

# Organizing for servitization: The constitutive role of communication

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## Abstract

Within operations management, servitization continues to receive increased attention among researchers from numerous perspectives, yet surprisingly a communication centered perspective is absent. In this paper, we begin to address this gap by applying the four flows model of communication. We do so by undertaking exploratory case research with a systems integrator pursuing a service strategy. Our findings explicate three different pairings of the flows. Each of these pairings contains the activity coordination flow and shows the inherent difficulties in constituting a complex organization delivering services.

**Keywords:** servitization, communication constitution of organizations (CCO), four flows model, coordination

## Introduction

The phenomenon of servitization - that is combining physical goods and services to create new offerings - has received, and continues to do so, significant attention. While the proclaimed benefits of such a strategy are manifold, it entails quite a radical change for organizations, such as design considerations (Raja et al., 2018), allocation of resources (Davies et al., 2006), development of capabilities (Raddats et al., 2017), and coordination of activities (Raja & Frandsen, 2017). In order to understand why companies continue to grapple with organizing for services, we turn to the communication constitutes organization (CCO) perspective.

The notion that CCO is something that has witnessed an increasing amount of attention from communication and organizational studies scholars (Ashcraft et al., 2009; Cooren et al., 2011). As a result, a large body of literature exists that supports the constitutive role communication plays for organizations (Ashcraft et al., 2009; Cooren et al., 2011). From this “CCO” perspective, the organization is conceived as a social entity that is constantly produced and reproduced through the existence of interconnected communicative practices (Nicotera, 2013; Taylor & Van Every, 2000). As such organizing and organizational existence are situated around communication; in other words, communication no longer plays a peripheral role (Ashcraft et al., 2009).

The CCO perspective contains a variety of theoretical roots and so rather unsurprisingly it is a fairly “heterogeneous theoretical endeavour” (Schoeneborn et al.,

2014, p. 286). Yet despite this heterogeneity communication theory has the ability to act as an “explanatory mechanism for unpacking the ontology of organizations” (Putnam et al., 2009, p.5). It is this explanatory power that leads us to adopt a CCO perspective as a means to analyze organizing within the context of servitization, specifically by drawing upon the four flows model of communication (McPhee & Zaug, 2009).

To date, surprisingly scant attention has been devoted to communication in organizing for servitization within the operations management domain. This is peculiar, given that communication plays a central role not only in terms of communicating service offerings but also in constituting the organizing activities through which services are delivered. The coordination of such service activities within and across service providers and customers are typically critical to the delivery of industrial services. Coordination is at the heart of operations management and its importance has been suggested in seminal contributions within operations strategy (Wheelwright and Hayes, 1985; Skinner, 1984) and supply chain management (Lee et al., 1997). Coordination hence involves the day to day alignment of activities within an organization but also coordinating development across organizations (Oh & Rhee, 2008). Reflecting the importance of coordination, this paper explores the four flows with a particular emphasis on the *activity coordination* flow in conjunction with the other flows (*membership negotiation*, *self-structuring* and *institutional positioning*). In this paper, then, we set out to explore: *How can we understand organizing for servitization using the four flows model?*

### **Literature review**

In the classical ethnographic study conducted by Julian Orr (1996), service repair technicians share accounts as a means of informing one another about problems they encounter in their work and means of resolving them through coordination. The study highlights the importance of the triadic relationship of the repair technician, customer and machine. As such, services are not merely another thing to be sold, rather offerings “*manifest a design of the relationships or interactions that enable value to be created – and they also depict the interlinked and enabled activities that a strategy brings forth*” (Ramirez & Mannervik, 2016, p. 94). In essence, services are processes requiring customer input (Sampson & Froehle, 2006) and as such often involves the coordination of activities between multiple actors who are mutually dependent on the activities performed and resources provided by others.

