

Chapter 7

Challenges to Business Models in the Digital Transformation Context

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ABSTRACT

The digital transformation of the economy and society itself is pushing the economic organizations to processes. Multiple digital technologies like data analytics, enterprise mobility, social networks, cloud computing, robotics, block chain, and internet of things (IOT) are pushing radical changes in the ways of working (WoW). People with strong technological skills are demanding changes to organizations towards two-way business interaction in order to meet the needs and expectations. But consumers who are technology users expect new information and knowledge products and services based on technological potential. It remains to the organizations to define strategies for this transformation, seeking to adapt their organizational and information systems to this new paradigm of digital transformation.

INTRODUCTION

The economic and social environment is permanently challenged by technological innovation. The resources, structures and dynamics established in the economy and society are increasingly dependent on technological capabilities. This dependence also expresses greater vulnerability of people and organizations regarding the technological context of society and of the economy itself. As we move towards greater integration of the digital dimension into the lives of consumers and organizations, the collective responsibility of the various actors that ensure the availability and operation of infrastructure increases. It is this collective responsibility of the various stakeholders that depends on the quality of the transac-

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tions carried out, the satisfaction of the products and services marketed, as well as the general social relations carried out through the technologies.

In this context, issues, like privacy or security, are permanently present in the activities of economic organizations, in the lives of technology users and in the new technological dimension of ethics, a concept rooted in ancient philosophy, reflects on the new human condition in the context of the digital economy and society (Anunciação, Esteves & Santos, 2014) (Anunciação, 2012) (Anunciação, 2008) (Anunciação & Santos, 2007). The lightening of the set of values and principles that, in the past, guided human practices, now, need adaptation, or perhaps not.

We live in a spiral difficult to control and even manage. Society and the digital economy constitute movements of society that have no return. The adhesion of consumers and citizens to information and communication technologies put pressure on economic and social organizations to adopt new working paradigms closely aligned with technological factors. ICT challenges business and organizations to adopt new models fully attuned to the technological potential, in any economic sector. If digital transformation in any large organization is tough - breaking down silos, overcoming legal barriers, fixed mindsets and internal conventions - negotiating technological change on the scale of the federal government is nightmarishly difficult (Gray & Parce, 2017).

Management requires responses in timings that are too short to adapt organizations and their operations to the market, modifying structures and adapting crystallized cultures. The setting is a permanent investment and managers are required net profits in the process of digital transformation of economic activities. And since many companies are not, and do not have, specialists in all technological areas, they will have to frame their activities in partnerships with specialists, focusing on their core business in order to frame their competitiveness.

The context associated with the process of economic and social transformation can be better evidenced through the analysis of the evolution of the digital economy in Portugal is presented in Tables 1-4 (IDC2015).

Table 1. Evolution of internet users

Online Population	2011	2012	2013	2014	2015
Evolution of users (millions)	6,1	6,7	6,7	7,0	7,4

Table 2. Evolution of the number of online buyers

Shopping Population Online	2011	2012	2013	2014	2015
Evolution of online purchases (millions)	1,9	2,3	2,5	2,7	3,1

There are several technologies that mark this digital era. Cloud computing, social networks, IoT (Internet of Things) and artificial intelligence, among others, are examples of new paradigms that are emerging and consolidating in the economy and society. Some of them have been breaking traditional paradigms associated with concepts fully assumed in the field of business sciences, such as cloud

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