becoming more actively involved in engineering and manufacturing activities (e.g. engaging in series of design meetings with providers' engineers); however, we do not investigate how such customer involvement influences the effectiveness of sales process implementation. Apparently, business customers possess a different level of competences and capabilities; hence, it will be an interesting research avenue to investigate the role of customer knowledgeability as facilitator or inhibitor of collaborative implementation of sales micro-activities.

Furthermore, the case referred to as "Hotel" appears to have unique challenges amongst all the companies. The company focuses on public organizations that are traditionally transactional oriented and resistant to

change; restricted by a variety of industry and government regulations; and engaged in highly bureaucratic purchasing process with limited financial resources. Thus, “Hotel” is highly dependent on government budget and external funding from international organizations (e.g. World Bank or regional developer bank) for major investments. As pointed out by the interviewees, most of the company’s customers have their service organizations, which limit the possibilities of offering post-project services without engaging in direct competition with the customers’ service organization. Therefore, the uniqueness of the case and the existing challenges presents fertile ground for further research opportunities. For instance, future study can investigate existing business models of solution providers that are serving public organizations to propose practical recommendations on how to structure integrated offerings in such unique situations.

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Figures:

Figure 1 Solution sales process blueprint

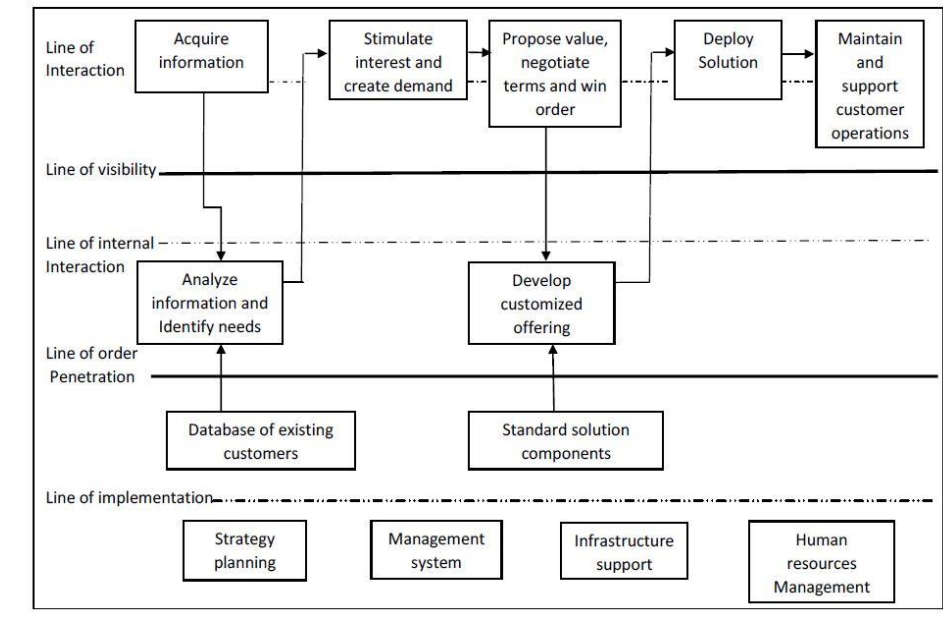
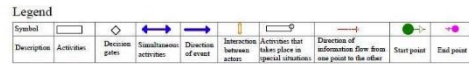
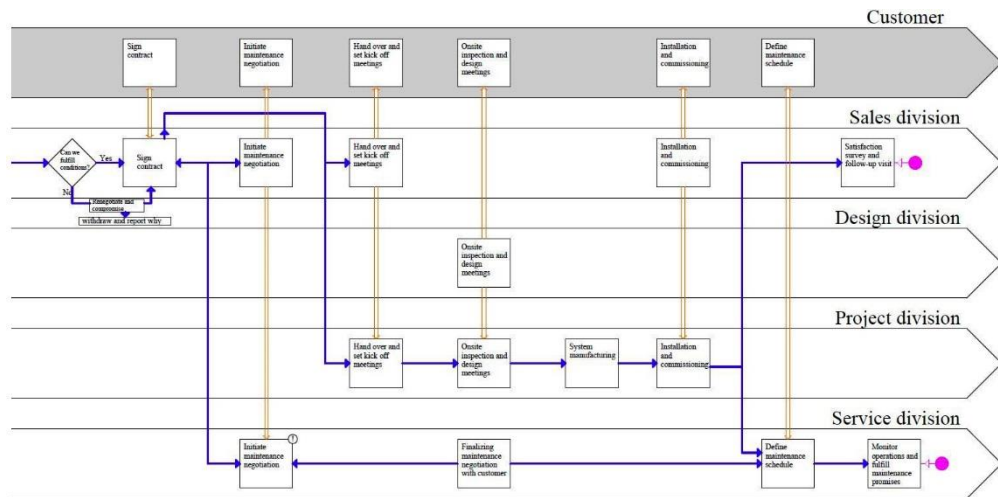
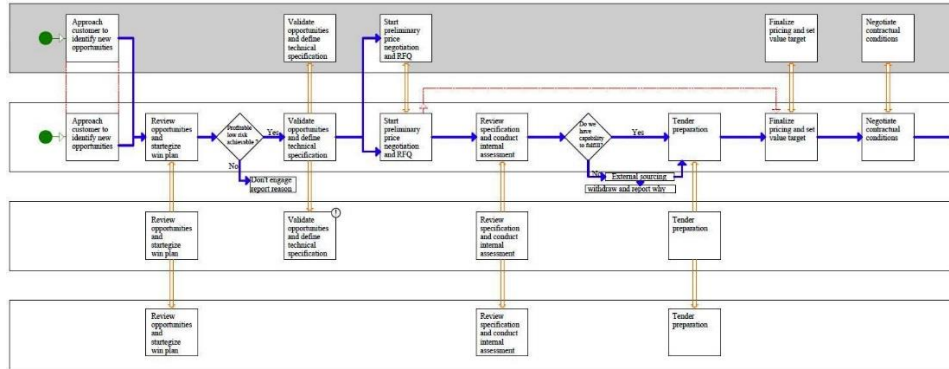


