

Designing Business in Digitally Aided Co-Prototyping Environments

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ABSTRACT

This study summarizes the experiences of the project, which focused on to develop the content of business and business models among participating enterprises of the project. Altogether, 14 enterprises participated in the design process, which was supported by digital co-prototyping environment. Outcomes show that digital-aided co-prototyping environment provides a robust and agile platform, which enables—and even encourages—the entrepreneurs to receive and try development advices, provided by project team, in their business and business models. Furthermore, digital co-prototyping will add the credibility of the design process.

KEYWORDS

Business Model, Digital Co-Prototyping Environment, Digital Service Design

1. INTRODUCTION

The credibility is a challenging feature in the consultant activities, such as service design (Wu & Gong, 2012). There are several ways to achieve credibility during co-design services. Pirinen (2016) finds 20 barriers and enablers of co-design for services. He names five main categories for barriers and enablers of co-design for services: collaboration, organization, processes, implementation, methods (Pirinen, 2016). One possibility to achieve authority is to use credible means and methods in the service design process, such as the latest digital platforms, environment or other digital means. Also, Pirinen (2016) sees the role of methods as important part of successful design service process. In addition to openness and flexibility of methods, also well-focused and well-prepared methods, for instance, are relevant part of successful co-design for services (Pirinen, 2016). Another way to achieve credibility is the tight cooperation during service design process (Wu & Gong 2012, Pirinen, 2016). This article is based on the service design process, where both of these features, that is, the latest digital environment and cooperation – or actually co-production – are present. Thus, this study describes the project activities and their outcomes, when the project is focused on to design the business in the co-prototyping environment. This digital design service process covered 14 enterprises and their design process in the digital co-prototyping environment.

Digital service design is very topical perspective in the contemporary business and service environment. According to Williams, Chatterjee and Rossi (2008), while software design was (about 10 years ago) a growing and maturing field, digital service design was an emerging and nascent field. Today, services itself as well as the service design activities often contain and exploit digital platforms, software and environments. For example, Liu, Werder and Mädche (2016) have introduced

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the taxonomy of digital service design techniques. According to them, there are five dimensions in this taxonomy: design phases (planning, draft prototyping, detailed prototyping, launching), time dependency (real-time feedback, retrospective feedback), duration (long-term study, short-term study), participants (user involved, without user) and evaluation types (questionnaire, interview, experiment, observation, group discussion) (Liu, Werder & Mädche, 2016). The comparisons between the typologies introduced by Liu and colleagues (2016) and by Pirinen (2016) show that it is possible to categorize and consider service design process very different ways. However, careful planning and collaboration, for instance, are important part of design process in both of these studies (Liu et al., 2016; Pirinen, 2016).

This study is based on the experiences of the project, which focused on to develop the content of business and business models among 14 participating Finnish enterprises of the project. The studied design process was supported by digital co-prototyping environment. The research question of this study is: what kind of role digital methods, and especially co-prototyping environment have in the design process generally, and especially in the considered case study? The studied 14 firms were located in the same geographical area. In order to save the business secrets of the case study firms, the area and names of the firm are kept anonymous in this study.

2. LITERATURE REVIEW

2.1. Digital Service Design

Often literature and scientific studies use term “digital” without any definition. One reason is that “digital” has so many definitions and understandings. According to Dörner and Edelman (2015), digital should be seen less as a thing and more a way of doing things. They have three attributes to define “digital”: creating value at the new frontiers of the business world, creating value in the processes that execute a vision of customer experiences, and building foundational capabilities that support the entire structure (Dörner and Edelman, 2015). Furthermore, they see that being digital is about using data to make better and faster decisions, devolving decision making to smaller teams, and developing much more iterative and rapid ways of doing things.

Service is defined in the following way, for example, service is the application of competences (knowledge, resources) for the benefit of another (Vargo and Lusch, 2004; see also Spohrer et al., 2007) or the act of dealing with customers in a shop, restaurant, or hotel by taking their orders, showing or selling them goods (Dictionary Cambridge, 2019).

According to Poggenpohl, Chayutsahakij and Jeamsinkul (2004), design lacks agreement on key terms and their meaning, design as a discipline has no orderly reference to its resources or tagging for its research. Buchanan claimed already 1985 that design practices are based on rhetoric, argument, and demonstration. Buchanan (1985) emphasises the role of communication and practices in design studies. Buchanan (1985) understands design and designer a very wide way. They are also making of decisions about size, shape, arrangement, material, fabrication technique, color and finish that establish how an object is to be made. Buchanan (1985) see that the object can be a city or town, a building, a vehicle, a tool or any other object, a book, an advertisement or a stage set. Thus, designers are people who make such decisions, although they will, most often, have some other name describing their specialized concern: architect, engineer, town planner or craftsman (Buchanan, 1985). In other words, design can be seen as a professionalised version of creative activity.

In what come to service design, there is no single definition either and the nature of the discipline may vary some according to the practitioner. According to Stickdorn et al. (2011; 2018) service design refers to the process of designing that combines methods and tools from more general design thinking and various other fields, such as ethnography, management, process engineering and marketing to form a holistic yet flexible combination. Individual development targets can vary from customer service, to organisational and operational structures to physical objects and even more and more to

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