Configuring Value Creation Processes for Global Service: Evidence from an IT firm

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ABSTRACT
To survive and prosper in a networked economy, organizations must learn how to act as part of a wider value network. Key firm capabilities are thus the positioning in a value network and the providing of services that are attractive for the market. In this article I report from a longitudinal study targeting a team that has been forced to handle a re-positioning within its value network. The team started out developing a software, tailor-made for each customer, but development have taken them to various positions and delivery context creating challenges for the team to tackle. As contributions, this research has the goal of providing new theoretical insights about the challenges involved in managing information infrastructure services from various positions in a value chain, how information gaps in value chains emerge as a result of an increased distance between service provider and customer, and how such gaps can be solved.

Keywords
Management, Services, IT, Value Creation, Value network

INTRODUCTION
IT service management involves the delivery and support of technology, applications, information and training within an organization. For many IT firms, an increasing customer focus and an awareness of the importance of the customer’s role in the service processes has led to an interest in IT service management skills such as customer management, contract management and contract monitoring (e.g., Alter, 2010). Contemporary IT firms increasingly approach their services through the development of a service catalogue, and develop and monitor services using service level agreements. IT service management is thus increasingly situated in service network where the services are seen as co-created (Augustsson, Nilsson and Holmstrom, 2010).

Value co-creation in service networks, such as the network consisting of an IT service provider, the customer base, and possibly third-party providers, relies on value proposition-based interactions between actors in such networks (Sphrer et al. 2007; Vargo and Lusch, 2004). Such value co-creation is influenced by a multitude of factors. According to Lusch, Vargo, and Tanniru (2010) actors in a value network are kept together via the trinity of competences, relationships, and information (Lusch et al, 2010). These structural components form the basis for the connection with suppliers as well as customers via value propositions. For a firm to be competitive it is, crucial that it is able to manage, i.e. to configure and re-configure, network dimensions such as competences, relationships and information.

The efforts in configuring and re-configuring such network dimensions can differ from firm to firm depending on the particular challenges at hand. Such challenges may involve emergent risks (Rönnbäck, Holmström and Hanseth, 2007), open innovation network orchestration (Westergren and Holmström, 2012) and shifting customer preferences in service production (Alter, 2010). Examining shifting customer preferences O’Shaughnessy & O’Shaughnessy (2011) mention information gaps as an example of a disjunctive subset to the overall service, i.e. it represents a critical component that arguably needs to be dealt with for the service to be successful. Indeed, emerging new technologies and shifting customer preferences are just some examples of the dynamics that affect business environments in which contemporary IT firms are operating. It is more important than ever before to institute capabilities that enable IT firms to cope with such uncertain and fast-occurring changes (Bharadwaj, 2000). Against this backdrop the following research question is posed: What are the challenges associated with configuration of value co-creation processes? In what follows I will present a case study that reports a longitudinal study of a team involved in the management of different IT systems. Focus is on the challenge that the emerging service-dominant logic requires cooperation between service provider and customer in a value-added network. This paper addresses how information gaps in such value chains emerge as a result of an increased distance between service provider and customer, and how such gaps can be solved.
RELATED RESEARCH

The traditional definition of service, i.e. intangible events that are consumed by the end user and do not require any further processing (Grönroos, 1990; Grönroos, 2001; Quinn, 1992), focusing on the distinction between products and services has over the past decade been challenged. One reason for this is the technological development we have witnessed where IT has fundamentally changed the way services are being developed, delivered and conceived (Rai and Sambamurth, 2006). IT has not only become an enabler of new services, but also a scope changer for existing ones (Alter, 2010; Chesbrough and Spohrer, 2006; Lyytinen and Rose, 2003). Vargo and Lusch coined the term service-dominant logic, as opposed to the goods-dominant logic, and define service as “the application of resources for the benefit of another” (Vargo and Lusch, 2006). A central part of a service is the co-creation of value (Maglio and Spohrer, 2008), and according to Vargo and Lusch the co-creation and customer-determined benefit of services make them inherently customer-oriented and relational (Vargo and Lusch, 2006).