Figure 2. Business concentration and customer solutions of the case firms



Tables:

Table 1. Sales process frameworks from extant literature

Authors	Sales Process Milestones
Moncrief and Marshall (2005)	1) Select or delete customer 2) manage database 3) sell relationship 4) market product 5) solve problem 6) add value 7) maintain relationship
Brady et al., (2005)	1) Identify need 2) pre-bid negotiation 3) propose value and bid 4) execute project 5) render service
Storbacka (2011)	1) Develop solution 2) create demand 3) sell solution 4) deliver solution
Passive Buyers	1) Identify opportunity 2) customer research 3) create interest 4) define business issues 5) create solution 6) engage decision maker and set value target 7) finalize agreement 8) Evaluate performance 9) make use of the success
Eades (2003)	1) Identify opportunities 2) judge opportunities 3) define competitive strategy 4) engage decision makers 5) promote own solution 6) set value target, 7,8 & 9 as passive buyers
Active Buyers	
Töytäri et al., (2011)	1) Identify customer 2) understand customer business 3) position own offering 4) set mutual targets 5) quantify impacts 6) negotiate; offer and deliver 7) verify and document impact.
Kaario, Pennanen, and Storbacka (2003)	1) Understand customer's business process 2) innovate process enhancement 3) quantify business impact 4) deliver and implement 5) verify business impact
Roune, Bristow, and Terho (2011)	1) Set goals and identify needs 2) influence needs and set priorities 3) influence buying vision, create value 4) justify 5) influence decision 6) deliver, validate result 7) support, maintain and sustain result-.

Table 2. Respondents' profile and data description

Case Company	Products and services	Size (employees)	Respondents' titles	Years of industrial experience	Identification code	Length of interviews (minutes)
Alpha	Automated handling, packing and storage systems and solutions for metal and paper industries	Over 200 employees	Vice President: Metal industry	19	A1	89
			Vice President: Paper and converting	5	A2	101
			Sales Manager	1	A3	98
Bravo	Industrial and chemical solutions	Over 350 employees	Sale Manager: process cranes	10	B1	46
			Sales Director: Conveyer systems	15	B2	55
Charlie	Technologies, services and solutions for pulp, paper, and board	Over 11,000 employees	Manager: Plant and process solutions	2	C1	99
			Director: Power plants solution	4	C2	79
			Director: Project & energy Sales	25	C3	79
Delta	Marine and energy solutions	Over 18,000 employees	Vice President: Offshore Business	20	D1	158
			General Manager: MLS	15	D2	72
Echo	Automation and power technologies	Over 55,000 employees	Manager: Marketing and Sales in Power generation	17	E1	104
			Manager: After-sales services	20	E2	86
			Sales Manager: Relay-sales	17	E3	86
Foxtrot	Lift, escalators, automatic doors, and services and solutions for maintenance and modernization	Over 55,000 employees	Sales Process Development Manager	5	F1	113
			Manager: Customer Value Creation, Sales Development	8	F2	113
Golf	Vehicles and transport and energy solutions	Over 49,000 employees	Product Manager & solution coordinator	7	G1	92
Hotel	Environmental and industrial measurement solutions	Over 1,500 employees	Regional Market Manager	14	H1	50
			Sales Manager: front line sales	7	H2	70

