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Inscribing Service into IT Service Management

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Abstract

Processes of IT Service Management (ITSM) are often defined in frameworks and standards presented as best practices. However, existing best practices are often solely directed to service providers, which does not correlate to a modern service-dominant logic. Moreover, existing best practices are often regarded as too comprehensive which prevents several actors from adopting them. Thus, this paper is based on the idea that there is a need to study how foundational premises of the service dominant logic could be inscribed into *essential* ITSM processes. This, we argue, will support practitioners to embrace a service culture while streamlining their work with ITSM work procedures. To this end, we have collaborated with service providers and service customers and adopted the Action Design Research methodology in order to identify, modify and evaluate essential ITSM processes in practice. Our theoretical contribution constitutes normative knowledge of enhanced essential ITSM processes from a service-dominant logic perspective.

Keywords IT Service Management, ITSM, Service Dominant logic, Best Practice, Essential Processes

1   Introduction

The potential benefits of adopting service-dominant (S-D) business models are numerous: the capability for service innovation increases, the ability to share and access new knowledge and skills is improved, and the relationship between actors[1] will be strengthened (c.f. Lusch et al. 2007; Vargo and Lusch 2004; 2008b, itSMF 2013). On top of that, organizations could achieve a greater understanding of each other's needs, sustainability will be encouraged and the value proposition will be enhanced through the concept of resource integration and value co-creation (ibid).

The field within the IT sector that has made an effort to manage IT as a service is called IT Service Management (ITSM). ITSM has become an important strategy in several organisations and the usage of ITSM best practices (standards and frameworks) has gained increased attention from organizations around the globe (c.f. Marrone et al. 2011; Cater-Steel 2009). ITSM is characterized by process- and customer orientation (c.f. Pollard and Cater-Steel 2009; Winniford et al. 2009) and the "S" in "ITSM" indicates that the locus of value exchange is considered to be IT-services. The latter is in great contrast to the traditional and product-oriented approach to managing IT, where the locus of value exchange is the underlying product (e.g. an IT-system of hardware and software). This means that ITSM implies a closer relationship with customers and a need for an increased understanding of customer values (Göbel et al. 2014a). In order to support actors with ITSM work procedures, several ITSM best practices have been established on the market. Examples of frameworks are ITIL (c.f. Cannon et al. 2011), CMMI (SEI 2010) and COBIT (ISACA 2016), while an example of an ITSM standard is ISO/IEC 20000-1:2011 (ISO/IEC 2011). ITSM best practices promise to provide with benefits such as increased return on investment, reduction of downtime, improved service quality, and increased customer satisfaction (c.f. Marrone et al. 2010; Cater-Steel et al. 2008; Cervone 2008). That is, in combination with the aforementioned generic service benefits, there are several incentives for an organization to embrace ITSM in order to shift from a traditional product oriented approach to managing IT to a service oriented approach.

However, practitioners often perceive existing ITSM best practices as ambiguous, which makes it difficult for actors to pinpoint what their internal operations actually entail, and how ITSM actually supports and aligns the different domains of organizations (c.f. Göbel 2014a, Göbel et al. 2014b). Small businesses especially do not have the resources to deal with existing comprehensive best practices, and they argue that it is difficult to tailor ITSM best practices to their specific needs (Göbel 2014a). Another, and more aggravating circumstance is that although several existing ITSM best practices are designed to manage IT as a service, a majority of those have not yet managed to inscribe a modern S-D logic approach[2] (c.f. itSMF international 2013; Göbel and Cronholm 2016). This claim could explain why "...*managers, though motivated to perform and being aware of the links among service, competitive advantage, and firm performance, often fail to execute on service knowledge*" (Lusch at al. 2007 p.5). Thus, there is a need to understand the underlying processes from which service innovations, value proposition and value realization emerge across market segments (c.f. Vargo et al. 2015; Ballantyne et al. 2011; and Michel et al. 2008). In particular, we need to understand how the value proposition and the accompanying value realisation processes need to be managed for service that is offered across market segments (Barret et al. 2010).

