

Digital Transformation Management for Agile Organizations

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Digital Transformation Management for Agile Organizations: A Compass to Sail the Digital World

STEFANO BRESCIANI

University of Turin, Italy

ALBERTO FERRARIS

University of Turin, Italy

MARCO ROMANO

University of Catania, Italy

AND

GABRIELE SANTORO

University of Turin, Italy



United Kingdom – North America – Japan – India – Malaysia – China

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About the Authors

Stefano Bresciani, Ph.D. in Business Administration, is a Full Professor in Innovation Management and Digital Transformation at the School of Management and Economics, University of Torino, where he is the Director of the Ph.D. program in Business and Management. He undertakes research integrated with the Department of Management of the University of Torino; his main areas of research include innovation management, knowledge management, international business and open innovation. He is the Vice President of the EuroMed Research Business Institute (EMRBI), Director of the Research Center of the Q-Institute, Chairman of the EMRBI Research Group on ‘Multinational enterprises and corporate governance’, and Member of the Steering Committee as Representative for Europe of the Academy of Innovation, Entrepreneurship, and Knowledge. He has published many refereed journal articles, contributed chapters and books, and presented papers to conferences on a global basis.

Alberto Ferraris, Ph.D. in Business and Management, is an Associate Professor at the University of Turin – Department of Management. He obtained the qualification of Full Professor at the National Scientific Evaluation in Italy in 2020. He is an Active Member and Research Fellow of the Laboratory for International and Regional Economics, Graduate School of Economics and Management, Ural Federal University (Russia), and he is Fellow (F-EMAB) of the EMRBI. He is the author of many academic and scientific articles published on international journals and he is in the editorial board and serves as a Guest Editor for special issues in several prestigious international journals. During the last years, he got several international awards such as the ‘2015 Emerald/EMRBI Business Research Award for Emerging Researchers’ and the ‘Best Reviewer Award’ for different conferences as well as for *Journal of Intellectual Capital* (2018).

Marco Romano, Ph.D., is a Full Professor of Management in Italy and serves as a Professor in ‘Entrepreneurship and Business Planning’, ‘Digital Innovation and Transformation Management’, and ‘Marketing’, Department of Economics and Business, University of Catania. He is a Visiting Professor with Newcastle Business School at Northumbria University (UK). He has published papers in leading international journals such as *Journal of Technology Transfer*, *Journal of Intellectual Capital*, and *Journal of Knowledge Management*. He is currently an Associate Editor in *Journal of Intellectual Capital*. He has successfully secured research funding and is an experienced Principal Investigator leading large-scale

multi-partner publicly funded research programs at European, national, and regional levels. He held several leadership positions including President of Science and Technology Park of Sicily, Board Member of APSTI – Italian network of scientific and technological parks, General Manager ‘Department of Economic Development’ Regione Siciliana, and General Manager, Service Health Emergency 118 in Sicily.

Gabriele Santoro, Ph.D. in Business and Management, is an Assistant Professor of Business Management at the Department of Management, University of Turin, Turin, Italy. He has authored/coauthored several papers in international journals such as *Technovation*, *Technological Forecasting and Social Change*, *Small Business Economics*, *Journal of Technology Transfer*, *Journal of Knowledge Management*, and *Journal of Business Research*. He also published two books on topics related to Open Innovation, and Strategic Management and Business Modelling. He is currently an Associate Member (AM-EMAB) of the EMRBI and Member of the Editorial Board of the *Journal of Intellectual Capital*. He also works as a Strategy Consultant with small and medium enterprises based in Italy. Finally, he is the Owner and Member of the Scientific Committee of Progesia (an Italian consulting firm).

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Introduction

Everyone talks about digitalisation nowadays. It is not just a buzzword used to create a new trend, but a phenomenon that has an immediate and substantial impact on businesses.

The term ‘digitalisation’ is often replaced by ‘digital transformation’ which is a process requiring an organisational, technical, business model, and culture change. The term ‘digital transformation’ can take different meanings and can imply different extents of effort for companies. For this reason, every organisation needs to establish a strategic approach to the definition of the goals and objectives, and scopes of application of digitalisation processes.

There are many definitions of digital transformation in the literature. A recent definition suggests that:

Digital transformation is an ongoing process of strategic renewal that uses advances in digital technologies to build capabilities that refresh or replace an organization’s business model, collaborative approach, and culture. (Warner & Wäger, 2019, p. 19)

As a consequence, we can observe that the transformation does not only concern the technologies implemented by the company, but also strategies, activities, processes, skills, competencies, revenue models and costs. All these elements require scholarly attention, providing clear implications on how digitalisation should be embraced.