Table 3. Key findings from the in-depth case studies

Case companies	Sales process themes from literature review				
	Information acquisition and opportunity identification	Opportunity validation and offering positioning	Negotiation and value proposition	Solution deployment and value verification	Sales follow-up and customer retention
Case Alpha	- Dedicated sales person to each customer - Regular calls and occasional visits - Assess the database of customer previous transactions and financial performance, and, - The customer's production capacity	- Organize physical meeting with the customer - Discuss and clarify needs - Sell new ideas - Conduct feasibility study for customer's factory - Prepare and propose technical layout	- Development of ready-made price structure for standard solution components - Internal discussions between design and sales department for price calculations on specific customer request - Evaluate the feasibility of customer request - Tie pricing to the total cost of ownership and demonstrate cost saving model - Sign contract with availability agreement	- Kick-off meeting with customer, project team and salesperson - Series of design meetings with customer - Procure material and manufacture - Assemble and test-run system before delivery - Customer's inspection of the system's functionality in the provider's factory - Evaluate customer's satisfaction - Deliver and commission the system	- Attach internet enabled monitors to the system for remote troubleshooting - Revisit the availability agreement and define terms for penalties - Propose 24/7 support service to customer
Case Bravo	- Customer enquiry (small customers) direct visit to big customers - Investment in market research - Buying information from third party organization - Gathering customer intelligent through the customer's webpage, technical magazines and exhibitions - Reporting information of every encounter with customer on the company's central database	- Sales manager organize meeting with customer - Market new solution - Consulting through physical assessment of customer's system and material flow - Analyse customer's order lines, purchases and deliveries - Discuss technical specifications and prepare technical layout and material flow diagram with the customer	- Present reference cases to demonstrate competence and build trust - Competitor analysis to scan market price - Present price calculation and budget offer - Sales manager collects information from supplier, construction engineer and design manager to prepare a fixed price offer, using a standardized price formula, after receiving RFQ from customer - Present cost saving calculations and delivery enhancement plan to customer - Estimate project risk, assess profitability, tender and sign contract.	- Hand over meeting between sales and project organization to clarify customer's specifications - Kick-off meeting between customer's project group and the provider's sales representatives - Component procurement, installation time scheduling and project execution - Weekly progress report to central database - On-site inspection, workshops and design meetings between project and design group - Project delivery and installation - Internal post-delivery assessment of profitability and documentation of good/bad practices	- Customer satisfaction assessment through survey and feedbacks - Dedicating sales person to visit and call the customer
Case Charlie	- Customer enquiry via phone - Customer identification through conferences, exhibitions, and webpages - Market screening through international agents, - Opportunity database screening - Opportunity review and validation - Decision to pursue or reject the opportunity	For approved opportunity: - Nominate bid/ proposal teams - Assessment of the customer's power and heat demand - Analyse demand against own solution - Evaluate customer's cost factors - Mutually define customers technical specifications and - Promote products from own portfolio	- Invite the new customer to discuss with old customers about previous projects - Examine customer's pricing priorities and make budgetary proposal - Attach pricing to performance and propose performance warranty contract - Engage service department, with sales team, to initiate service agreement - Provide support to customer in securing external financing (in some cases) - Management review/approval of proposal - Modify proposal and sign contract	- Continue and finalize service agreement - Customer site condition and location assessment - Equipment procurement and plant construction follow up that technical details are fulfilled - In special cases, salesperson collaborate with the project team to discuss with customer for contractual term (e.g. delivery time and warranties) modifications - Deliver, install and commission power plant	- Nominate key account manager, mill manager, service manager and sales manager to monitor customers' activities and establish multilevel contacts with the customer
Case Delta	- Customer profiling and strategy analysis - Mapping customer's decision making structure - Analysis of customer's annual report - Bi-weekly review of sales pipeline to identify opportunity - Opportunity review using a standardized template - SWOT analysis of own and customer's competitor , project risk assessment and development of win plan	- Nominate sales, project and bid manager - Meet customer, clarify needs and tailor value quantification - Engage the project team in the sales meeting - Mutually design ship architecture with customers - Propose products and components from own and competitors' products - Start discussion with sub-suppliers and begin basic engineering	- Prepare tender requirement based on standardized template - Presentation of opportunity and action plans to win executive approval - Receive and review customer's RFQ - Tailor tender to customer's request and submit quotation - Demonstrate the value and impact of the solution (e.g. on-time delivery) - Negotiate availability and performance agreement with customer - Negotiate contractual conditions - Internal contract review/sign contract - Analyse win/loss & document new ideas	- Sales order review and official contract hand-over to project office - Conduct engineering review - Start equipment procurement and construction. - Deliver system to customer - Evaluate, with customer, that the delivery time and specifications are fulfilled as promised	- Deliver spare-parts and provide life cycle support based on agreed service contract - In some cases, utilize remote monitoring system to collect data on equipment performance, energy consumption, and process parameters.

