

Towards a Micro-Enterprise–Focused Digital Maturity Framework

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ABSTRACT

Digitalisation has been identified as one of the major trends changing society and business. However, companies are not making the most of all the opportunities that digitalisation has to offer. In the digital transformation process, it is important to start with assessing the current state. Digital maturity assessment can be used to analyse the current level of digital readiness and performance of an organisation. Micro-enterprises are the smallest group of enterprises and numerically the dominant enterprise type in economies. They differ from larger enterprises in terms of organisational characteristics, such as their unique attitude towards digital tools and application deployment. Furthermore, micro-enterprises are lagging behind in exploring the possibilities that come with digitalisation. This article describes the design process, usage possibilities, and initial experiences of a digital maturity model, especially from the viewpoint of micro-enterprises. As result, this article presents a micro-enterprise-focused self-evaluation framework providing holistic digital maturity status.

KEYWORDS

Digital Maturity, Digital Transformation, Digitalisation, Maturity Assessment, Micro-Enterprise, Self-Assessment, Service Design

INTRODUCTION

Digitalisation has been identified as one of the major trends changing society and business (Tihinen & Kääriäinen, 2016). Nevertheless, just 17% of small to medium-sized enterprises (SMEs) in Europe are highly digitised (European Court of Auditors, 2019). Furthermore, the concept of digitalisation is multidimensional, often vaguely defined and dependent on the speaker's background. It is both about transforming the core business using digital tools and discovering and capturing new opportunities enabled by digitalisation (Furr & Schipilov, 2019). Hence, digitalisation can mean enhancing existing processes, finding new opportunities within existing business domains or finding new opportunities outside existing business domains (Parviainen, Tihinen, Kääriäinen, & Teppola, 2017).

Companies have also found it challenging that digitalisation affects so many aspects; besides information technology, it also affects the strategy and business model, products and services, internal and external processes, the organisational structure and the company culture, among other aspects (Leino, Kuusisto, Paasi, & Tihinen, 2017). Therefore, a holistic conceptualisation of digitalisation is needed.

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Digital transformation is a key enabler for maintaining competitiveness and reacting to continuous changes and pressure. Parviainen et al. (2017) define digital transformation as changes in the ways of working, in organisational roles and in business offerings, which are caused by the adoption of digital technologies in an organisation or in the operation environment of the organisation. The main issue is how companies can tackle digital transformation. For this purpose, companies should know their current state of digitalisation in order to determine their digitalisation improvement needs (Pham, 2010).

A micro-enterprise is a private enterprise employing fewer than 10 employees and having an annual turnover or balance sheet below €2 million (Commission of the European Communities, 2003). Micro-enterprises are the smallest group of SMEs in terms of size and numerically the dominant enterprise type in the economy (Saarela, Niinikoski, Muhos, Isoherranen, & Leviäkangas, 2018); they represent almost 93% of the enterprises in EU28 in 2015 (Muller et al., 2016). Micro-enterprises are different from larger SMEs because they are entrepreneur centred (Gherhes, Williams, Vorley, & Vasconcelos, 2016); they are also intrinsically different in terms of their organisational characteristics and approach to business challenges and obstacles (Kelliher & Henderson, 2006; O'Dwyer & Ryan, 2000).

According to Jones, Simmons, Packham, Beynon-Davies and Pickernell (2011), the strongest inhibitors to adopting (e-business) digital services and applications are the time to develop a digital operation, limited information technology (IT) skills, low customer/supplier usage and insufficient financial resources. On the other hand, the strength of micro-companies is their agility, as they can be flexible in implementing projects and carrying out rapid openings (Saarela et al., 2018). The ability to adopt information and communication technologies (ICT) is related to the size of enterprises, and micro-enterprises evidently lag behind (Arendt, 2008). Moreover, the rate of technology adoption in micro-enterprises is highly dependent on the passion and interest that the owner–manager has for technology (Ritchie & Brindley, 2005).

Maturity models can contribute to organisational transformation and the development of competencies in organisations by initiating a change process (Mettler, Rohner, & Winter, 2010). Maturity models usually include a sequence of levels or stages which form a logical path from an initial state to a final level of maturity (Becker, Knackstedt, & Pöppelbuß, 2009). These levels or stages are used to derive and prioritise improvement measures and control the progress of changes (Iversen, Nielsen, & Norbjerg, 1999). Research has introduced several digital maturity models since the seminal work by Venkatraman (1994), and these models offer a good understanding of digital challenges and are useful when companies develop their digital transformation practices (Valdez-de-Leon, 2016). However, there is a lack of digital maturity models with wide scope focused especially on micro-enterprises. The aim of the present research was driven by the practical need for tools to support the digital transformation and development of micro-enterprises. The authors see that current models do not take into account the special characteristics of micro-enterprises, as even research does not distinguish micro-enterprises from SMEs (Falk et al., 2014; Kelliher & Reinl, 2009). The model presented in this paper, which is a micro-enterprise–focused digital maturity framework, is intended to fill this gap.

In providing the framework, the authors use the guidelines of service design for the design and development of services (de Sousa Pereira & da Silva, 2010; Mettler, 2010; Stickdorn, Hormess, Lawrence & Schneider, 2018). In the service design approach, the aim is to create services that are useful, usable, desirable, efficient and effective (Holmlid & Evenson, 2008).

BACKGROUND

Preparing for a digital future is not an easy task. It means developing digital capabilities in which an organisation's activities, people, culture and structure are in sync and aligned towards a set of organisational goals (Kiron, Kane, Palmer, Phillips, & Buckley, 2016). As stated previously, Parviainen

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