With recent development within IT-based services, both research and practice stand before a challenge since these IT-based services, by spanning over boundaries such as business functions, enterprises and geographies, has taken the complexity involved in evaluating, implementing and not the least managing them to another level (Bardhan, Demirkan, Kannan, Kauffman, and Sougstad, 2010). In their layout of the new science; service science, management, and engineering (SSME), Bardhan et al. present several areas where the managerial challenges have increased due to advances in technology (Bardhan et al, 2010).

The combination of resources that constitute a service can be fairly complex. Indeed, what service actual is not always apparent (Vargo and Lusch, 2008). Maglio and Spohrer use the term service system to address the compositional aspects of services (Maglio and Spohrer, 2008). A service system “… represents any value-co-creation configuration of people, technology, value propositions connecting internal and external service systems, and shared information (e.g., language, laws, and measures)” (Maglio and Spohrer, 2008: p.18). The actors (social and economic) involved in the value creation process act in a value network (Lusch et al, 2010). Value networks are no fixed structure, but have adaptive as well as evolutionary characteristics that can be seen as a service eco-system, where the actors are held together by three central components, namely: competences, relationships, and information. These core resources are then used when firms configure their value propositions that connect them to suppliers as well as customers (Lusch et al, 2010).

Against this backdrop we can see how firms, in order to be successful, not only need to be able to use their resources (competences, relationships, and information) in the best possible way, but, since the customer demands constantly change, they also need to be able to re-configure their value propositions in order to stay successful. Extant research is silent on what the challenges are in such endeavor. For this reason, I seek to explore the issue of what challenges are associated with configuration of value co-creation processes.

METHOD

Research site

The study has been undertaken at Weilgo, a large public IT firm, providing a wide variety of products and services such as consulting, system integration, and outsourcing on an international market. The study focuses on a team in the Swedish part of the company, whose key activity is to develop and maintain administrative portals for their customers. The unit originates from the consultancy part of Weilgo, and hence all work being done by the team is based on chargeable hours within the scope of management, maintenance or development projects. As a result, team members always have to contribute to the project at hand in the best possible way, making long term, cross-project issues difficult to manage. The development team is small, technically focused on building, providing and maintaining administrative solutions and services to their customers who are external as well as internal. Over the 10-years period that this study entails The Team have increased in number from being two consultants in the start, then three and four, and eventually to the current size of 12-15 consultants.

Data collection

The empirical data used in this paper has been retrieved using a combination of several different data collection techniques and data sources (see Table 1). Since I, the author of this article is also a member of the team in focus, I have taken on the role as insider researcher during four years of the longitudinal study. This has not only enabled inclusive access to the case and data sources, but also created a need for handling the risk of bias when it comes to selection as well as analysis. In the process of analyzing the data, an outsider researcher therefore participated and interviewed the insider researcher, i.e. me, and asked questions about the circumstances around The Team during the time period. In a highly iterative manner, the collaborative interpretation of this activity was documented into an over-arching time line of key events. The time line was then revised as further knowledge and understanding of the process was gained. The revised version of the timeline and
identified key events has then, after being presented to the other members of The Team for further feedback and validation, been used as point of departure for this study, where further interviews has been conducted with key resources within The Team.

<table>
<thead>
<tr>
<th>Data Sources</th>
<th>Description</th>
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<tbody>
<tr>
<td>Focus Group</td>
<td>One focus group was conducted with 3 participants from the team plus the insider researcher and one of the outsider researchers. The session was recorded and transcribed.</td>
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<tr>
<td>Formal interviews</td>
<td>10 formal interviews were conducted. Each interview lasted for approximately one hour. The interviews were recorded and transcribed.</td>
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<tr>
<td>Open-ended, semi-structured interviews</td>
<td>Daily informal discussions concerning the information infrastructure services were possible. These informal discussions allowed for insight in everyday practices at the company. The informal discussion during everyday practice has been documented in field notes written by the insider researcher.</td>
</tr>
<tr>
<td>Proposals</td>
<td>Due to the insider role the research project had access to all proposals that the team has produced. 10 proposals were collected, including approved and rejected proposals, which all contribute with important information to the study.</td>
</tr>
<tr>
<td>Contracts</td>
<td>Contract proposals that The Team produced during this period were collected. In total 6 contracts.</td>
</tr>
<tr>
<td>Meeting Minutes</td>
<td>The formal meeting minutes from monthly and weekly meetings with the management group and internal team group were collected, in total 200 meeting minutes.</td>
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<tr>
<td>Email conversations</td>
<td>Email conversations between the insider researcher and internal and external stakeholders. Amounts to approximately 1150 emails.</td>
</tr>
<tr>
<td>Presentations</td>
<td>Presentations used to present to internal and external stakeholders during this time period, in total 40 presentations.</td>
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Table 1 Data sources