The problem we address in this paper is that there is a lack of knowledge of how the S-D logic theory could be inscribed into essential ITSM processes in order to support organizations to embrace a service view of the market. The reason for improving (or complementing) ITSM processes with S-D logic is that it emphasizes important service aspects (see table 1) which will increase competitive advantages, and that reputable scholars state that the S-D logic is the correct (and only) way to view all economies (c.f. Vargo and Lusch 2004; Edvarsson et al. 2011; Skålén et al. 2015). Our research question reads: *How can the foundational premises of S-D logic be inscribed into essential ITSM processes?* That is, first we have to decide what the essential ITSM processes are and then we can propose inscriptions of S-D logic into these processes.

The structure of the remainder of this paper continues with section 2, where we will briefly discuss previous research on essential ITSM processes, while describing our theoretical framework. In section 3, we describe the research design and methodology and in section 4, the result is communicated. In section 5, we inscribe service into essential ITSM processes, while we present our evaluation and conclude our findings in section 6.

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[1] Actors such as service providers and service customers.

[2] This bold assertion will be further elaborated in this study, section 4.

2   Related Theories and Prior Work

We have mainly based our result on the kernel theory of the S-D logic. According to Markus et al. (2002), a kernel theory is underlying a design theory, while Kuechler and Vaishnavi (2011 p. 489) add that kernel theories "frequently are theories from other fields that intend to explain or predict a phenomena of interest". In addition to S-D logic, we have based our result on prior work on essential processes (merged with our own findings), and the analysis of the view of service in existing ITSM best practices. Finally, our result is based on practitioners' experiences of using modified essential ITSM processes.

2.1   Service-Dominant Logic

The shift from a goods-dominant (G-D) logic to a modern S-D logic entails a view that firms offer value propositions, and that value is co-created through interactions amongst actors in a service ecosystem (Edvardsson et al. 2011; Vargo and Lusch 2004;2008a). This view redefines the roles of the company, the customer, and other resources, and thus informs innovation in a different approach than the traditional G-D logic view of the market (Vargo and Lusch 2008b). In contrast to G-D logic that asserts that value is built into a product and delivered from a provider, the S-D logic views value as something that is decided by a customer using a service (i.e. value-in-use). The S-D logic redefines *service* per se, and that is why in this paper we define service as "*the application of specialized competences (knowledge and skills) through deeds, processes, and performances for the benefit of another entity or the entity itself*" (c.f. Vargo and Lusch 2008b p.26). In order to define the core of S-D logic, Vargo and Lusch (2016) proposed 11 foundational premises (FPs) of this constantly emerging paradigm (table 1). The FPS should frame the essence of the S-D logic, and we argue that they are relevant for this study, since they on the one hand support our attempt to identify and analyse existing processes in ITSM best practices, while on the other hand they support our intention to inscribe service into identified essential ITSM processes. That is, the argument for inscribing knowledge from S-D logic into essential processes was that S-D logic is the "de facto" theory that describes value co-creation and value integration.

FP	Description
FP1	Service is the fundamental basis of exchange.
FP2	Indirect exchange masks the fundamental basis of exchange.
FP3	Goods are a distribution mechanism for service provision.
FP4	Operant resources are the fundamental source of strategic benefit.
FP5	All economies are service economies.
FP6	Value is co-created by multiple actors, always including the beneficiary[3].
FP7	Actors cannot deliver value but can participate in the creation and offering of value propositions.
FP8	A service-centred view is inherently beneficiary-oriented and relational.
FP9	All social and economic actors are resource integrators.
FP10	Value is always uniquely and phenomenologically determined by the beneficiary.
FP11	Value co-creation is coordinated through actor-generated institutions and institutional arrangements.