Investments in digital technologies are increasing in many sectors. Such investments allow to build new competitive advantages related to cost reduction, through increased efficiency, and increased revenues, through the development of new business models or the development of product innovations.

This book attempts to address this issue by providing a comprehensive and exhaustive overview that addresses digital transformation in organisations from multiple angles. In particular, the book offers theoretical and practical insights on digital transformation in general, shedding light on what it is and why it is relevant for businesses that aim to be competitive nowadays. It also provides evidences on useful tools for digitalisation (such as social media, cloud technologies, RFID, IoT machineries, etc.) and how they can be implemented in order to achieve competitive advantage. Then, the book discusses and presents cases on the impact of digital transformation in terms of strategic management and business

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models, for example, underlining the changes in value creation, configuration, and capture. Linked to these, different digital marketing strategies are addressed. Moreover, the book advances the knowledge on how to adapt the management of human resources as well as different leadership styles that are more successful. Implementing digital transformation within companies requires different factors, not only related to the selection and development of the right 4.0 technologies. Finally, the book suggests methods for building and supporting an agile organisation that can leverage digital technologies balancing internal activities and processes as well as external resources drawn from stakeholders and ecosystems.

How did we get to this point? It is well known that most of the technologies available today have been developed in recent decades. In other words, technological development has undergone exponential growth in recent years. We live in an era of technological convergence in which many complementary technologies are being developed for an enabling technology, giving rise to numerous business process redefinition and business model innovation at the firm level. Despite this, the technological boom requires new skills, mindsets, and strategic approaches to companies to avoid resources wasting and losing competitive advantages in an increasingly dynamic and competitive environment.

The book is structured in nine chapters dealing with different, but linked, organisational and systemic aspects related to digital transformation.

Chapter 1 aims to introduce the topic of digital transformation and to examine the strategic aspects of digital transformation, recalling past theories such as resource-based view, knowledge-based view and dynamic capabilities. Besides, the chapter offers practical insights on how to formulate a digital strategy and the challenges of digital transformation.

Chapter 2 sheds light on the so-called technologies 4.0 enabling connection and integration between people, machines, objects, and systems. Practical examples are provided to show and discuss how these technologies, along with the large amount of data generated, are changing production processes, altering value chains and representing new ways to create value.

Chapter 3 addresses the relationship between digitalisation and business models, shedding light on how digital technologies can foster successful business models. To do this, the chapter distinguishes between businesses born in the digital era (born-digital) and those born before (traditional companies), providing theoretical and practical insights for both types. The value creation, configuration, and capture framework is applied and discussed to explore the business model implications of digitalisation. The cases of Domino's Pizza, Disney, Apple, and Netflix are presented to highlight how and why business models should be digitalised.

Chapter 4 discusses new trends in modern marketing and how digital technologies are reshaping the company–customer relationship along the marketing funnel. Emphasis is given to the traditional and innovative marketing strategies such as display advertising, email marketing and search engine marketing and optimisation.

Chapter 5 turns to the digital leadership, shedding light on how managers should cultivate a digital and learning culture, and how to face the unknown in the era of digital innovation. Then, the chapter offers insights on how managers

could become digital leaders. The main message of this chapter is that digital transformation is a complex process that requires guidance, culture, orientation, curiosity, learning, and responsibility.

Chapter 6 explores the human resource management consequences of digitalisation. In the digital transformation process within organisations, the human resources area is mainly involved in improving digital processes and skills to support the strategy. As a result, human resource managers play a vital role in training, researching, and selecting people and investments in digital.

Chapter 7 presents the digital opportunities driven by data management. Nowadays data represents a key asset, a more and more critical resource for business management, and a vital factor for competitiveness. In this regard, the chapter illustrates the different phases (intelligence, design, choice, and implementation) for managing data and transforming it into useful knowledge.

Chapter 8 looks at the reality of digital ecosystems, which are growing, thriving, and creating tremendous opportunities for businesses, individuals, and society at large nowadays. Digital ecosystems represent a collective of firms interlinked by a common interest in the prosperity of digital technology for materialising their product or service innovation. This view somehow contrasts Porter's view of competition, suggesting that building a powerful ecosystem is better than building a competitive advantage, as the latter is easy to lose. Thus, the chapter sheds light on the types of digital ecosystems and the dynamics that govern these complex systems. The Apple and Microsoft cases are discussed to explain why and how an ecosystem vision is crucial to thriving in the platform business.

