



MINISTERUL EDUCAȚIEI
IOSUD - UNIVERSITATEA „VALAHIA” DIN TÂRGOVIȘTE
ȘCOALA DOCTORALĂ DE ȘTIINȚE ECONOMICE ȘI UMANISTE
DOMENIUL: MANAGEMENT

HABILITATION THESIS

**Project management and
operationalization of technological
strategies in the knowledge-based
economy**

SUMMARY

Qualification field: **MANAGEMENT**

Author: Assoc. Prof. Mircea Constantin DUICĂ, PhD.

Târgoviște, 2021

SUMMARY

In the context of the globalization of flows of products, services and information and also taking into account non-renewable resources limitation, organizations must innovate and implement new technologies and collaboration strategies in order to increase the efficiency of value creating processes beyond their classical borders, by sharing information and knowledge to their partners through information and communication technologies (ICT). This approach is possible by operationalizing the strategic modalities of action, included in the strategic plans, in the form of projects. Such an approach allows to reduce risks, increases organizational flexibility and effective control of resources.

Also, the knowledge society, in which contemporary organizations carry out their activities, involves new procedures of information, communication and knowledge valorization in order to influence how business is organized.

In this context, the habilitation thesis *“Project management and operationalization of technological strategies in the knowledge-based economy”* is very timely, aiming to highlight the main scientific contributions in the field but also the academic career of the author - Assoc. prof. Mircea Constantin Duică.

The paper is structured in three parts that meet the methodological habilitation degree criteria, emphasizing the retrospective evolution of the author's professional and academic career, the main contributions to the improvement and development of management science but also the directions for his future evolution career.

The first part, *“Professional and scientific achievements”* highlights the professional evolution, scientific research activity and professional prestige after getting the doctor's degree at the *“Dunărea de Jos” University of Galati*, also including relevant information on academic career evolution over the past 15 years.

Academic positions held within *“Valahia” University of Targoviste* (Director of Quality Assurance, Vice President of the University Senate, Dean of the Faculty of Economics and Vice Rector), the activity carried out both as a teacher (within the Management-Marketing department), but also as a researcher (within the Center for Research and Applied Studies in Management and Marketing) allowed the author deeply know the managerial and academic processes in higher education institutions, but also the socio-economic issues within South-Muntenia region organizations. His experience facilitated participation in numerous project teams, as director or member, and to capitalize on the knowledge and results of scientific

research activities in numerous training activities or to address explicit economic and social needs of beneficiaries.

The second part of the habilitation thesis presents the major research directions in the field of management and details the main original scientific contributions to the management development, on three major research directions:

- study of the particularities of project management, in the context of the knowledge-based economy;
- work organization, organizational learning and supply / distribution chain management;
- strategic planning, technological strategies and sustainable development.

This part is structured in five chapters and describes the scientific contributions according to the main research topics addressed in the last 15 years of activity. If **the first chapter** lists the main major research directions approached in the field of management, describing the red thread of the scientific component of the habilitation thesis, **the second chapter** presents the particularities of project management in the knowledge-based economy with emphasis on the impact of new technologies, leadership, communication and risk management.

The third chapter includes the analysis of important aspects in the field of organization from the perspective of globalization and knowledge society impact. Starting from the organizational types and design typology which involves project management in order to increase organizational flexibility, we analyzed the organizational learning processes, specific to the knowledge society, but also the impact of ICT on the value chain. It is known that efficiency of many large contemporary organizations depends on information, technology and knowledge sharing, beyond classical organizational boundaries.

In **the fourth chapter**, after describing the levels of strategic planning and framing technological strategies in the management process, the author presented the organizational implications of this type of strategy, the operationalization ways through project management and also the technological promotion of circular economy and sustainable development.

The fifth chapter includes the conclusions of the scientific part of the habilitation thesis and also the main ideas and value judgments synthesis of the research subject.

The intensification of global competition, due to the limited nature of non-renewable resources, the unprecedented development of information and communication technologies, climate change and the intensification of digitization processes following the SARS CoV2 pandemic, determined organizations to adopt technological strategies to create sustainable advantages and to cooperate in supply chains, sharing information with customers or suppliers

beyond the classic organizational boundaries. In this context, contemporary organizations need to create flexible organizational structures that allow them to react quickly to changes in the environment, by developing market-oriented, highly innovative projects and to develop organizational learning mechanisms that allows them real integration into the knowledge-based economy.

In the knowledge-based economy, new technologies allow working in multidisciplinary teams (groupware), access, processing, storage and transmission of information more and more easily and at lower costs, which results in streamlining the specific activities of different processes, projects and activities through an optimal allocation of material, financial, human and informational resources. In this sense, the information can be valued by:

- development of integrated management information systems, which allow the provision, in a timely manner, of information to substantiate decisions,
- the use of artificial intelligence, data warehousing, the Industrial Internet of Things (IIoT), expert systems and business intelligence applications to increase the efficiency of the use of information in decision-making processes,
- the use of modern forms of organization that stimulate innovation and creativity of human capital and that streamline communication, while reducing bureaucracy and increasing staff self-esteem,
- investments in human capital, which will need to possess electronic and project management skills, communication skills and the use of new technologies,
- using mobile digital communication channels and social networks to promote products and services, selling them and collecting their value,
- the use of network techniques for scheduling the activities of complex projects and computer applications such as *Microsoft Project*, *Mac Project Planner*, *Primavera Project Planner*, *Leading Project*, which facilitate the planning and monitoring of project activities,
- use of mathematical modeling and simulation for economic, technological and social forecasts.

These things are possible only if they are considered by the management at the highest level in organizations and by developing organizational cultures, based on knowledge, with clear procedures for valuing and securing information, which make information and knowledge sources of competitive durable advantages.

Top management of organizations must encourage entrepreneurship and assume technological strategies that are operationalized, using project management, within flexible organizational structures, to develop new technologies, products or services. These projects will have to integrate the principles of sustainable development and the circular economy, which suppose that, from the design phase, new technologies and production capacities contribute to improving natural capital, optimizing the use of resources and minimizing the risks of the production system by managing finished stocks and renewable energy flows.

At the same time, organizations must find new ways to reduce the volume of waste, to better manage resource stocks and to optimize production and logistics processes, but also how to use modern management methods and techniques.

The third part of the paper outlines the future career development directions both from the perspective of teaching and scientific research objectives as well as from the perspective of national and international professional prestige.