Table 1. FPs of S-D Logic (Vargo and Lusch 2015)

2.2   Previous Work on Essential ITSM Processes

To our knowledge, only few studies have sought to identify essential processes of ITSM. Cater-Steel et al. (2009) found that priority has been given to the processes' Service Desk, Change Management and Incident Management. This is in line with DuMoulin and Turbitt (2007) who assert that the most common processes are Incident Management, followed by Service Desk and Change Management. To those processes they add Problem Management, Service Level Management and Release Management (ibid). According to other two surveys conducted in 2010 and 2013 by itSMF International, the level of implementation for the respondents is generally similar between those years, and the top few ITIL processes are incident, change, request fulfillment, problem and service level management (itSMF International 2013). Furthermore, Iden and Eikebrokk (2014) argue that most firms choose a single-process approach

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[3] A beneficiary is usually the customer but value could also be enabled for a provider or other actor in the service ecosystem.

when implementing ITIL by prioritizing user-centric areas such as the Service Desk and Incident Management. From there, firms gradually continue with processes like Service Level Management, Change Management, and Problem Management (ibid). Fry (2008) presents eight essential ITSM processes that are required by all IT departments (e.g. service providers): (1) Service Desk, (2) Event Management, (3) Problem Management (4), Service Asset & Configuration Management, (5) Change Management, (6) Incident Management, (7) Request Fulfillment and, (8) Release & Deployment management. Finally, Göbel et al. (2014) shows that the core of ITSM consists of five processes: Service Agreement Management, Service Design & Development, Service Delivery Management, Service Issue Management and Service Improvement.

3   Research Design and Methodology

This study is part of a three-year research project. The overall purpose of the project is to suggest efficient artefacts for ITSM (e.g. constructs, process model, methods and IT-systems). In order to structure the logic of our study, our research approach correlates to the four stages of the Action Design Research Methodology (ADR) (Sein et al. 2011). One argument for selecting ADR was that we aim to identify and modify essential ITSM processes which we view as a class of IT-artefacts. Another argument was that ADR correlates with our intention to intervene in practice in order to understand the context and to empirically evaluate, and if necessary modify, the artefacts designed. Although the following research process is described as a staged-gate process, we have used an iterative approach which also is recommended by ADR.

The outcome of the first ADR stage, *Problem Formulation* involves articulating a generic problem (see section 1) while grounding the problem in practice and theory. The problem was jointly identified and agreed upon by several practitioners and researchers. Thus, we argue that the problem is both significant and generic. In total, seven service providers and seven service customers from public and private sectors have been included in our study. The practitioners originated from different sectors such as social healthcare, telecom, municipalities, and IT consultancy. The specific choices of the several diverse organizations were made in order to secure a generic problem and a generic solution (e.g. essential ITSM processes). The argument for involving both service providers and service customers was to respond to the FPs of the S-D logic and especially regarding value co-creation.

The second ADR stage, *Building, Intervention and Evaluation* (BIE) consisted of three main activities: 1) an analysis of the service view in popular ITSM best practices; 2) identification of essential processes in prior work; and 3) identification of essential processes in this research project, and inscription of knowledge according to S-D logic into these essential processes.

In first activity, we analysed the service view of popular ITSM frameworks through a S-D logic lens. The best practices that we chose to analyse were: ITIL, COBIT, CMMI and ISO/IEC 20 000, since they are considered to be amongst the most frequent frameworks and standards adopted according to itSMF International (2013). By analysing the purpose *and* the content of the processes in the best practices, we were able to group processes with similar characteristics, regardless of their origin. The purpose of this exercise was to get a general understanding of how ITSM frameworks correspond to a service perspective, and to find areas where improvements according to S-D logic could be made (see section 4.1).

In the second activity, we identified essential processes in prior studies. The purpose of this activity was to review the service perspective in existing studies, while getting a base for our next activity. We explicitly used the 11 foundational premises in S-D logic as criteria to understand the service view in essential processes proposed by other scholars (see section 4.2).

In the third activity, we interviewed both service providers and service customers in our research project environment about essential ITSM processes. Based on the research question, we selected organizations from different sectors (i.e. private or public), were of different size (small, medium, and large), and represented both service providers and service customers. Furthermore, organizations with in-house IT-departments and outsourced IT capability participated. The argument for involving both service providers and service customers was to respond to the FPs of the S-D logic and especially regarding value co-creation and resource integration. The essential processes were first identified by practitioners in a workshop where they selected the most frequent ITSM processes adopted in their own organization. In order to confirm the selection we asked diverse roles in each organization to pinpoint essential processes needed for their specific role. These roles were service managers, process managers, developers, team leaders, IT-managers, and process owners. Then we compared our results with the general results from activity 1 and the output from activity 2. In this way, we were, in activity 3, able to advance existing

knowledge concerning essential processes. The aforementioned approach can be considered to be cumulative; we built our proposal of essential processes on other scholars' findings (see section 4.3).

