Department: Operations, Information and Technology

[MDT] Managing Digital Transformation

Introduction

Building on the foundation laid in Module 2, 'The Digital Context,' where we examined the rise of cutting-edge technologies like Blockchain, Artificial Intelligence, Cybersecurity, and IoT, and their influence on today's business environment, this course pivots to focus on how these technologies are integral to the digital transformation of organizations. In the context of Silicon Valley, a nexus of technological breakthroughs, we will explore how companies utilize these innovations to fundamentally transform their operational and strategic frameworks. This course extends beyond merely adapting to a digital economy; it is about enabling incumbent organizations to reinvent themselves to stay relevant in a rapidly changing digital landscape.

In this course, we will immerse ourselves in the dynamic business environment of Silicon Valley, observing firsthand how companies are reshaping their operational strategies in response to the digital era's rapid advancements. This landscape presents both challenges and opportunities - challenging incumbent companies to evolve, while simultaneously opening new avenues for emerging players. A significant emphasis of this course will be on guiding these established companies through their digital transformation journey. This process involves a strategic and methodical approach to managing a digital transformation portfolio, which includes the identification and execution of pilot projects aimed at creating new business revenues, often inspired by the innovative technologies synonymous with Silicon Valley startups. Furthermore, it is imperative for these companies to acquire new capabilities, which span both technological and organizational changes.

Essential to this transformation is a cultural shift within these organizations, embracing innovation, agility, and a mindset aligned with the fast-paced changes characteristic of Silicon Valley. The goal of this course is not only to educate but also to inspire, using the unique culture and vibrancy of Silicon Valley as a model for successful digital transformation. We will also take a closer look at various industries that have been revolutionized by ICT advancements to understand how these changes are continuously shaping the competitive landscape, posing challenges to incumbents, and creating opportunities for new entrants.

Attached and on the virtual campus you will find all you need to be prepared for this course. This includes a description of the team project to be developed during the post-residential part and will be shared with GMV. Also, you will find for each session:

a)   A brief description of what the session is about

b)   A list of the material you need for the session

c)   Some assignment and discussion questions where appropriate

Objectives

Building upon the foundational concepts explored in 'The Digital Context' module, this course delves into the intricacies of digital transformation within organizations, emphasizing the 'why', 'what', and 'how' of this process. Set within the dynamic and innovative environment of Silicon Valley, the course offers a blend of case studies, interactive discussions, and hands-on workshops. Participants will gain a comprehensive understanding of digital transformation, equipping them with the necessary concepts, frameworks, and tools to drive innovation and digital initiatives in their organizations or to develop new digital ventures. The learning outcomes of this course include:

- **Understanding Digital Transformation**: Gain insights into the digital revolution's impact on businesses and industries.

- **Pilot Project Implementation**: Understand the importance of pilot projects in digital transformation, learning how to identify, implement, and scale these initiatives to create new business opportunities.

- **Acquisition of New Capabilities**: Recognize the need for acquiring new technological and organizational capabilities for successful digital transformation, including cultural shifts towards innovation and agility.

- **Adopting a Digital Mindset**: Embrace a digital mindset that aligns with the rapid pace of change in the digital world, inspired by the culture and ecosystem of Silicon Valley.

This course is designed not only to provide theoretical knowledge but also to inspire practical application, preparing participants to be at the forefront of digital transformation in their respective fields.

Competences

Basic

CB6. Possess and understand knowledge that provides a basis or opportunity to be original in the development and / or application of ideas, often in a research context.

CB7. The students know how to apply the knowledge acquired and their ability to solve problems in new or unfamiliar environments within broader (or multidisciplinary) contexts related to their area of study

CB8. The students can integrate knowledge and face the complexity of formulating judgments based on information that, being incomplete or limited, includes reflections on social and ethical responsibilities linked to the application of their knowledge and judgments.

CB9. Students know how to communicate their conclusions and the knowledge and ultimate reasons that support them to specialized and non-specialized audiences in a clear and unambiguous way.

CB10. Students possess the learning skills that allow them to continue studying in a way that will be largely self-directed or autonomous.

General

CG1 – To explain and discuss business situations in a rigorous, effective way using both formal and informal procedures, and providing relevant information to support their observations and conclusions.

CG5 – To identify the catalysts of personal and organizational change to foster the entrepreneurial and innovative behavior that makes it possible to adapt to changing business environments.

CG6 – To prioritize objectives, schedule activities appropriately, and execute them within the proper timeframe.

CG7 – To distinguish and categorize relevant information effectively for business decision making.

CG9 – To interpret the global context in order to analyze and judge the threats and opportunities facing the organization.

CG13 – To make and validate hypotheses on personal or business reactions to different decisions and circumstances in order to develop methodical, solid learning about oneself and one's organization.

Specific

CE1–To apply a structured, rigorous analysis process of business situations that encompasses all the dimensions of the business (personnel, strategy, finance, etc.) and concludes with the preparation of a reasonable, feasible action plan.

CE2 – To write organized, concise, and clear executive reports for analysis and decision making in business situations.

CE28 – To handle monitoring tools to help implement the company's strategy.

CE29 – To master information and communications technology tools (ICT's) for accounting, finances, operations, and sales management and in general for appropriate decision making.