Chapter 9 concludes the book by emphasising that digitalisation requires agility. Starting from the assumption that organisations live in a world characterised by volatility, uncertainty, complexity, and ambiguity (VUCA), the chapter indicates the path towards an agile transformation. To reach this goal, several practical frameworks are presented and discussed.

In conclusion, this book is not meant to be a definitive answer to digital transformation questions, but rather a guide to digital transformation in today's VUCA world. No one knows what will happen tomorrow. However, being ready for what is happening today is a good start.

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Chapter 1

Building a Digital Transformation Strategy

1.1. Strategy and Digitalisation: An Introduction

We live in the digital age, a revolution that impacts people, groups, and organisations. Such a paradigm shift is influencing companies and the way they do business. Integrating and exploiting new digital technologies is one of the biggest challenges that companies currently face (Heavin & Power, 2018).

Overall, new digital technologies offer the opportunity to transform processes and activities to create more value and sustain competitiveness (Majchrzak, Markus, & Wareham, 2016). All sectors and types of organisations are somehow and to a different extent, influenced by new technologies, such as mobile devices, social media, analytics, and the cloud, which offer exciting opportunities and challenges. New technologies are developed every year. Someone describes them dividing between primary (e.g. mobile, social, cloud, Big Data, and IoT) and secondary or emerging (e.g. 3D printing, wearables, virtual and augmented reality, artificial intelligence (AI), drones and robotics, and deep learning algorithms) (Spremic, 2017).

In recent years, firms in almost all industries have conducted several initiatives to explore those mentioned above new digital technologies and exploit their benefits. This frequently involves transformations of crucial business operations and affects products and processes, as well as organisational structures and management practices. Companies need to establish management practices to govern these complex transformations. In this regard, a necessary approach is to formulate a digital transformation strategy to integrate the complete coordination, prioritisation, and implementation of a digital transformation within an organisation (Matt, Hess, & Benlian, 2015).

The exploitation and integration of digital technologies often affect large parts of companies and even go beyond their borders by impacting products, business processes, sales channels, supply chains, and sometimes entire industries. Potential benefits of digitalisation are manifold and include increases in sales or

productivity, innovations in value creation, as well as novel forms of interaction with customers, among others. As a result, business models can be reshaped or replaced (Downes & Nunes, 2013).

Thus, as anticipated, the process of using new digital technologies has been recently called ‘digital transformation’ in the literature and by practitioners. However, what is a digital transformation? In order to fully understand its meaning, it is necessary to understand the difference between three distinct but inter-related concepts: digitisation, digitalisation, and digital transformation (Verhoef et al., 2019):

- *Digitisation*: Integrating digital technologies within existing tasks. In other words, it could be considered the process of converting information from a physical format to a digital one. Examples are converting a VHS cassette to a Blu-Ray disc; scanning a paper document; and saving as a PDF.
- *Digitalisation*: Using digital technologies to alter existing business processes and to create and capture more value. It converts processes to be more efficient, productive, and profitable. Examples could be saving a company’s document in a cloud instead of local folds and hard drive; allowing people to get access to a vast amount of data in real-time; or introducing an IoT machinery in production processes.
- *Digital transformation*: It is the transformation of business activities, processes, products, and models to exploit the opportunities of digital technologies fully. It profoundly affects the way of creating and capturing value, engendering the development of new business models. In other words, it leverages digitalisation to reshape and innovate the current business model. Examples could be collecting data from clients, analyse it, offering new products/services according to their needs; introducing an IoT machinery in production processes, and changing the production patterns in such a way to increase efficiency and efficacy.

Therefore, digital transformation can be defined as the process through which companies converge multiple new digital technologies, enhanced with ubiquitous connectivity, to reach superior performance and sustained competitive advantage, by transforming multiple business dimensions, including the business model, the customer experience (comprising digitally enabled products and services) and operations (comprising processes and decision-making), and simultaneously impacting people (including skills talent and culture) and networks (including the entire value system). This is in line with the recent definition provided by Warner and Wäger (2019, p. 19), which stated that:

Digital transformation is an ongoing process of strategic renewal that uses advances in digital technologies to build capabilities that refresh or replace an organization’s business model, collaborative approach, and culture.

Therefore, digital transformation can be comprehended as a continuous process of climbing the scale of digital maturity by employing digital and other

technologies and organisational practices to create a digital culture and find new sources of value (Ivančić, Vukšić, & Spremić, 2019). This maturity will enable the company to provide better services, gain a competitive advantage, and effectively respond to actions in a complex environment. Ultimately, companies that successfully employ digital transformation enjoy better returns on their assets and are generally more profitable (Westerman, Tannou, Bonnet, Ferraris, & McAfee, 2012).