In the second part of the third activity, we used the knowledge gained from activity 1 concerning areas for improvements in the ITSM frameworks, together with the lacks identified in activity 2, as a base for inscribing S-D logic into the proposed essential processes. In the third part of activity 3, we evaluated the modified essential processes in real contextual settings in three iterations. The practitioners worked in pairs (i.e. there was an existing relationship between service customers and service providers). In order to facilitate an efficient situation we used a digital tool where the pairs compared processes already implemented in their context (according to existing best practices) with the modified essential ITSM processes. If new process statements (derived from S-D logic) were relevant to both service providers and customers, they were implemented[4] into the organizations (service ecosystem), which we have viewed as a confirmation of the validity of the statements. If the practitioners considered that the process statements should be reformulated to better fit the ITSM context, changes were implemented and re-evaluated in the next iteration. Finally, we conducted interviews with both service providers and service customers to learn their perception of the essential ITSM processes in use (see section 5).

In parallel to the BIE stage, we carried out the third ADR stage, *reflection and learning*. In that stage, we analysed and reflected on the identified processes and new statements (in context) together with practitioners. By doing so we agreed on, and implemented improvements in, the ITSM processes. Finally, and in line with ADR; we *formalized our learning* (see section 6).

4 Communication of the Service View and Essential ITSM Processes

Following our research approach (see section 3) we in this section communicate what are the views of service in existing ITSM best practices and essential ITSM processes.

4.1 The View of Service in Existing ITSM Best Practices

In order to suggest improvements of existing essential processes we have used a S-D logic lens to analyse the purpose and content of processes in a variety of existing ITSM best practices. Although several ITSM best practices exist, we have selected for analysis the most frequent frameworks and standards used according to itSMF international (2013): ITIL, CMMI, COBIT and, ISO/IEC 20000. We claim that all of the ITSM best practices are thorough, feasible and work well in practice. However, in this paper we have taken a critical stance to selected ITSM best practices in order to suggest improvements for those while answering our research question.

The most recognized ITSM framework is ITIL (c.f. itSMF international 2013; Cannon et al. 2011). ITIL is a set of good practices and offers detailed descriptions of processes with comprehensive checklists, activities, roles, and responsibilities related to a service lifecycle. The service lifecycle is depicted as a "hub-and-spoke" design, with 'service strategy' as the hub, and 'service design', 'service transition' and 'service operation' as iterative lifecycle stages or "spokes" (c.f. Cannon et al. 2011). 'Continual service improvement' surrounds and supports all other stages of the service lifecycle. Karu (2016 p.10) asserts that *"...it is important to note that the guidance is written for the service provider and is from the service provider's point of view"*. This view also permeates the processes of the ITIL framework. For instance, the incident management processes describe incident identification, logging, categorization, prioritization, diagnosis, resolution, etc. from a unilateral service provider point of view. The purpose of incident management is to restore normal service operation as quickly as possible and it does not explicitly mention any involvement of a beneficiary. Furthermore, ITIL also asserts that *"services are a means of delivering value to customers"* (Cannon et al. 2011 p.13) and that *"services are produced and consumed at the same time and cannot be separated from their providers"* (Cannon et al. 2011 p.48). From a S-D logic perspective the ITIL service view is too limited, since it excludes the service customers. That is, a modern service-oriented perspective means that a service provider cannot deliver value but that it can participate in the creation and offering of value propositions. Thus, the service view of ITIL is in conflict with FPs such as FP6, FP7, FP8 and FP9 of the S-D logic (see table 1). Furthermore, the aforementioned statements suggesting that value is delivered are direct contradictions to FPs such as FP7 and FP6. Hence, the definition of service in ITIL is not in line with all the FPs of S-D logic, and even though we value ITIL highly, we argue that a potential for improvement exists.

