Network Management and Service Systems: The Case of German and Swiss Banks

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ABSTRACT

Service science views companies as service system entities that interact with other entities to create value. In today’s networked value chains competition is no longer among companies, but among networks that may be regarded as service ecologies. Following service science each entity comprises a dynamic configuration of resources and structures, thus a variety of design aspects needs alignment within these ecologies. To manage service ecologies this article suggests to link insights from network management with service science. A multi-dimensional framework consistently describes the organizational aspects of network management among service system entities as well as the required processes to align activities between service system entities and the possible information systems to support network management. The framework emerged from a design-oriented research project based on eleven interviews with managers from financial service providers in Germany and Switzerland.

Keywords: Banking Industry, Network Management, Outsourcing, Service Systems, Swiss Banks

1. SERVICE SYSTEMS AND NETWORK MANAGEMENT

It has been almost one decade that service science has emerged as an interdisciplinary approach to understand value creation in service industries (Chesbrough & Spohrer, 2006). Following Spohrer & Maglio (2010, p. 174) “an entity capable of intentional value-cocreation interactions can be viewed as a service system entity [and consists of] … dynamic configurations of resources that include one or more persons, and evolve complex structures and interaction patterns”. In the service science literature many design issues were developed from business, engineering and technical disciplines (e.g. (Lusch et al., 2008; Alter, 2009; Bardhan et al., 2010; Maglio & Spohrer, 2013), but an integrated perspective covering organizational, process- and system-related aspects
is still missing (Bardhan et al., 2010). This applies especially to service ecologies which are defined as “a population of such entities that, as a whole, are better off working together than working alone” (Spohrer & Maglio, 2010, p. 174). At the same time, managing linkages among service system entities is a domain that has become known as network management in the area of inter-organizational process management. From the practical side, an example from the banking industry may demonstrate the need of such an integrated approach for the management of service systems.

When eight regional banks in Switzerland decided to outsource their IT development and IT operations to a joint venture, the aim was to reduce IT costs via a shared development and operation of application systems. A dedicated organizational unit was established to coordinate the services which were outsourced from the participating banks to other banks or service providers. Only a few weeks after the first go-live, this network management unit realized that a lack of available resources prevented it to meet all individual requirements and change requests. The coordination activities alone exceeded 220% of the available resources due to non-standardized inter-organizational structures (e.g. coordination boards), processes (e.g. service management activities) and systems (e.g. application systems). To safeguard the timely deployment of the new core banking system, the operations had to be aligned to gain synergies: The newly founded joint venture created institutions, processes and systems to manage the entire partner network of the participating banks. Among the benefits of this approach were improvements in networkability (e.g. faster and timely adoption to changes), quality (e.g. commonly used and standardized service level agreements between partners) and costs (e.g. by reduced manual efforts through automation).

The example highlights typical management challenges of inter-organizational networks of service system entities (or service ecologies) and emphasizes the need to develop formalized structures and procedures which compensate for the increased coordination requirements inherent in inter-organizational value chains which have become a reality in most industries. They add to the ability of a service system entity to efficiently adapt to changing links with other service system entities – a phenomenon also referred as network-ability of an organization (Alt et al. 2000) or of a business network (Alt & Smits, 2007). This paper presents a framework for applying network management to service science and is the result of a design-oriented research project in the banking industry. After the introduction, section 2 provides a brief overview over the underlying research methodology and section 3 describes the requirements of a multi-dimensional network management concept which serves to derive the framework in section 4. A concluding section summarizes the findings and shows potentials for further research.

2. RESEARCH METHODOLOGY

The architecture developed in this paper is a design science artifact which was developed along the four phases of “analysis”, “design”, “evaluation” and “diffusion” (see also Peffers et al., 2008; Österle et al., 2010; Hevner et al., 2004). These steps were conducted in a six year consortium research program (Back et al., 2007) between 2004 and 2012 with 18 partner companies from all tiers of the financial value chain (e.g. regional retail banks, international private banks, outsourcing providers, software providers etc.) in Germany and Switzerland. The aim of the research program was to develop artifacts (architectures, methods, reference models, tools) for networked banks in close cooperation with experts from these participating companies. During the design phase of the framework, semi-structured expert interviews with middle management representatives in the area of network management from eleven of the 18 participating partner companies were
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