The focus group session (Stewart and Shamdasani, 1990) was performed as a joint collaboration between the insider and outsider researcher (moderator). Ten interviews have been conducted with key people at various positions within The Team at Weilgo and with key people at internal customer sites. The external customer perspective i.e. the outer context (Pettigrew 1997; Pettigrew, Woodman, and Cameron 2001), has been identified through interviews with the team members, internal customers and via documentation.

RESULTS

This section contains a presentation of the findings from the study of a unit at a large Swedish IT firm.

Configuration activities: Alfa – Delta (2001-2010)

Customized implementations

In the beginning of 2001, Weilgo was contacted by a customer that, due to a rapid growth through acquisitions, found themselves in situation where they had an urgent need to keep track of inventories and find an efficient way of establishing “who had access to what” in terms of information, systems, and processes. The service delivery assignment pursued was characterized by a close collaboration between the appointed resources from Weilgo and the business representatives at the customer. Two consultants from the unit were engaged in the operative work at the customer site. Since the assignment was largely explorative in character the work was a ‘time- and material based assignment’ and posed no financial risk for the unit. However, the assignment turned out to grow much larger than initially estimated and the customer eventually ran into financial problems. The invested efforts at this point had resulted in an almost complete product, and Weilgo decided to jointly finance the completion of the product (Alpha) with the customer in exchange for ownership of the code (See table 2).
After assuming ownership of the code, The Team now possessed an application supporting a new and very potent technology. Consequently, The Team got engaged in product packaging activities that were promoted not only from the unit, but also from upper management within Weilgo. The support from management and with an application adding value to existing dominant infrastructure designs, The Team had an opportunity to take a substantial market share within the area of administrative portals. This opportunity was acted upon and The Team conducted sales activities where two members of The Team travelled around the northern part of Sweden and promoted the solution. The sales activities paid off and The Team managed to significantly increase their customer base. The product-like solution was adjusted for each customer implementation as to solve customer specific demands regarding functionality.

The key information gap in this period was a gap between The Team and the customer related to how The Team can add service value, e.g. that the tool was a platform for service rather than a tool per se. Indeed, despite delivering implementations that were unique for each customer, the implementations did not end up in any sort of agreement for taking care of support and development after the initial implementation.

<table>
<thead>
<tr>
<th>Solution</th>
<th>Description</th>
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<tbody>
<tr>
<td>Alpha</td>
<td>An application targeting the administration of MS Active Directory. Alpha started out as an address book, but then expanded to AD and Exchange administration.</td>
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<tr>
<td>Beta</td>
<td>A centralized functional service that only used some of the functionality present in Alpha, as interface and workflow engine. Beta used Microsoft Identity Integration server (MIIS) as the underlying connection technology.</td>
</tr>
<tr>
<td>Gamma</td>
<td>Second generation of Alpha, with similar but more powerful functions than Beta. Gamma was built to provide a user-friendly interface for administrators, managers, and end-users involved in user administration. Inspired by Beta in terms of integration and connectivity.</td>
</tr>
<tr>
<td>Delta</td>
<td>End-user self-service portal built on SharePoint Portal Services (SPS). Delta was a development of Gamma’s end-user interface and was configured and administrated via Gamma, which functioned as Delta’s back-end.</td>
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Table 2 Solution overview

Internal deliveries

In 2004 the Alpha solution was selected as the interface and workflow engine for a functional platform (Beta) for the company’s infrastructure management department. The competition between solutions included both internal and external solutions, and the one promoted by The Team was selected thanks to its ability to make administration of users and access rights easier and more effective. In addition, The Team benefited from the network of contacts that they had established internally earlier when they had promoted their solution.