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[4] The success of innovation is often defined as the organization's ability to exploit an innovation for its own performance improvement (Gopalakrishnan and Damanpour 1997).

Another common ITSM framework is Capability Maturity Model Integrated for Services (CMMI-SVC®). CMMI-SVC models are collections of best practices that help organizations to improve service related processes. The purpose of CMMI-SVC is, according to SEI (2010 p.495), to provide "...guidance for applying CMMI best practices in a service provider organization". Moreover they argue that service is "a product that is intangible and non-storable" and that "a service is considered to be a special variety of product" (SEI, 2010 p.38). Process areas of CMMI are also directed to service providers. One example is the "incident resolution and prevention" process area. The purpose of Incident Resolution and Prevention (IRP) is to ensure a timely and effective resolution of service incidents and the prevention of service incidents as appropriate (SEI 2100 p.171). That is, CMMI process areas have adopted a view that is close the traditional view of services where several of the FPs (e.g. FP2, FP6, FP8 and FP10) in S-D logic are not incorporated, and where co-creative processes are overridden in favour of internal processes.

COBIT, is a framework for the governance and management of IT and according to ISACA (2016) it expands on ITIL. The COBIT 5 view of service is that it is "*the day-to-day provision to customers of IT infrastructure and applications and support for their use - e.g., service desk, equipment supply and moves, and security authorizations*" (ISACA 2015). This citation, again suggests that a service can be *delivered* and that a service is limited to specific activities, which is in contrast to the S-D logic definition of service. Moreover, processes of COBIT are directed to service providers and do not explain *if* or *how* a service customer is involved in processes. Such an example is the process called "*Manage Service Requests and Incidents*", the purpose of which is to "*Achieve increased productivity and minimise disruptions through quick resolutions of user queries and incidents*" *(ISACA 2013 p.95)*. It includes statements (called best practices) such as "*Define incident and service request classification schemes*", "*Record, classify and prioritise requests and incidents*", "*Verify, approve and fulfil service requests*", and "*Investigate, diagnose and allocate incidents*". That is, we argue that COBIT has adopted a traditional view of service that does not correlate to S-D logic and it's FPs (e.g. FP7, FP8 and FP10).

Finally, the most adopted standard for ITSM is ISO/IEC 20000 (ISO/IEC 20000-1 2011). It contains requirements for processes aiming to manage IT as a service. Such processes relate to service delivery processes, relationship processes, resolution processes and control processes. ISO/IEC 20000 "*specifies requirements for the service provider to plan, establish, implement, operate, monitor, review, maintain and improve an SMS*" (ISO/IEC 2000-1 2011 p.1). The standard defines a service as a "*means of delivering value for the customer by facilitating results the customer wants to achieve*" (ISO/IEC 20000-1 2011 p.6) and furthermore it asserts "*service is generally intangible*" (ibid p.6). The processes incorporated in the standard are not described with a purpose. However, by studying the process content we understand that the processes are directed to service providers. One such example is one requirement of "incident and service request management" that reads: "*When prioritizing incidents and service requests, the service provider shall take into consideration the impact...*". (ISO/IEC 20000-1 2011 p. 21). This view does not correlate to FP2, FP6, FP7, FP8 or FP10 of S-D logic. That is, also the most adopted ITSM standard has not yet adopted the FPs of S-D logic which is shown in how they define service as well as in its description of various process requirements.

To summarize, existing ITSM best practices have not yet incorporated a fully modern service oriented view, neither in terms of process purpose nor in terms of process content. We have shown that existing ITSM best practices are unilaterally focusing on how service providers *deliver* value, and that they often separate services from goods. By doing so, existing ITSM best practices automatically address a traditional and product oriented view of service. Such views do not recognize a service ecosystem of several actors focusing on resource integration and value co-creation. This could constitute a problem, since it provides a view closer to the traditional G-D logic view. Moreover, we argue that such a view could reduce the possibility for actors in service ecosystems to open up their organizational borders, which in turn could reduce an actor's ability to exploit the benefits of services (see section 1). By conducting this part of the study we have identified gaps (purpose and content) between S-D logic and existing best practices that needs to be filled in order to respond to S-D logic.