This characterization of service activities as occurring through a range of interdependent relationships suggest the importance for developing ways of understanding how organizing activities are constituted through communication. We attempt to begin addressing this gap using the four flows model (McPhee & Zaug, 2009) to understand organizing within a servitization context. The four flows model draws on Giddens’s (1984) notion of the duality between structure and agency, in which organizations are seen to be both produced by and producers of communication (McPhee & Poole, 2001; MCPhee & Zaug, 2009). Those flows are: *membership negotiation*, *self-structuring*, *activity coordination* and *institutional positioning*.

*Membership negotiation* is not a given property of people but rather constituted through/in this communication flow (McPhee & Zaug, 2009). Miller and Jablin (1991) discuss the means by which newcomers acquire information, not just how they process it. In doing so they illustrate a communicative process whereby existing members give and new members seek information in turn constituting membership of “something”, i.e. the organization. Similarly, Alvesson and Willmott (2002) argue, that processes of inclusion and identity formation are fluid, unstable and reflexive. Even members deemed high

status undergo a process of negotiating their spokespersonship and/or power claiming over organizational resources (McPhee & Zaug, 2009).

*Self-structuring* is analytically distinct from activity coordination albeit they are often part of the same messages. Self-structuring concerns “*internal relations, norms, and social entities that are the skeleton for connection, flexing, and shaping of work processes*” (McPhee & Zaug, 2009, p. 36), as well as the processes that design the organization from hierarchal relationships and organization charts to information processing patterns (Galbraith, 1973). In short, self-structuring is especially managerial and encompasses the controlling and structuring of activities (McPhee & Zaug, 2009).

*Activity coordination* is heavily influenced by the self-structuring flow in so far as the division of labor, work policies and timelines coordinate these activities but in practice these directions provide guidelines that are constantly interpreted and reinterpreted informally (McPhee & Zaug, 2009). Coordinated adjustments are required in response to new problems, exceptions and difficulties that arise frequently in an organization (Perrow, 1967). Coordination should not assume to mean that individuals are collectively working towards the organization’s goals; multiple attitudes and behaviors towards the organization co-exist and in some cases individuals can coordinate how not to do work (McPhee & Zaug, 2009).

*Institutional positioning* flow refers to communication between the organization and other entities at a macro level (McPhee & Zaug, 2009). Institutional theory in organization studies has numerous examples of how these entities – suppliers, customers, competitors and government regulators – communicate with one another. Isomorphic pressures come either directly or indirectly from communication and many of them exert pressures because they structure future communicative relations within their institutional field (DiMaggio & Powell, 1983). The interlocutors are very often individuals that can be considered “boundary spanners” as they negotiate not only their own relationships with the different entities but the terms of recognition for the organization itself.

These four communicative flows draw our attention to discourse in organizing, and are “*analytically distinct, even though a single message can address more than one constitutive task; we need to recognize that complex organizations exist only in the relatedness of these four types of flow*” (McPhee & Zhang, 2009, p. 21). Each flow is an interactive communication that involves both reproduction and resistance to rules and resources of the organization (McPhee & Zaug, 2009). The four flows model applies a pluralistic approach to human communication (Browning et al., 2000) and its constitutive effects for organizations. Table 1 provides a description of each flow and, importantly, the question each flow asks, which we use to unpack our findings section.

Table 1: Flow, description/includes and question it asks (Adapted from MCPhee & Zaug, 2009)

| <b>Description of flows</b>  | <b>Asks question:</b>                      |
|--|--|
| <i>Membership Negotiation:</i> Socialization, identification, and self-positioning activities within, for example, departments, groups (formal and informal), teams, communities of practice, third party organization, etc.                           | “Who are we?”                              |
| <i>Self-structuring:</i> Reflexive structuring and control activities, especially managerial activities. I.e. <i>organizational charts, policies and procedure, operating manuals, decision making and planning forums, budgeting, accounting etc.</i> | “What rules to we operate by?”             |
| <i>Activity Coordination:</i> Process of adjusting the work process and solving immediate practical problems.  | “What work are we doing together?”         |
| <i>Institutional Positioning:</i> Communication outside of the organization. Includes entities such as suppliers, customers, regulators, competitors and partners.   | “What external forces provide legitimacy?” |

## **Research methodology**

An in-depth, exploratory single case study approach was selected given this is an underexplored phenomenon (Flyvbjerg, 2006) from a CCO perspective within a servitization context.