CE30 – To analyze and understand the value chain of an industry or business to develop the corporate strategy.

CE34 – To understand and evaluate cultures of innovation and entrepreneurship within one's own business (intrapreneurship).

Content

The course navigates participants through the intricacies of a Digital Transformation journey, emphasizing the development and management of a Digital Transformation Portfolio. It aims to equip participants with a comprehensive understanding of both the technological and organizational capabilities required for spearheading successful digital changes in organizations.

This course starts with foundational knowledge in digital transformation, including the impact of emerging technologies, and methods to evaluate an organization's digital maturity. It then progresses to building a Digital Transformation Portfolio, focusing on strategy formulation, digital initiative planning, and implementing pilot projects to showcase potential transformations. A significant emphasis is placed on enhancing capabilities necessary for digital transformation, encompassing both technological advancements and organizational restructuring to foster a digital culture. The module further guides participants in scaling and integrating digital advances through effective portfolio management and stresses the importance of continuous innovation and adaptability. Finally, it addresses leadership and cultural aspects, developing skills for digital-era leadership and promoting a digital-first culture within organizations, ensuring participants are well-equipped to lead and support digital transformation initiatives.

This course goes beyond theoretical understanding, focusing on practical applications and strategic planning for digital transformation. It blends insights from Silicon Valley's culture of innovation with real-world case studies, providing participants with the tools and knowledge to navigate the digital transformation journey in their organizations successfully.

Evaluation

This course consists of pre-residential preparation, company visits and classes, and the elaboration of a team report during the post-residential period.

During the residential week in Silicon Valley, we will combine classes (both case discussions, interactive lectures and a workshops) with company visits/talks to/of leading players in the digital field.

The Post-residential period will consist of a final team project as well as an individual report.

The grading breakdown for this course is as follows:

- Class attendance and participation – 30%

- Consolidation period team assignment (i.e., project) – 35%

- Consolidation period individual assignment – 35%

The content of the sessions will be essential for both the team project and the individual paper.

Bibliography

Jeanne W. Ross, Cynthia M. Beath, Martin Mocker
Designed for Digital
MIT, 2019

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Competing on Analytics: The New Science of Winning
Harvard Business Review Press, 2017

Ulwick, Anthony W.
Jobs To Be Done. Theory to Practice
Idea Bite Press, 2016

Schildt, H.
The Data Imperative.
Oxford University Press, 2020

Kane, Gerald C., Phillips A. N., Copulsky, Jonathan R., and Andrus, Garth R.
The Technology Fallacy
Massachusetts Institute of Technology, 2019

Carmona, D.
The AI Organization
O'Reilly Media, 2020

Specialized journals:

MIT Sloan Management Review: sloanreview.mit.edu

Wired: www.wired.com

MIT Technology Review (https://www.technologyreview.es/

Fast Company: https://www.fastcompany.com/technology

Sustainable Development Goals (SDG)

SDG 3 – Good Health and Well-Being

SDG 4 – Quality Education

SDG 5 – Gender Equality

SDG 8 – Decent Work and Economic Growth

SDG 9 – Industry Innovation and Infrastructure

SDG 11 – Sustainable Cities and Communities

SDG 12 – Responsible Consumption and Production

SDG 16 – Peace, Justice and Strong Institutions

SDG 17 – Partnerships for the Goals

Professor's Biography

Prof. Javier Zamora

Professor of the Practice of Management

Javier Zamora is Professor of the Practice of Management in the Operations, Information and Technology Department at IESE Business School. He received his Ph.D in Electrical Engineering from Columbia University, and his M.Sc. in Telecommunications Engineering from the Universitat Politècnica de Catalunya. He also holds a PDG from IESE.

He is the academic director of the executive programs Executing Digital Change and *Transformación Digital* at IESE. His current areas of interest are focused on data-driven organizations and Artificial Intelligence and its impact on digital transformation.

Prof. Zamora's teaching spans across all IESE programs, from MBA to Custom, and is focused on the digital transformation of organizations through the knowledge and application of new digital technologies with special emphasis on the redesign of processes and the challenge for senior executives to develop a digital mindset. In custom training and consulting he has been involved in projects with leading organizations. He also regularly teaches at AESE (Portugal), IAE (Argentina), PAD (Peru) and ESE (Chile).

Prof. Zamora is co-founder of Inqbarna, a company specialized in the design, development and marketing of mobile experiences for smartphones and tablets. For eight years he was the General Manager of eNeo Labs, a company devoted to products and services for the digital home. His previous professional experience includes four years as Director of Product Development at Xbind in New York, a pioneering company in video transmission over data networks, and five years researching and implementing one of the first video-on-demand systems in the US at the Center for Telecommunications Research and the Image and Advanced Television Laboratory of Columbia University.

He served in the International Standard Organization (ISO) as editor of the MPEG-4 video standard. Javier Zamora is the author of five publications in international journals and fifteen technical contributions to standard bodies. He is the author of two international patents on digital home architecture and services. From 2005 to 2009, he designed and taught the class "Topics in New Technologies and Business" in the international Master of Science in Information and Communication Technologies Dept. as a visiting professor at Universitat Politècnica de Catalunya.