4.2 Prior Work: Essential ITSM Processes

When analyzing previous studies (see section 2.2) it is possible to discern a pattern where specific processes could be considered to be more essential and prioritized than other ITSM processes. All studies (see section 2) claim that incident management is prioritized while a majority of the studies argue that change management and service desk are crucial (c.f. Cater-Steel et al. 2009; DuMoulin & Turbitt 2007). However, we argue that service desk, rather than being seen as a process, should be considered as an organizational unit that *uses* other processes. The purpose of a service desk is to handle incidents and requests in collaboration with customers, and to constitute an interface for other ITSM processes. Thus,

we claim that service desk is obsolete when attempting to pinpoint essential ITSM processes. We also found that prior studies highlight request fulfillment, problem management and service level management. Continuous service improvement is also a recurrent process among other scholars' findings.

The essential ITSM processes identified in previous work have not been selected through applying a service perspective, such as S-D logic including a combined service provider *and* service customer perspective. Instead, they have been selected from a limited service provider perspective. This, we argue, is from a S-D logic lens, a drawback, since service *per se* is inherently relational and promotes co-creation (see table 1). We claim that it is necessary to study the relationships between actors in existing service ecosystems, in order to make sure that the identified processes are the beneficial for all involved actors.

4.3 Empirical Findings: Advancing Essential ITSM Processes

In contrast to other studies, we have involved both service customers and service providers. Our study reveals similar results to the aforementioned surveys, with a slight difference in that we also find that business relationship management, release, and service catalogue management are prioritized by practitioners. The practitioners argued that business relationship management and service catalogue management could be concatenated, as well as change and release management. That is, the ITSM processes we have identified as essential are built on previous work, and new processes based on empirical findings from our study conducted with service providers and service customers are: business relationship management (BRM) that includes service catalogue management, service level management (SLM), change and release management (CRM), incident and problem management (IPM), request fulfilment (RF), and continuous service improvement (CSI) process. We have seen that the selected processes have been the most frequently implemented processes in the participating organizations and we have also seen that practitioners regard the set of essential processes identified as constituting a good mix of processes, covering the inter-organizational relationships on both operative and strategic levels.

The identified processes have been selected by practitioners (service providers and service customers) and researchers based on experiences in context, previous studies of essential processes and the analysis of existing ITSM best practices.

5 Communicating the Inscription of Service into ITSM Processes

In order to improve the correlation between ITSM processes and the S-D logic, we briefly describe the purpose of each modified *essential* ITSM process in section 5.1, while we present the modified process content (also in relation to S-D logic) in section 5.2. The evaluation of the processes is further elaborated on in section 6.

5.1 Process Purpose

Table 2 illustrates the modified overarching purpose of each essential ITSM process and its relation to one or more FPs. That is, the FPs have been considered while re-writing the purposes.

Process	Overarching purpose	FP
BRM/ (SCM)	To routinely structure relationship building activities and to meet the needs of the beneficiary. This includes to co-create and maintain a service catalogue containing a mix of services that enables value co-creation with the beneficiary.	FP6, FP9, FP11
SLM	To co-produce service level agreements, a type of organizational prenuptial agreement, between actors in the service ecosystem that constitute a guidance for relationship framework.	FP6, FP9, FP11
CRM	To co-create value-enabling service changes, in order to correlate to service ecosystem modifications. CRM also controls the transition of new services (or releases) from development and test environments into live environments.	FP8, FP11
IPM	To jointly manage incidents in order to restore the possibility for the actors to co-create value as quickly as possible. This process also manages underlying problems, the cause of incidents.	FP6, FP8, FP9, FP11
RF	To scan, listen and communicate beneficiary demand for services. This does not only include minor (standard) changes (e.g. requests to change a password) but also major changes that could affect services.	FP9
CSI	All actors to define and manage the steps needed to identify problems, find solutions to those problems, and implement improvements.	FP9

