# Chapter 5
# Digital Transformation From Data Science:
## A Source of Organizational Agility

**George Leal Jamil**
https://orcid.org/0000-0003-0989-6600
*Informações em Rede Consultoria e Treinamento, Brazil*

## ABSTRACT

*In this chapter, concepts of data science definition and market business agility with strong support of digital transformation paradigm are discussed. The intention is to provide the reader with a consistent, proposedly not finished view of this powerful, actual, and potential association, which presents a new fashion for entrepreneurship, leading also to organizational changes which imply, in their way, a redefinition of professional works, technology application, risk and project management, and strategic planning. The chapter describes these concepts, develops their relationships, and leaves an "open door" for the reader to perceive not only the conceptual application for competitive scenario description, but also as an associative and integrative methodology to be used, beyond other perspectives, to appreciate the evolution of the context developed by the chapter itself, updating it in the time ahead. In the final part of the text, study cases are discussed as to affirm chapter objectives, findings, and proposed integrative base.*

## INTRODUCTION

It is difficult to consider a period of more intense and provocative motivation as the last four to five years when we observe organizational design propositions

DOI: 10.4018/978-1-6684-6786-2.ch005

and executions. Massive waves of change, and associated challenges, produced a thorough way for researchers and practitioners around this fundamental issue: how to design one organization business model. Just approaching this small window of some years, we could think about the successive phenomena:

- The rise of new business models, with the emergence of market sharing resources, signature, IaaS/PaaS/SaaS, on-demand, adaptative, marketplaces, platforms, among many others, synthesized through company´s success, such as Uber, AirBnB, Spotify, Netflix, among various (Jamil, 2021).
- Technological propositions and launchings, resulting in the emergence of different independent resources, which were offered as stand-alone market features or associated, resulting in the "Digital Transformation" context, which encompassed - eventually - the insertion of artificial intelligence in our routine lives, as data science evolution and affirmation, virtual and augmented reality presence and waves of immersive automation, with robots of different assemblies (Lacerda and Jamil, 2019).
- The confinement period, with its associated attempts to return to the "normal levels of life", before the Pandemic of Covid-19. In here, an attention is paid specifically to the answers demanded from commercial, non-governmental and public organizations to answer market demands, when eventually enclosed to avoid a fatal virus contamination, eliminating various traditional behaviours which served as a basis for organizational design throughout the years (Brower, 2020; Foss, 2021, Dedeilia *et al.,* 2020).

Definitely it is not possible to consider each one of these remarkable events correctly approached by organizations in general, as there was no control of its occurrence, association and precise interpretation. Maybe, in the future, this period of time could be compared to those of global discoveries or industrial revolution or even after first and second world wars, but with less controls and definitions, produced, mainly by the immense and disordered availability of technology (McKinsey, 2021).

In this chapter, a reflection will be made around the Agility proposition, as a new way to conceive adaptive business models to answer customer, stakeholders and entrepreneurs initiatives, and the opportunities and challenges faced by these agents on implementing agile principles for management (Iqbal, 2022). The first point to discuss is to evaluate if the needed adaptation could occur as a reaction to these sudden events. The other aspect as to analyze is the continuous relationship of agility, as a managerial philosophy, with information technology and associated resources. As an expressive collateral effect of these two first points, the third one is to observe how business models could be revised, redrawn and proposed as a