# Management and organization in the digital economy

## Prof. Maria Cristina Farioli, Prof. Elisa Martina Martinelli

***COURSE AIMS AND INTENDED LEARNING OUTCOMES***

In the last decade, enterprises have had to thoroughly rethink their relations with market and customers. Such rethinking is implemented through a reformulation of business models, often aided by the opportunities offered by the new technologies. Through an evolutionary approach, the course introduces and develops the fourth industrial revolution (Industry 4.0) and aims to survey the main changes occurring in the relations between market and enterprises. In detail, the course analyses the evolutionary processes taking place in the management and organization of enterprises and of their inter- and intra-organizational networks as well as the technology evolution, in particular digital technology, and how they have accelerated the process of transformation and innovation of companies.

The course also wants to be a contemporary observatory of the persistent changes to which companies and the market undergo; this cannot be done without a critical view. Finally, the course -which is prompt to grab and analyze new digital trends- will also address what it means to be an Artificial Intelligence company driven and how companies are exploring the emerging world of Metaverse to find new growth opportunities.

At the end of course the students will:

* know what it means “digital transformation” beyond the social channels having analyzed all its components: from big data concept to new disruptive business models;
* be aware about the four industrial revolutions rand their key differentiations but also the common elements moved from a revolution to another;
* achieve the ability to analyze the main elements of a company Business Model and to apply the Canvas/Disruptive business models in an enterprise thanks to the several exercises and examples will be carried out;
* have the basic knowledge on Information Technology which enabled and is still enabling the innovation of enterprises and the whole market;
* be familiar with digital economy terminology and able to communicate and present digital plans;
* be equipped with the knowledge basis and capacity to collect additional information that is needed to tackle more advanced digital topics;
* be updated on the last technologies, like Artificial Intelligence and Human Augmentation which are affecting the business environment and society;
* have acquired “the right language” and some fundamentals on new emerging topics to be a proactive member on innovation in the companies;
* have developed a critical and attentive look at innovation and its issues and opportunities.

***COURSE CONTENT***

– Enterprises, environment, markets.

– The second industrial Revolution. Mass production and mass consumption.

– The third industrial revolution. Flexible automation and mass customization.

– Servitization, Networks and Business Modelling.

– The fourth industrial revolution and the Internet of things: from the concept to specific case histories in several industries such as manufacturing, healthcare, and local government (smart cities).

– The five domains of Digital Transformation: Customers, Competition, Data, Innovation, Value. Each one will be analyzed in its own strategic themes and key concepts compared with the previous analog scenario.

– Mastering “disruptive” business models as the challenge of the digital era. Particularly will be presented the business model Canvas, commonly recognized, and its nine components.

– Presentation of some *“Digital Giants”* of the Platform-economy through the company testimonials who will introduce the organization history, evolution and key success factors. While later the students will analyze their business model.

– Evolution of Value Proposition understanding how the new technologies reshape opportunities and needs in the market.

– Turn data into assets: the new core of the digital companies also called *“data driven”.*

– Open innovation, start-ups and new emerging eco-system: they represent the new vocabulary of digital transformation and often the new way to do business and to survive for the companies.

– Opportunities and challenges of the digital transformation.

– Emerging Platforms: Voice and eSport Platforms.

– New frontiers for business: Artificial intelligence, Blockchain technology, NFT (No Fungible Tokens) and Metaverse.

***READING LIST***

The reference book which will be used is “The Digital Transformation Playbook” of David L.Rogers issued by Colombia Business School. It covers the core of lessons and it will be integrated with a selection of texts provided by the lecturer at the beginning of the course and uploaded on Blackboard.

The contents which will be integrated are:

* The four industrial revolutions
* The Information Technology Trend
* The business Model Canvas
* Artificial Intelligence, Blockchain, NFT, Metaverse

Given the novelty of the topic and the continuosly changing technology, there is not a specific textbook able to cover all the topics. Also for this reason, students who option for this course are strongly recommended to attend the class.

***TEACHING METHOD***

Interactive lectures; discussion of case studies and group projects; seminars by experts and professionals. Project group activities will be coordinated via Blackboard and other collaborative digital tools.

***ASSESSMENT METHOD AND CRITERIA***

The exam is in written form, using PC of the University digital room and it is structured in two parts:

1. *Multiple choices Test* (30% of the final grade) in 30 minutes, finalized to understand if the student has learnt and understood the main fundamentals, topics and principles of the course;
2. *Assignment* (70% of the final grade) in 2,30 hours,specifically addressed to evaluate if the student has absorbed the conceptual and methodological tools and is able to develop complex lines of reasoning interconnecting the different concepts and developing management suggestions.

 *Attendant students*

Attendance will be checked in class during the lessons. In addition to the final exam, attendant students can have the possibility to develop a group project and receive 0.50 to 1 point up the exam grade. The *Project work* is focussed on the business model development of a selected digital company or of a hypothetical start-up created by the team. The specific modalities will be communicated at the beginning of the course and made available on Blackboard.

*Not Attendant students*

There is no distinction between attendant and not attendant students, the program and the exam are the same for all, although not attendant students cannot take part to the the group project.

 Honors will be awarded at the discretion of the Professors.

***NOTES AND PREREQUISITES***

*Office hours*

For information on Professors’ office hours students are invited to check the lectures’ webpages.