Table 2. Essential processes from the S-D logic perspective

5.2 Process Content

Since there is limited space in this paper, we have chosen to present examples of how we have modified and inscribed S-D logic into the content of essential ITSM processes. The examples consist of statements[5] that represent one or more FPs (see table 3). Skålén et al. (2015, p. 154) argue that "...*a value proposition is a promise not only about what but also about how the firm, the customer, and other parties co-create value...*". Since we have inscribed statements specifically supporting the 'how' of value co-creation in both general (e.g. 1a-1c) and specific process statements (e.g. 3b and 5b), we argue that our proposed additions to the ITSM processes constitute a great part of the *how* of the value realization process. We have in our study recognized that value is co-created by service providers and customers in the very intersection point of the essential ITSM processes. That is, value is not created and delivered by the service provider alone as existing best practices and prior studies implicitly suggest. Neither is the value solely created by the beneficiary. Hence, the purpose of proposed improvements is to act as a means for value co-creation, and that is why essential ITSM processes cannot stay hidden in internal firms. The process statements/activities take into account both the views of the service supplier and service customer. Statements/activities point out that either a shared responsibility between a beneficiary and supplier (e.g. 1b, 2a etc. in table 3) exists for a specific process activity, or they point out that it is only one of either the supplier (e.g. 6b table 3) or beneficiary (e.g. 6c table 3) that has the main responsibility for the statement. The logical consequence is that the responsibility for the process must be shared between actors, since the components of the processes are no longer internal for the service provider alone. That is, all actors should embrace this thought and change the cultural view of how they use processes as a means to interact with partners in the service ecosystem. Another consequence is that the scope of processes must be extended to span organizational borders. With a wider scope the processes will act as interfaces or bridges between actors constituting a 'highway' where capabilities and value are exchanged between actors, while the actors are tied closer together.

Process	Example of inscribed process statements/activities	FP
1. All	a) "The beneficiary agrees that the formalized process enables increased value."	FP6, FP7, FP8, FP10
	b) "There is a documented process description that is jointly developed by all actors."	FP6, FP8 FP9, FP11
	c) "The actors have jointly developed a strategy for process improvement".	FP6, FP7
2. BRM/ (SCM)	a) "Actors meet regularly to improve the relationship".	FP8
	b) "Actors discuss and document how service offerings support the work practices and enable the value of the beneficiary."	FP6, FP8, FP10,FP11
	c) "The service customer informs the supplier about changes in their environment that affect services".	FP8
3. SLM	a) "Actors have jointly agreed on how results will be measured and presented".	FP8, FP9 FP10
	b) "There is a common understanding of the value that the service intends to enable"	FP6, FP7 FP10,FP11
	c) "Actors are jointly reviewing performance reports in order to ensure that outcome and work procedures are in compliance with agreements."	FP8, FP9
4. CRM	a) "There are agreed instructions for how a 'change' is initiated".	FP8, FP9
	b) "Actors conduct a joint appraisal of how the suggested change affects the value beneficiary".	FP6, FP8, FP9
	c) "Actors jointly determine when and how the change is released".	FP9
	d) "Actors monitor implemented changes to ensure that they enable expected value".	FP6,FP10, FP11
5. IPM	a) "Criteria supporting how to determine the priority of an incident have been jointly designed by the actors".	FP8, FP9
	b) "The proposed solution enables greater value for the beneficiary".	FP11

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[5] Statements that easily could be reformulated as activities.

	c) "The beneficiary is available to provide information about the incident".	FP6, FP7, FP9
6. RF	a) "Actors jointly determine whether the request is an incident or if it is a basis for a new or changed service".	FP9
	b) "The supplier logs information about the request and keeps it updated".	FP9, FP11
	c) "The beneficiary uses a standardized approach to initiate requests".	FP9, FP11

Table 3. Examples of inscribed and changed process statements and their relationship to FPs

