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Illustrating Emerging Design Principles Enhancing Digital Service Platforms

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The study is based on the idea that in order to achieve and facilitate innovation of value-enabling services, digital service platforms are necessary. We derived this assertion from both theory and practice. From a research perspective, [1, p. 161] claim that actors in a service ecosystem “*find that service exchange is not very efficient without service platforms, which help to liquefy resources fostering value creation.*” From a practitioner’s perspective, digital tools that are oriented to collaboration (e.g. a digital service platform) are important. For example, [2] found that, between the years 2003 and 2014, such tools have been located among the most significant IT investments, peaking in the year 2012 in 4th place. Another argument related to practitioners is “*...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*” [3, p. 5]. That is, both theory and practice confirm that the significance of digital service platforms is increasing.

However, studies on the phenomenon of service platforms are scarce and insufficient [4]. Existing service platforms that tentatively could support practitioners to innovate value-enabling services, neither fully inscribe axioms of the service dominant logic [1], nor the principles of open innovation [5]. Besides these weaknesses they are seldom digital. Hence, we argue that there is a lack of consolidated normative theory of how to design digital service innovation platforms. This is problematic, because it hampers actors in service ecosystems to combine and advance their capability to co-create value. The problem we address is that there is a lack of generic knowledge for digital service platforms facilitating digital service innovation.

A recommended and popular approach to inform practitioners and researchers about IT-artifacts (such as digital service platforms) is to present generic design principles (DP) as a solution to a shared problem [6]. We argue that purposive normative DPs for digital service platforms could leverage more and better value-enabling IT services, strengthen relationships and support practitioners to understand and manage service innovation. The research question reads: *How should digital service platforms facilitating service innovation in service ecosystems be designed?*

In order to find an answer to this research question, researchers and practitioners have jointly designed and evaluated a digital service innovation platform using the Action Design Research methodology [6]. The digital service platform consists of a web-based IT artifact. In total, 19 organizations from the public, private, and third sectors have been involved in the design and/or evaluation. All the organizations had need of more efficient business models related to the field (or context) of IT Service Management (ITSM). ITSM is customer oriented and relies on several well-defined processes in order to manage digital services. The initial platform design rested upon two kernel theories: service dominant logic (c.f. [1]) and Open Innovation (c.f. [5])

combined with requirements from organizations. We based the formulation of the DPs on theoretical insights and the organizations' experiences of using the digital service platform in different service ecosystems.

By evaluating the digital service platform in several service ecosystems within the context of ITSM, we have been able to present intermediary answers to how digital service platforms facilitating service innovation should be designed. The results presented are mainly three nascent DPs: a design for a dynamic process bridging actors in service ecosystems; a design to ensure an iterative co-innovation process; and a design for co-problematization. We have evaluated the digital service platform and collected empirical evidence for the validity, utility, and efficacy in practice (participating organizations). By doing so, we have found the platform to be useful and operational, and that it supports actors to co-create service innovations. Moreover, we have discovered that theoretical statements in open innovation and service dominant logic are coherent and thus can be co-inscribed in a digital service platform applied in the ITSM field. By identifying new DPs while transforming statements in the two kernel theories to DPs, we argue that we answer the call by [3] to generate normative knowledge.

Keywords: Design Principles · Service Innovation · Action Design Research · Digital Service Platform · Service Dominant Logic · Open Innovation

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