


## Chapter 6

# Digital Transformation and Changes in Business Models for Service Industries: General Principles and Cases From Hospitality, Traveling, Food Delivery

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### ABSTRACT

*The digital transformation and digital technologies find ample application in service as well as in manufacturing. Advances in digitalization and digital technology adoption encourage service sectors to incorporate new digital technologies into their processes to increase efficiency and productivity. The trend towards up-to-datedness and remote control mechanisms increases service industries' awareness of digital technologies in the era of Industry 4.0 and Society 5.0. A transparent and instant management approach with real-time data becomes possible with digital innovation in service. In the digital ecosystem, personalization is more likely to be possible if the increasing diversity in demands for a particular product/service is disruptive. In these collaborative platforms, the prosumer is at the center of the business and acts as designer, customer and consumer. In this digital ecosystem, the consumer is involved in the design phase at the beginning of the process. A new business model is required due to the overall digitalization of the organization. After talking about the digital revolution and transformation, traditional tools for customer demand/relationship management, sales marketing and operations should be examined. The Internet of Things (IoTs), cloud computing, blockchain infrastructure, and business intelligence, are the basic components of digital transformation. This chapter mainly focuses on the digital transformation of the service industry, service innovations, service business platforms and service business model transformation using digital tools. All these digitalization efforts are made possible by innovation in business models. This new digital business model innovation is defined as a unique and significant change in the fundamental elements of the enterprise's business model and value chain architecture. BM analyzes and redesigns operations, content, structure and management to create value by taking advantage of business opportunities. Especially in an environment where organizations and operations, data and processes become open, the concepts of participation in processes and collaboration come to the fore. Sharing economies and platforms where everyone meets on common ground constitute today's new business models. Platform businesses are shared networks and interfaces that create a common structure in which flexibility in design can be achieved, fixed costs can be saved, and efficiency can be increased. Platforms are divided into two: internal and external, and internal platforms are defined as areas where co-operation is carried out within the business or with the business and suppliers for a specific purpose. The study revealed that the labor-intensive and competitive service sector could not avoid this trend. Within the scope of this section, the concept is intended to be concretized through platform works and sample applications. In summary, all this change has caused physical worlds to be moved to small screens and virtual worlds. No matter how perfect the resulting physical product is, it will always be incomplete unless it is supported by accurate and complete services. In today's cyber-physical environment, perfect service platforms will be able to meet the needs and produce real-time and creative solutions to customer demands. These solutions can be provided through innovative and smart technologies such as artificial intelligence and business intelligence. It can be stated with certainty that service businesses that invest in these technologies will stand out from their competitors.*

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## **1. INTRODUCTION-TECHNOLOGY ENABLED SERVICE BUSINESS MODEL**

Recent developments in digitalization and digital technology adaptation urge service industries to welcome new technologies to their processes to increase efficiency and productivity. Besides Accepting the digital paradox effect on business, the pressure on being up to date and remote-control mechanisms is also increasing the awareness of digital technologies for service industries in the Industry 4.0 and Society 5.0 era. Autonomous systems utilizing sensors, actuators, and robot technology have become a real-world phenomenon. Besides, collaborative approaches and the value created through networking are the basic foundations for companies to gain knowledge (Lusch et al., 2007). In the digital era in which enterprises are faced with, the organizations try to transform their business into a digital ecosystem. We are in the smart era, where IoT technologies and dense and mass data are present in the environment, and data analytics and predictive analytics are on the agenda (Parida et al., 2019). Everybody and everything are connected through the internet. People, computers, and even machines are communicating among themselves through the invention and intervention of the Internet of Things (IoTs). It becomes imperative for businesses to acquire these and similar technologies to ensure service innovation and not miss the digital transformation trend.

The main success and critical factor in service business is technology adaption and implementation (Kitsios & Kamariotou, 2019). It is important for businesses to invest in technology, especially information technologies, to be successful in innovation and create continuous value (Harvey, et al., 1997; Davenport, 1993: 49). It is accepted that there is a close relationship between the company's technology investments, innovation success and ability to create an innovative environment (Van Riel et al., 2004). Businesses that adopt innovative approaches and constantly adapt them offer more innovative products and services than others (De Brentani, 2001). The decrease in operating and IT costs has encouraged businesses to invest in service platforms. In order to increase profitability, improve services and efficiency, and get ahead of the competition, businesses need to follow technological innovations and innovative approaches in their service processes (Aranda et al., 2003; Van der Aa & Elfring, 2002; Quinn & Paquette, 1990; Gadrey et al., 1995).

The new technologies give rise to new business models (Baden-Fuller & Haefliger, 2013). In other words, technological advancement pushes enterprises to change their business model. Each business model aims to create a new value for an enterprise and affect technological innovation performance (Teece, 2010; Hu, 2014). Technological innovation can generally be expressed as the acquisition of improvements and technologies that will improve the processes of the business and enable it to achieve a better position in the market (Wei et al., 2014).

In the digital ecosystem, personalization is more likely to be possible if the increasing diversity in demands for a particular product/service is disruptive. In these shared platforms, the prosumer is at the center of the business and acts as a designer, customer, and consumer. In this digital ecosystem, the consumer is involved in the design phase at the beginning of the process. To provide such an environment under geographical barriers, remote working conditions, and distributed resources, in other words, a digital, open environment, redesigning the process in the entire product life cycle (PLM) will enable a personalized service concept. In such a digitalized ecosystem the main handicap is analyzing the data and getting real-time action. In this sense, Business Intelligence (BI) is the main operator for each cycle of the PLM.

Business intelligence is a bundle of technology for collecting, analyzing, and reporting data to make inferences for further analysis (Negash, 2004). Data types can be structured or unstructured and can come

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