### *Data collection*

Data collection was conducted in Denmark at EngCo's (a pseudonym) headquarters to understand the case company and its service business. Data included semi-structured interviews, workshops, observations, site visits (at the Danish headquarters, operations in Asia and shipyards) and examination of internal and external documentation. A number of key informants in the service division were interviewed initially within Projects and Technologies (P&T) Division, followed by a number of rounds of interviews with project and other personnel in the division. Subsequent data collection then took place in Singapore with employees in both the projects and service business and at various levels from senior management, sales managers, procurement, service coordinators and engineers. The researchers also visited the operations at the shipyards. In addition, interviews were conducted with a number of customers and suppliers.

In total, 24 interviews were conducted over a 3-year period with selected employees within P&T Division, and 11 interviews with customer and supplier firms. Interviews lasted between 47-175 minutes and were conducted in familiar environment at the employees' workplace or on customer and supplier sites. All interviews were recorded with the consent of respondents and transcribed verbatim.

### *Data analysis*

The findings from the case were written up in an in-depth case study reports, forming the basis for subsequent discussions with interviewees to verify the accuracy of our findings. A second phase of data analysis, which includes the coding of all source material by one researcher was supported by the use Nvivo software. Each interview was thoroughly reviewed, taking quotes and certain comments from the interview transcripts which were then sorted according to the four flows model. Our thinking constantly interplayed between data collection and analysis, based on how well the data fitted existing, modified or emerging understanding and its relevance to the observed phenomenon (Miles & Huberman, 1994). The coding process informed the structure of the findings and discussion sections.

## **Case description**

EngCo is a large engineering firm in the maritime industry that has been in operation for nearly forty years. It provides high-tech installations to firms in marine, shipbuilding, and wind industries throughout the world. On a global scale, EngCo has operations across Europe, the Middle East and Asia as well as Northern America and Australia. In this study, data were collected within a large division of the company that provided integrated systems for onshore and offshore telecommunications (e.g., turnkey communication systems, including satellites, data network and radio links for navigation and monitoring systems) and firefighting (e.g., water mist systems, sprinkler systems, deluge water/foam and gaseous systems, etc.). The division employs approximately 220 employees, and while its shift towards services has been fairly recent (previously, service support was provided by project engineers), it has operated a fully functioning service department for several years. Today, EngCo is one of the largest players in Denmark within the offshore market, which accounts for 70% of their revenue. In terms of services, it provides

installation, commissioning and servicing of equipment installed on-board vessels and offshore installations. Furthermore, 30-40% of revenue stems from manpower services.

## **Findings**

In this section, we present emerging findings from our exploratory study. We do so by discussing three pairings – (i) self-structuring and activity coordination, (ii) membership negotiation and activity coordination, (iii) and institutional positioning and activity coordination - of the flows, specifically each linked with coordination to provide insights into organizing for servitization.

### **Self-structuring and activity coordination**

Our first pairing discusses self-structuring and activity coordination.

*What rules do we operate by?*

The formal structure of EngCo suggests internal conflict between the six divisions, leading to six largely independent companies which, in turn, impacts the collaboration and knowledge sharing amongst them. This is reflected in the following:

*“We are six independent companies. We do not talk to each other on a daily basis...and we are not acquainted with their technology and products or what they can offer. There are a lot of small conflicts between these divisions. Each division has to prove they have a good margin.”* (Service Coordinator, Fire Fighting)

Each division has their own profit and loss responsibility in order to facilitate internal sales and ensure proper allocation of costs and resources between projects, leading to a pre-determined profit margin of 15% on internal sales, to ensure profitability on all tasks. Within EngCo, the P&T division which we studied, has established a separate service department (each division possess a service department largely independent of others with minimal contact).