Not everything will be different in the digital world, and not all should embrace digital strategies in the same way. Large traditional companies can face the competition of innovative digital start-ups by approaching an agile transformation. As such, the digital transformation is something happening in both traditional and high-tech companies, to a different extent. In this context, traditional companies are players belonging to industries such as automotive, retail, and financial services. Threatened by the digital economy they are at risk if they cannot change their business models and activities according to the digitised world. Unlike digital companies such as Amazon, Airbnb, and Google, traditional companies sometimes do not have the competencies, skills, and resources to quickly embrace a digital transformation strategy. As such, the paradigm shift is more problematic for them.

For this reason, they need a clear and agile strategy, integrating information systems and business strategy analysis. As a result, a digital transformation strategy aims to coordinate, prioritise, and implement a traditional firm's adaptation, to manage its journey to achieve the desired future state of being in a digital competitive world (Matt et al., 2015). The digital transformation strategy does not involve just the implementation of digital resources. However, it involves adapting critical structural and organisational aspects, the use of advanced information technologies (IT), and the improvement of the current business models.

Therefore, as we will explore during the next sections and chapters, a digital transformation should consist of a planned strategy. This strategy will need to define in which areas the transformation will take place, how it will take place, what resources will be used, and the timeline of the transformation. A digital strategy, thus, involves both the IT and business strategies. Consequently, digital strategy is inherently transfunctional, as IT is pervasive in functions such as operations and marketing. Hence, it is reasonable to infer that a fusion of business and IT strategy composes the digital strategy. This contrasts the traditional view of IT as a 'functional level strategy that must be aligned with the firm's business strategy' (Bharadwaj, El Sawy, Pavlou, & Venkatraman, 2013, p. 472). In other words, there is no longer a distinction between the two strategies. In practical terms, the emergent digital strategy is both business centric and technology oriented in the sense that both market logic and new technologies can drive the company to pursue a new strategy with new dynamics, goals, objectives, and investments.

A strategy is defined as a synonym of policies, objectives, tactics, goals, and programs, by strategic management theories. More specifically, Miller and Dess (1996) defined strategy as a set of plans or decisions to help organisations achieve

their objectives. Porter (1996) defined strategy as performing different activities to those performed by rivals or performing the same activities differently. Wright, Kroll, and Parnell (1997) defined strategy as the set top management plans to achieve results consistent with the organisational mission and objectives. Mintzberg, Ahlstrand, and Lampel (1998) defined strategy as the mediating force between the organisation and its surroundings, focussing on decisions and actions that come naturally.

Therefore, while it is agreed that strategy concerns all the actions and decisions to achieve objectives, digital strategy can be defined as an ‘... organizational strategy formulated and executed by leveraging digital resources to create differential value’ (Bharadwaj et al., 2013, p. 472). Furthermore, a digital transformation strategy seeks to provide insights into how such an organisation-wide digital strategy might be developed and implemented (Hess et al., 2016; Matt et al., 2015). For these reasons, it is possible to assume that the digital transformation strategy does not replace any former strategy but will need to be aligned with them. In reality, organisations pursue one of the following two options: (1) develop an explicit digital transformation strategy or (2) develop a business strategy that incorporates components regarding investments in digital tools.

Why do companies need a digital strategy? Because the digital transformation process should be managed as a strategic approach if the company wants to achieve the expected results. As such, sharing a common digital vision is a vital factor for the successful outcome of digital transformation endeavours. Still, every company develops its strategy according to its own needs and the stage of its digital transformation process. A digital transformation strategy signposts the way towards digital transformation and guides managers through the transformation process resulting from integrating and using digital technologies.

Despite the great interest in this topic and its importance from a managerial perspective, how to embrace digital transformation is still not entirely clear. Moreover, digital transformation is different from traditional forms of strategic changes in a way that digital technologies have increased the speed of change processes, resulting in an environment that is much more volatile, uncertain, complex, and ambiguous. This means that elements such as vision, mission, values, goals, objectives, resources implemented should be analysed and revised more often in a digital context. Besides, even in traditional industries, aspirations are very high, and executives would succeed in digital transformation by developing new offerings and changing their companies’ business models. However, a McKinsey’s survey suggests that less than 30% of companies succeed in this challenge and even less in traditional industries such as oil and gas, automotive, infrastructure, and pharmaceuticals (McKinsey & Company, 2019). This is because the evolution of digital technology offers great opportunities and challenges for companies and institutions. Facing these challenges and seizing the digital opportunities is far from easy, as digitalisation touches every aspect of an organisation and requires an unprecedented effort to coordinate people, processes, and technologies. Precisely for this reason, digital transformation must