Initialising customer-orientated digital transformation in enterprises

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Abstract

Digitisation forms a part of Industrie 4.0 and is both threatening, but also providing an opportunity to transform business as we know it; and can make entire business models redundant. Although companies might realise the need to digitise, many are unsure of how to start this digital transformation. This paper addresses the problems and challenges faced in digitisation, and develops a model for initialising digital transformation in enterprises. The model is based on a continuous improvement cycle, and also includes triggers for innovative and digital thinking within the enterprise. The model was successfully validated in the German service sector.

Keywords: Industrie 4.0; digital transformation; digitisation; customer expectations; continuous improvement

1. Introduction

“Digital is the main reason just over half of the companies on the Fortune 500 have disappeared since the year 2000” ~ Pierre Nanterme, Accenture CEO. A recent phenomenon, digitisation, has gained a lot of traction and

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completely changed customer behaviour and expectations, and therefore implicitly forced the reinvention of business 
in order to create and keep customers.

Digitisation forms a significant part of possibly the largest world-wide trend, Industrie 4.0, and threatens to entirely 
transform organisations and current business models [1, 2].

Customers today no longer only expect companies to respond to their expressed demands, but implicitly expect 
companies to anticipate and address their future needs before they themselves have realised them. This proactive 
customer orientation has been found to be the most consistent driver for both customer value and gaining a competitive 
advantage in this digital era [3]. Manufacturers of the future should, therefore, be more focused on the consumer’s 
needs and value creation niches within systems [4], named by many as smart service or smart production [5]. Companies that embrace these new demands will succeed, whilst others will disappear entirely. Hamish Nuttall, 
founder of the digital start-up ‘the Naked Bus’ believes that: “[…] if you don’t reinvent your business, chances are 
somebody else will” [6]. This paper aims to identify the problems and challenges faced on the road to becoming digital 
and analyses a new approach for companies to initialise their digital transformation.

2. Digital transformation

Since the purpose of any company is to turn a profit by meeting customer demands, it is crucial to understand how 
digitisation affects the customer. Hughes [7] addresses some key changes in this changing customer behaviour. Not only are customers less forgiving of mistakes and less loyal to a single company, they are also more informed, 
communicate more with other customers and are forming ever higher expectations regarding digital service provision 
that spans across all channels and industries [7]. To add to the increased demands from customers, companies are 
facing ever tougher competition due to globalisation [8]. Companies in all branches are feeling the pressure to go 
digital, and know that they need to do so quickly before they are left behind by innovative and digitally-focused 
competitors and new entrants [9, 10].

2.1. Digital barriers

Although most companies have realised the need to digitise, various challenges are inhibiting them from starting 
or benefiting from digital transformation [8]. These challenges can occur during all three phases of the digital 
transformation as defined by McAfee et al. [8], namely the initiation phase, the execution phase, and the coordination 
phase. Typical barriers mentioned by companies themselves include insufficient IT structures, lack of technical skills, 
inadequate business processes and high implementation risks and costs [8, 10, 11]. Albrecht [12] addresses possibly 
the most important cultural barrier which is often underestimated and usually not recognised by companies. This is 
people’s unwillingness to change, and their indifference to the necessity of a radical change such as digitisation.

The question then becomes: How can companies overcome these obstacles and become digital?

2.2. Digital maturity of an organisation

Azhari et al. [13] provides a maturity model for the digital transformation which clearly depicts the multifaceted 
depth of digitisation. The maturity model, as shown in Figure 1, is comprised of 8 dimensions of digitisation, namely 
strategy, leadership, products, operations, culture, people, governance and technology. These dimensions can be 
fulfilled to varying extents. Five levels of digital maturity are defined according to which companies can classify 
themselves.

The first level, “unaware”, describes companies in which there is no strategy for digital transformation, nor are 
there any digital competencies available. These companies do not yet offer any digital products or services, and are 
missing an overall organisational awareness for the need of digital transformation. Companies classified by the 
“conceptual” level, are those which offer a few digital products, but are still without a digital strategy. Those with a 
“defined” level of digitisation, are the companies who are able to consolidate experiences gained from pilot 
implementations into partial strategies. At this stage, a culture of digital thinking is taking root in the company. The profitability of these partial strategies and the effects of the pilot implementations are assessed and used to develop an 
overall digital strategy. At this point, where a clear digital strategy is developed, the company falls into the “integrated”
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