By extending the scope of ITSM processes, we argue that the processes fulfill several of the FPs; The essential ITSM processes, incorporates *service* as the fundamental basis for exchange (FP1) and enables operant resources to flow across market segments to different actors, in order to create strategic benefit (FP4 and FP9). The processes also enable a service culture where value is co-created by multiple actors, always including the beneficiary (FP6), which leads to a view that is oriented to the beneficiary and that is inherently relational (FP8). FP10 is also inscribed because the beneficiary is always present in the suggested essential processes to co-create value in several ways, and to determine what the very value is. Finally, FP11 is fulfilled through the arrangements that are automatically created when actors are working in, and with, the essential processes. Finally, we have inscribed statements related to continual service improvement in all essential ITSM processes. This is in contrast to ITIL, where continual improvement is seen as a separate process. Thus, we advocate a contextual approach for continual improvement which means that continual improvement should be part of each individual process and not organized as a separate general process. We have had difficulties in putting FP1-FP5 of the S-D logic into processes. We argue that the reason for that is that these FPs are not normative enough. This means that none of these have affected either the aim or content of the processes. Hence, we view them as prerequisites that enable actors to embrace a service culture and thus to put FP6-FP11 into practice.

We have evaluated all essential ITSM processes identified, by intervening and using them in different contextual settings of service providers and service customers. By doing so, we argue that the essential ITSM processes modified in this paper are improved versions of existing ITSM best practice processes. The improvements constitute the inscribed statements and purposes related to the FPs of S-D logic. The interviews, conducted after the evaluation in context, revealed that practitioners found the service inscription in the processes useful. Utterances asserted by practitioners that confirms this claim are: "...processes are jointly owned by the customer and supplier", "...*a suitable selection of ITSM processes that support actors at strategic, tactical and operational level.*", "...*enabling a shared understanding of shared problems.*" "...*enables an improved understanding of the service in focus*", and "*strengthens the relationship and thus integration between service customer and service supplier*". Hence, we argue that the current version of the essential ITSM processes are proven to be successful and valid.

6   Conclusion

We have in this study shown that the traditional view of service still is favoured in comprehensive existing ITSM best practices, where value is seen as something *delivered by service providers* using ITSM processes (see section 4.1). We have also shown that existing processes do not fully correlate to the foundational premises of the S-D logic. Consequently, existing ITSM best practices do not yet fully correlate to the S-D logic that according to Lusch et al. (2007), is philosophically grounded in a commitment to collaborative processes with actors such as service customers, partners, and employees. To this end, we have identified *essential* ITSM processes and studied how those can be modified in order to inscribe foundational premises of S-D logic. The essential processes we have identified are BRM/SCM, SLM, CRM, IPM and RF. We do not view these processes as definitive in terms of process names, and we realize that they need to evolve as new knowledge in the S-D logic is presented. Nevertheless, we argue that the theoretical knowledge presented in the paper is valuable because it illustrates the *how of value co-creation* and value realization in an ITSM context.

We have based our study on a prior work on essential ITSM processes, the execution of an additional study incorporating the service customer view, the kernel theory of the S-D logic, and practitioners' experiences of using the essential ITSM process in action. That is, we have evaluated and modified essential ITSM processes in real contextual settings of service providers and service customers. Hence, another theoretical contribution constitutes normative knowledge of how essential ITSM processes can be modified to inscribe foundational premises of the S-D logic.

The main contribution to practitioners consists of knowledge on existing ITSM best practices, and a concrete limited set of essential ITSM processes that correlates to S-D logic. This, we argue, could support practitioners to more efficiently adapt to a modern service oriented culture regardless of which best

practice (e.g. ITIL, CMMI) that has been adopted. The statements inscribed in essential processes should be viewed as recommendations that also could be used as instructions for how to conduct service oriented ITSM. Moreover, the essential ITSM processes suggested are important since they provide a solution to the problem where practitioners argued they had not enough resources (e.g. money) to deal with existing comprehensive best practices. Hence, we argue that identified essential ITSM processes could also constitute a foundation for a future light weighted ITSM best practice. Furthermore, the knowledge could be used for practitioners (e.g. owners and users of best practices) who wish to incorporate an improved service-oriented view in existing ITSM best practices. A limitation of our study is that only service providers and service customers within the ITSM context have participated. Hence our result should be considered to be valid for that sector only and a suggestion for future research is to expand this study to include a variety of companies.

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