*What work are we doing together?*

As pointed out by McPhee and Zaug (2009), *“self-structuring is a communication process among organizational role-holders and groups; it is analytically distinct from, though often part of the same message as, communication that helps coordinate the activities of members”* (p. 36). Thus, it is useful to consider the implications of the self-structuring flow on activity coordination. Within the P&T Division, the service department was established in 2011 to coordinate service related activities after projects have been delivered. Given the nature of the work, it is common for customers to require ongoing service and support from project engineers, which the projects part of the business considers *“essential to deliver”* but *“a hassle”*. Whilst the projects part of the business deals with its counterparts in the customer organization responsible for capital expenditure (CAPEX), the service work requires coordination with the operations and maintenance (OPEX) part of the customer business (see Figure 1). It is for this reason the P&T service department was created.

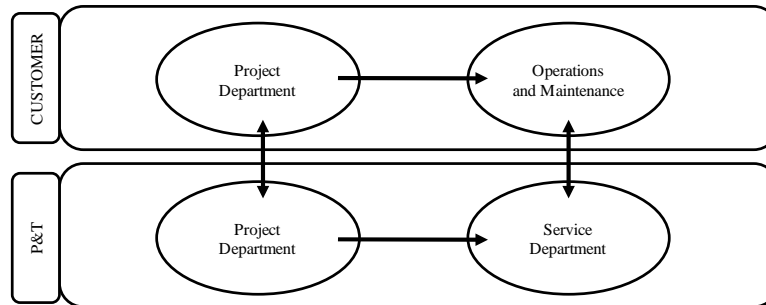


Figure 1: Project and service departments structuring and coordination across organizations

First and foremost, the P&T Division considers itself to be a project business, readily accepting that *“sales managers are completely focused on projects and not on services”* (VP, Sales & Business Development). In part, this explains why services neither figure in the tender process nor is it highlighted as an offering during the sales process. However, there is recognition that a long change process is taking place.

*“...projects are king in [EngCo]. Because that’s where the money used to come from. But in the future, we have to build in that services actually are part of our market offerings. And that has to be built in our product, into our projects. As part of our business”* (VP, Sales & Business Development).

At the time of the study, internal relations between the projects part of the business and service department were limited.

### Membership negotiation and activity coordination

Our second pairing discusses membership negotiation and activity coordination. Here we focus on both negotiating internally one’s membership and with external parties, such as customers and suppliers.

#### *Who are we?*

Identification, socialization and self-positioning are important aspect in negotiating membership. Within P&T Division, knowing “who are we” as a division *and* within projects and service departments respectively is crucial to organizing. As a division, there is an identity that needs to internally negotiated within EngCo. Then there is the membership negotiation internally between the different departments – such as bid and proposals, projects and service, etc. – that possess different degrees of power. Service is found to be a weaker partner within the division that struggles to be recognized or taken seriously; perceived by others to be there to pick up work they don’t wish to do. Neither is it in a position to negotiate its offering easily into the tendering process with the bid and proposal part of the division.

#### *What work are we doing together?*

When it comes to activity coordination, there is the added complexity for engineers negotiating their membership at customer “sites”. Service work requires service engineers or technicians to oscillate between their own organization and the customer’s organization. Service is typically performed on customer sites off-shore placing specific requirements to acquire access. The membership construction process takes time for those entering a highly-regulated setting and in many cases the interaction with the customer typically lasts a few days. On some occasions, the customer asks for the same engineer on new tasks suggesting that those engineers they have previously worked with retain a membership of sorts, the customer still remains the gatekeeper as to what work they can carry out and the level access provided to facilities. This is significant because there are

extensive barriers to membership in a context that requires experts who have both knowledge and experience. In such a scenario, the service engineer occupies a liminal space by holding membership in some form of both the organization and the customer(s) at the same time.

### **Institutional positioning and activity coordination**

Lastly, our third pairing considers institutional positioning and activity coordination.