Table 3. Key findings from the in-depth case studies (Cont.)

Case companies	Sales process themes from literature review				
	Information acquisition and opportunity identification	Opportunity validation and offering positioning	Negotiation and value proposition	Solution deployment and value verification	Sales follow-up and customer retention
Case Echo	- market screening through agents - Direct monthly/quarterly contact to potential customer - Customer visit by front-end sales in different countries - Analysing the decision making structure of customer firm - Documenting every customer visit to central database - Identify opportunity and nominate follow-up team	- Opportunity screening via pre-project planning meetings with customer - Promote own expertise and present preliminary price calculations to customer in adjustable excel formula - Provide consulting service (In some markets) by helping customer make inquiry - Review customer inquiry and decide to tender or reject	- Start internal tender screening and make full cost calculations - Access own capability to meet customer specification and competitive situation - Internally decide to tender or not - Submit quotation - Document customer's technical specification and hand over to project team - Agree, based on customer's request, on availability contract, terms, and penalties - Tie pricing to performance and technology superiority/sign contract	- Conduct site survey - Start equipment manufacturing - Provide engineering services - Deliver to customer site and install electrical cables - Commission the equipment and train customer employees	- Evaluate with customer that target is achieved - Sell warranty agreement to customer and hand over the customer to after-sales unit - Supply post-delivery services and repair throughout the warranty period
Case Foxtrot	- promote new solution to exiting customer during customer visit - Assessment of decision making structure and priority of the customer organization - Conducting loyalty survey to identify market trends - Develop and utilize standardized questioning model to uncover needs	- Design action plan and win strategy for the customer - Meet with the customer frequently to stimulate interest - Design solution proposition and present budget price - Internally define borderline for acceptable and non-acceptable contractual terms - Receive official RFQ	- Assess requirement against own technology and engineering solutions - Reject RFQ for requirements outside own set terms and explain to customer why - Prepare and submit tender for acceptable terms - Negotiation and validate contract terms - Cross examining customer requirement against own company acceptable terms - Accept/reject contractual conditions	- Organize internal meeting with project office to specify customer and project requirement - Coordinating equipment and material supply from the global project office - Delivery and installation by local front-line unit - Set maintenance schedules and possible failure penalties	- Nominate an account manager to regularly visit the customer, and - Feedback information to maintenance, service, and operation department - Provide equipment maintenance services
Case Golf	- Direct visit to customers - Customer enquiry for solution - Analysis of customer's fuel consumption from customer's existing vehicles - Mutual vehicle operation planning with customer - Involve service salespersons for customer consultation and maintenance calculations	- Offer a bundled offering involving vehicle operation, fleet management service (FMS), maintenance & repair - With solution analyser, present the benefits of the bundled offering against stand-alone vehicle - Set fuel consumption targets	- Negotiate contract based on monthly subscriptions fees and prepare billing - Schedule driver training with customer through sub-contractor - Sign a single contract including vehicle, FMS, repair and maintenance agreements - Schedule repair and vehicle check-up - Activate FMS and monthly vehicle operation reporting system	- Hand over new vehicle to customer - Equip vehicle with monitoring devices to keep track of operation, facilitate monthly reporting and up-time service intervention - Start driver training through sub-contractor - Send monthly operation report to customer - Call drivers once per month to ensure that pre-set conditions are observed. - Prepare and send bills to customer - Verify result, based on the monthly report	- Annual evaluation of the performance of the solution vehicles - Evaluate customer satisfaction - In case of dissatisfaction, analyse causes and settle based on agreed terms - Renew contract
Case Hotel	- Customer visit by salespeople and international representatives to identify new opportunities - Customer profiling and profitability and risk analysis - Competitor's and customer's country analysis - Internal opportunity review between sales, technical, and project function.	- Approach customer to promote own technology - Customer's prepare inquiry through consulting agency - Receive enquiry and conduct internal quotation review - Decide to pursue or reject project - For positive decision, prepare proposal and tender	- Based on customer request, submit bid-bond to the customer - Negotiate contract terms and propose maintenance agreement - Present preliminary maintenance cost-calculation and sign contracts - Internal Kick-off meeting and hand over to project office - Nominate steering group to monitor project execution and progress	- Plan project time and delivery schedules - Schedule and conduct customer site survey - Coordinate hardware logistics and procurements - Secure transmission and site approval from regulatory authorities and start construction - Schedule acceptance tests and deliver - Secure installation approval from authority - Install system and provide (service engineers) on-site training to customer's employees - Commission system and plan annual inspection	- Conduct follow-up and feedback surveys once in every 2 years to gather information for service and product development - Nominate a sales person for periodic visit to the customer

