

Chapter 7

Management of Digital Innovation

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ABSTRACT

Digital technologies are putting tremendous pressure on businesses to renew and transform their business models. The transformation of business models using digital technologies will lead the businesses to innovate themselves digitally. To improve operational efficiency, customer engagement, and launch successful new products, every organization must innovate. The application of new digital technologies to solve existing business problems and improve organizational practices is known as digital innovation. Digital innovation has become critical to the long-term viability and growth of businesses. To stay relevant and competitive, any company aiming for long-term success should embrace digital innovation. This chapter tries to find out the existing definitions of digital innovation from socio-technical perspectives regarding product, service, process, digital system, organizational innovation, and business models and tries to develop a framework to organize digital innovation research.

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INTRODUCTION

Companies are under enormous pressure to use digital technologies to renew and transform their business models. The transformation of business models using digital technologies will lead the businesses to innovate themselves digitally. Every organisation must innovate in order to improve operational efficiency, customer engagement, and the successful launch of new products. The use of digital technology and applications to improve business processes and workforce performance, improve customer experience, and introduce new products or business models is referred to as digital innovation.

Digital innovation has piqued the interest of academics and practitioners alike (e.g., Holmstrom et al., 2021) from a variety of fields, including economics, strategy, and marketing (Konya-Baumbach et al., 2019; Autio et al., 2018; Beltagui et al., 2020). Digital technology's pervasiveness has altered not only how we strategize and organise to create innovation (Bharadwaj et al., 2013; Lyytinen et al., 2016), but also how we carry out “new combinations of digital and physical components to produce novel products” (Yoo et al., 2010), has changed the nature of innovation itself (Nambisan et al., 2020). Innovation is a thriving field of study with new contributions being made all the time, such as digital innovation (Yoo et al., 2010), open innovation (Bogers et al., 2017), user-led innovation (von Hippel, 1988) and employee-driven innovation (Høyrup, 2010). There is a remarkable interconnection between social actors and digital technologies involved in digital innovations (Sandberg et al., 2020; Wang, 2021). The emergence of complex sociotechnical systems as a result (Mousavi Baygi et al., 2021; Tilson et al., 2010) necessitates research into “technical artifacts as well as the individuals/collectives that develop and use the artifacts in social contexts” (Sarker et al., 2019). When investigating digital innovation, we as a field must therefore focus on both human and technical artifacts (Majchrzak and Griffith, 2020; Yoo et al., 2012). This speaks directly to the Information Systems (IS) discipline's sociotechnical core, with some even predicting a “golden age of digital innovation, providing an unprecedented opportunity for the IS field” (Fichman et al., 2014). As a result of the use of digital technology, new market offerings, business processes, and models can emerge. Digital innovation has been studied as a process (Yoo et al., 2010) or as an outcome (Fichman et al., 2014). We argue that when it comes to combining digital technologies in novel ways or with physical components to enable socio-technical changes and create new value for adopters, it should be examined as both a process and an outcome (Osmundsen et al., 2018). The interdependencies between the innovation process and the innovation outcome have become more complex and dynamic as a result of digitalization, challenging some of the well-known prerequisites for innovation (Nambisan et al., 2017), which have traditionally viewed innovation processes and outcomes as separate

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