#### *What external forces provide legitimacy?*

EngCo does not exist in a vacuum. Hence, EngCo – or more specifically, the P&T Division – is subject to many different regulatory requirements and standards. In large part, this is due to the environment in which P&T Division operates; the offshore oil and gas industry. The actors in this institutional context consist of, to name a few, supranational bodies, national and local government bodies, regulatory authorities, as well as, organizations that provide certifications and set qualification standards for engineers working offshore. Customers do not permit any personnel onto their offshore facilities who do not meet stringent requirements. This is reflected in the following quote:

*“It has something to do with the legal terms around doing service on these installations. For instance, if we’re doing a 5-year recertification, every year a rig has to be re-certified, all systems, the board and stuff like that, also the firefighting systems. The way to do that is to make a long inspection list and then we’ll inspect all the points, and then you have to send into approved third party, normal, American Bureau of Shipping, Lloyds, DNV [Det Norske Veritas]. Then they have to approve these papers. You wait till ... this system re-certified is approved, and then they have to send a surveyor out and he would just look and say, “Yeah, you said you will do that. Yeah, it’s okay.”* (Service Coordinator, Firefighting Systems)

Service in this industry is tightly linked with the certification requirements both in terms of the demand for service resulting from this but also in terms of living up to the requirements set by external regulators. The customers operation is dependent on documenting the adherence to regulations and service provision by EngCo affords legitimacy through its ability to communicate and demonstrate its capabilities to adhere to regulation.

#### *What work are we doing?*

Although there are a multitude of actors involved, it is clear that organizing for service work requires particular coordination efforts that are by no means straightforward. Activity coordination along with institutional positioning flows leave the firm delivering the services in an omnipresent spotlight, where failure to effectively perform the service or meet customer demands risks losing legitimacy. The impact this has on a service strategy is significant, particularly for a systems integrator like the P&T Division, who are dependent on different sub-suppliers. For example, one supplier described it as follows:

*“I very often tell them: ‘I want you to look good in front of your customer.’ So whatever we can do to help support you on site meetings - coming without any [Supplier] badges or anything, just come along ... and answer technical questions or do a short presentation - we’re willing to do that. Because if they look good at their customer, and we can help them, then it’s from my point of view quite easy for them to place an order here”.* (Sales Engineer, Supplier)

The institutional positioning in front of the customer involves the inclusion of other actors, such as suppliers and regulatory bodies. As explained by the suppliers Sales

Engineer, there is a need to coordinate the efforts from suppliers who supply important components for the systems to the customer. Hence their knowledge becomes important but also entail contractual and commercial sensitivity.

Coordinating and organizing the handover of the integrated system present a key event and a particular point in time. Typically, here an Engineering, Procurement and Construction (EPC) would deliver P&T’s system as part of a larger installation, i.e. to a shipyard. This is often the first time the P&T division is permitted to be present or know who the end customer actually is. This is where the Factory Acceptance Test (FAT) takes place and all the different actors (e.g. EPC, end-customer, shipyard, P&T, other suppliers) are present.

*“When they are going to deliver to the customer, they go through FAT, that’s the Factory Acceptance Test, and go through the specs that the customer said we want, like this build it to description and then we test it afterwards. Then we deliver to the customer.”* (Telecom Manager)

It is at the FAT that P&T must position itself to the end-customer in terms of service provision etc. While ideally presented during the tendering process, institutional positioning implies that the sale of service is legitimized at this point rather than earlier in the initial tendering process. Figure 2 depicts the process showing where the service engineers come into play during the typical project process and the position of the FAT.