The internal service, which functioned as a back-end service offering e.g. Service Desk resources, administration of mailbox accounts, and access rights management, was established as an integration technology internally at Weilgo and the use of a meta-catalogue increased flexibility, and although still basically a console application it was adapted to function in a larger, more heterogeneous, environment. The centralized service provided support for administration of several platforms in one single interface in a way that no competitor had managed to provide. Weilgo hence had a unique opportunity to market themselves and thus gain a larger share of the market. The potential of the solution, plans for future development and need for support placed The Team in a good position with regards to signing an agreement with the internal customer. The chance to secure a long-term strategic collaboration via a maintenance agreement was acted upon and The Team signed an OLA (Object Level Agreement) regulating the service to be provided.

The key gap in this phase was within the area of competence since management within the infrastructure management had underestimated the competence needed to establish and rollout the newly developed solution (Beta) in their organization. When this situation occurred The Team managed to step in and take on more responsibility within the establishment and rollout projects something that was positive from a chargeable hour perspective, but since The Team was small, created
challenges with regards to resources. The lack of resources brought with it that The Team had to sacrifice strategic activities like upholding the dialog with customers and colleagues as to be able to deliver according to the new scope.

Mixing the agenda

During the end of 2005, The Team started to develop a new version of the solution Alpha (from here on called Gamma). After some economic difficulties delaying the development, The Team eventually managed to develop a version that they could market to potential customer base. The marketing activities were initiated and during the spring of 2007 they managed to find a customer that agreed upon becoming the pilot customer for the newly developed solution. The pilot implementation, which started after the summer of 2007, went on during the autumn the same year. During the final months of the project The Team also initiated a dialog regarding a support and maintenance agreement.

In parallel with the pilot implementation, The Team intensified the strategic dialog with their large internal customer, i.e. the infrastructure management department, regarding an upgrade of Beta. Since Gamma offered more powerful functionality an upgrade could potentially solve many of the challenges and problems that had been present during the maintenance of Beta. In the beginning of 2008 the infrastructure management department formulated a strategic objective to increase their market share in the area of outsourcing. This objective called for a solution to promote in sales project and the sales organization sent the demands of the solution to the service manager responsible for Beta. However, during the first meeting it became clear that Gamma was more suitable considering the demands articulated in the customer requests. Hence Gamma was selected as the solution that was going to be offered.

The functionality present in Gamma made it potentially useful in many different customer projects. Most of the projects started during this period were initiated by the Infrastructure Management department, as they were a key actor in large-scale infrastructure projects. Business went well and the Infrastructure Management department landed several contracts securing a demand for Gamma and The Team, still only four in numbers, struggled to manage the new projects that were being established and the team hence had to face extreme pressure as to be able to handle the parallel deliveries.

The key gap during this period was the lack of appointed speaking partners on management level within the internal customer side that had the overall picture of the delivery situation at hand. This lack of overall guidance and communication created a situation where representatives from The Team, despite working with the same (internal) customer, had isolated dialogs regarding the each delivery despite the fact that the infrastructure management department was responsible for initiating all projects at hand. The Team and the business owning unit was hence left alone with the responsibility to coordinate and manage the different deliveries.

Service context

In the beginning of 2009, The Team engaged in the establishment of a large implementation project where Gamma was to be implemented as administrative interface. Early on in the project when The Team had initiated dialog with the stakeholders it became evident that the internal customer had shifted focus regarding the targeted users of their solution. Instead of focusing on providing an interface to a limited amount of customer users, i.e. approved orderers, they now targeted all end-users at customer site. Meeting customer demands, called for heavy investments financed via the establishment project and The Team was appointed to build a completely new solution (from here on called Delta).

Since there were no similar solutions already in place at Weilgo, the end customer, which was large and also had developed a solution that resembled the one that The Team now was supposed to develop, became central for setting the requirements for the new solution. In parallel with the development of the new portal, The Team had to engage in dialog with the line business within Weilgo as well as other end customers who, had heard the news about the upcoming new portal had and had waited a long time for that kind of solution. The demand for further implementations was huge since all existing customers in other installed base components at Weilgo, was proposed as candidates for migration into Delta.

