Introduction to the Minitrack "Digital Innovation in a Networked World"

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Abstract

Digital innovation is a much-discussed phenomenon which is not confined to a specific domain and transcends both functional and geographical borders. Despite its increasing popularity in both academia and practice, the concept of digital innovation remains under-theorized and often poorly grasped. This is also demonstrated by a lack of common guidance and standards pertaining to digital innovation.

Research needs are including the exploration of digital innovation from diverse perspectives to adequately grasp the phenomenon and to put some special emphasis on digital innovation in a networked world. In this respect, networks can be any types of networks, be it social networks, electricity networks, telecommunications networks, supply chain networks and alike.

Digitalization, digital transformation and alike are most prominent buzzwords of today. This includes digital innovation. While popular, the term is often not clearly defined and used interchangeably with other concepts, such as digitization and digital transformation. At its core, digital innovation incorporates the processes and outcomes of innovation subject to the use of digital technologies and digitized components. In this respect, digital innovation not only describes novel innovation practices but also the creation of novel products, processes and services. As examples, one may look at the overwhelming developments in the area of social networks or even the upcoming changes regarding smart ports in the context of maritime shipping. Accordingly, digital innovation can also be seen as an instigator for digital transformation, which characterizes the process of fundamentally changing and restructuring organizational components such as processes and business models as well as whole domains and industries through the use of digital technologies. That is, as the term digital innovation can be used to describe both the processes and the outcomes of innovation using digital technologies, it also encompasses digital transformation.

Digital innovation is not confined to a single domain, it rather disperses throughout a broad variety of areas of study and industries. This is demonstrated by the manifold literature available on digital innovation. With the increasing diffusion of digital solutions in a broad range of industries and the increased attention it attracts, the distinction between information technology (IT) and other disciplines as well as products and services becomes blurred. As most companies increasingly rely on a well-established IT infrastructure to operate successfully, digital technologies become ever more diffused, IT has become a necessity rather than an asset. To set themselves apart from the competition it therefore does not suffice anymore for organizations to invest in IT and digital technologies, but they need to find innovative and transformative applications for digital technologies to generate an edge over their competition. The value offered by digital technologies is not represented in itself but in its diverse applications, resulting in digital innovation and transformation. With digital innovation at the heart of many future economic and scientific developments and as a phenomenon that is here to stay, its growth in significance is undeniable.

We should aim to support the advances in digital innovation by accommodating research from various viewpoints like systems engineers, business analytics and information systems specialists as well as economists, just to name a few. As an example, *Riechert et al.* elaborate on *Potentialfinder*, fostering network innovation by connecting data owners using scaled business-relevant pattern recognition and clustering. In an innovation network creation framework, patterns of important growth figures may be discovered and then utilized. Looking through a magnifying glass, we may observe, like others, that IT matters as a necessary prerequisite for digital transformation and digital innovation, not the other way around.

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