Chapter 5
Enterprise 4.0:
The Next Evolution of Business?

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ABSTRACT

Enterprise 4.0 is already referred to as the next stage of the evolution of global business and the global economy. This wave is achieved by technology enablers often referred as digital transformation (DT). Social media represent a subset of these technologies which contribute to organizational transformation. However, the adoption of social media does not imply such a transformation; changes in the organization's culture and behavior are also needed. While the technology enablers allow the production, sharing, and management of information and knowledge within the organization they also require the updating of the supporting information systems (IS). Thus, using technologies in organizations requires an exercise in understanding how to demonstrate their usefulness in relation to the creation, access, and sharing of contents and IS improvements in a safe way. To this end, this chapter envisages a new context of labor faced within DT of organizations, largely boosted by the organizational adoption of social media, and which the authors propose to be implemented through the m_CSDIT framework.

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INTRODUCTION

Enterprise 4.0 is the next stage of the evolution of global business and the global economy. This parallels Industry 4.0 that relates to factory automation but goes beyond the factory concept into all aspects of the global economy.

This wave of digital transformed enterprises is achieved by technology enablers often referred as digital transformation (DT) enablers which include (1) cloud, (2) mobile, (3) social, and (4) big data – analytics (Uhl and Gollenia, 2016; IDC, 2018). Innovation accelerators like IoT, Robotics, Artificial Intelligence, Augmented and Virtual Reality, Cognitive Systems and Next Generation Security are often also playing part of this process of digital transformation Kane (2017).

It is, therefore, widely acknowledged that organizations have suffered a large transformation at the social, economic and technological levels, where the traditional barriers of transferring information and knowledge have been progressively eliminated. This evolution allowed the elimination of silos, the breaking down of hierarchies, the connection of internal and external stakeholders and the empowering of employees (Berkman, 2014). According to Bear (2015), Social Business has contributed to this end, and has proved its value across nearly every business function, from marketing and commerce, to product development and human resources, to internal collaboration and intelligence.

Social Business (Yunus, 2007; Bear, 2015) can be defined as the ability of an organization to share information, produce knowledge collaboratively, manage knowledge, eliminate communication and sharing barriers, accelerate business processes, approaching the business partners, namely suppliers and customers, and create innovative products, services and business models. It is thus essential that such products, services and models are created and properly documented, managed and shared.

Information systems and technologies (IST) are the essence of up-to date organizations, and changes in this field are occurring at an uncontrollable pace, interrupting traditional business models and forcing organizations to implement new models of business. These changes need to be accompanied by new modeling methods that, for instance, drive the evolutionary changes of requirements, as argued by Gustas and Gustiene (2012). A change of paradigm in what comes to the use of IST in the day-to-day life of every citizen, by itself, does not sustain such a transformation; it is also necessary a change of culture and behavior. On the one hand, the use of IST in an appropriate and integrated way with the organization's processes will depend on an individual and collective effort, which may be called "collective leadership" (Paunova, 2015). On the other hand, the younger generation, accustomed to sharing, often through mobile devices, personal information on Facebook, Twitter, among others, enters the job market looking for similar tools. These new "social tools" allow the production, sharing and management of information and knowledge within the organization between peers and other stakeholders, allowing the barriers elimination of the communication and sharing.

Therefore, we may infer that Social Business is much more than just collaboration and sharing, since the IST that are currently available allow the organizations' processes to be more dynamic, more "social".

Following these developments, and according to the European Commission report "*A Roadmap for Advanced Cloud Technologies H2020 under*", the environment of IST (market research, industry, education, training, etc.) is undergoing constant changes. These changes originate, typically from the conflict between the technical restrictions and the "new" needs experienced by users. Thus, it is necessary to identify the major changes that can be expected in the next years and can, or will, affect the environment of IST. It is expected, for example, storage for all and the internet of and for things (World Economic Forum, 2015).