The key gap during this period was the lack of common understanding regarding who, from the perspective of The Team, was to be considered as the customer. The Team was forced to work in close collaboration with the end-customer while gathering requirements to fulfill the contract, but the since The Team’s assignment was initiated from and the solution developed was supposed to support the internal services, there was two parties placing requirements on the solution. The infrastructure management department’s way of organizing their delivery with standard services, increased the complexity that The Team had to face since it created watertight bulkheads between the services leaving the Team as coordinators and the only ones with focus on the whole delivery.
DISCUSSION

In this paper I addressed the following question: What are the challenges associated with configuration of value co-creation processes? I explored this question by building on an interpretive case study (Klein and Myers, 1999; Walsham, 1995) targeting a team working with providing administrative portals to their customers. In answering the research question, I developed two theoretical contributions. First, I extend current knowledge on service production by presenting the notion of configuring and re-configuring of network dimensions to help researchers uncover how service production is implicated in practice. Second, I build on notion of information gaps to theorize how information gaps are implicated with the increased physical distance to customers that presents Weilgo with a challenge for service production.

Existing research on service and service management suggest that it nowadays is more important than ever before for IT firms to institute capabilities that enable them to cope with such uncertain and fast-occurring changes (Bharadwaj, 2000). Uncertainties and fast occurring changes presents challenges for service production. In particular, while extant research points at how service providers must re-configure their value propositions in order to stay successful, extant research is silent on what the challenges are in such endeavor. Reading our data from a service perspective allowed us to uncover how services were produced. Specifically, our analysis revealed how the involved actors interacted across contexts and over time to constitute the configuration of service value. We observed how efforts to configure and re-configure network dimensions such as competences, relationships and information was a key for Weilgo as they made continuous efforts to aligning their services with changing customer demands by fine-tuning and further developing the services, and, by learning from customer interaction. Hence, services are constantly reinvented in response to ambiguous situations and changes in local circumstances.

Information gaps are mentioned by O’Shaughnessy & O’Shaughnessy (2011) as an example of a disjunctive subset to the overall service, i.e. it represents a critical component that arguably needs to be dealt with for an organization striving for providing services in any value network were actors are kept together via the trinity of competences, relationships, and information (Lusch et al, 2010). This study confirms several of these findings. In particular, it identifies these gaps and explicitly portrays the abilities used and actions taken by a team as to handle those gaps. The findings of this study extends extant research in several ways. First, it identifies the essence of these disjunctive subsets, i.e. gaps and how they are resolved. Second it reveals the complexity regarding who really is the customer in a delivery context with multiple value chains.

In existing research within the area of IT service management (Bharadwaj, 2000; Alter, 2010; O’Shaughnessy & O’Shaughnessy, 2011; Lusch et al, 2010) the notion of “customer” is handled somewhat straightforward, but this study shows that knowing who the customer actually is might be hard and there might be two customers to satisfy which was the case for The Team. Over the studied period The Team has not only delivered their services from various positions in a value chain. During the first couple of years, The Team was at core of value creation having the dialog with and working in close collaboration with the customer. When The Team started to deliver their solution to the internal customer, i.e. the infrastructure management department, they suddenly had a position further away from the end customer. Despite the new position The Team interacted not only with the internal customer, but the team members were also central players in the dialog with the end-customer due to the increased responsibility regarding establishment of new customers in the central service. The multiple value chains and the insecurity regarding “who the customer really is” became even more evident during the development of Delta solution when The Team was forced to work in close collaboration with the end-customer while gathering requirements to fulfill the contract. The gaps with regards to communication on management level and the confusion regarding who actually was the customer disentangled and isolated The Team’s deliveries and placed them in a situation where they had to try and satisfy two customers.

CONCLUSIONS

In this retrospective longitudinal case study I have demonstrated how information gaps appear, how they affect the parties involved in the delivery of IT solution in various delivery context and from various positions in the value chain, i.e. distance from customer. Handling these gaps requires an ability within the organization to handle multiple dialogs in various settings, a critical reflection regarding who the actual customer is within a service delivery as well as careful considerations regarding the information that is distributed on strategic as well as operational level.

REFERENCES