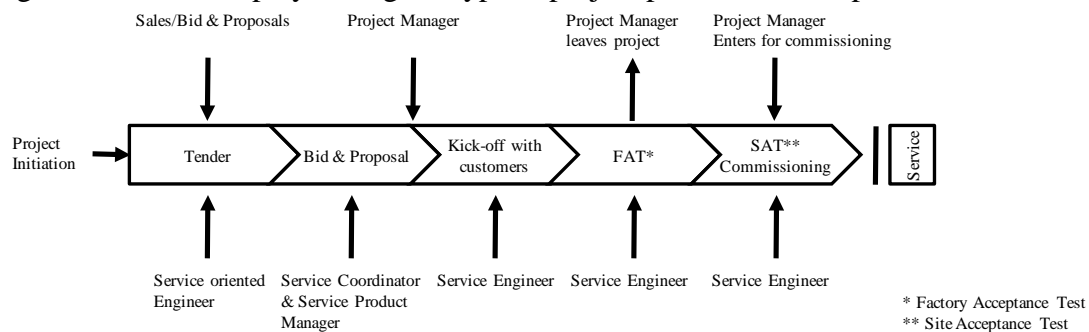


Figure 2: Project process

### Discussion and concluding remarks

The literature in operations management emphasizes the role of coordination, and in so doing has contributed to placing this as having strategic importance. Moreover, there is a tendency to focus on the structural and infrastructural aspects of organizing (Rudberg & Olhager, 2003). In contrast, the CCO perspective – or more specifically the four flows model – does not privilege the role of coordination ahead of the other flows but argues for the relatedness of these in organizing (McPhee & Zaig, 2009). As shown in the findings, activity coordination addresses other constitutive tasks. From the CCO perspective, “an organization is communication and communication is organization” (Putnam et al., 2009); whereas within operations management communication is considered to be just one element among many, and even that is a fairly limited conception of what communication entails (see Sheu et al., 2006; Oh & Rhee, 2008).

In this study, we set out to understand organizing for servitization using MCPhee and Zaig’s (2009) four flows model. Following Browning et al. (2009), we do so by pairing the *activity coordination* flow with the other three flows. To this end, our findings show how the flows can become imbricated; this overlapping or combining of flows, that is, they become “syncretized” (Browning et al., 2009). The flow of activity coordination is combined in relation to the three other flows; this is in recognition of the centrality activity coordination has for organizing service operations. While Browning et al. (2009) present a rich example of the Air Force technicians and how they organize using the four flows



for entrepreneurial action in their case, our findings highlight the inherent tensions the case firm has to grapple with to organize for services. As such, the findings from this study provide a means of identifying operations improvement and ways of developing service delivery for servitizing firms.

In our first pairing of self-structuring and activity coordination, the structuring heavily influences the manner in which service is coordinated. There are clear distinctions between projects and service parts of the business, but going beyond simply the design by examining this syncretic flow we were able to see how the rules and work patterns shape the coordination of service. Effective delivery of service requires an appreciation for the impact workplace structures have on the ability of the organization and the individuals inside them to deliver desired outcomes.

In the second pairing of membership negotiation and activity coordination, we were able to see how organizations engaging in servitization reframe their own organizational boundaries. Where service takes place and who carries out the service are important elements that characterize the negotiation process. Furthermore, understanding the CCO allowed us to consider the identity (or lack of) for individuals who operate in this liminal space between the organization and customer and what implications this has for coordinating service.

Lastly, the third pairing where institutional positioning and activity coordination overlap the constellation of actors at the macro level shape how services can actually be delivered. Understanding that the coordination of service is not detached from its institutional field but in fact is constantly shaped by the communicative flows that determine many of the rules, standards and protocols that have to be adopted, failure to do so will mean the firm is unable to remain a viable partner in its (institutional) field.

#### *Limitations and further research*

The four flows model draws upon structuration theory (Giddens, 1984) and as a result privileges the agentive power of humans in communication. From such a theoretical position, it is only human actors that are able to communicate. Although structuration theory does provide a place for non-human actors (see McPhee & Iverson, 2011), it does not afford non-humans agency. Whilst the adoption of the four flows model has allowed us to understand the constitution of an organization engaging in services, a limitation we accept is we have been unable to consider non-human agency. Further research may consider the constitutive entanglement of the material and the social, or “sociomateriality”, and how they are inextricably bound up together (Orlikowski, 2007).

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