ABSTRACT

**“THE ROLE OF LEAN MANAGEMENT TOOLS IN SHAPING**

**"INTELLIGENT ORGANIZATION"**

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The research problem addressed in the doctoral thesis is the need to develop traditional lean tools, which are key mechanisms for building productivity as a central feature of a lean organization, to the requirements of an environment characterized by unpredictable changes, in which the central development competence is resilience as a key attribute of an intelligent organization.

The first chapter of the doctoral thesis presents the fundamental aspects of the concept of a lean organization. It begins by explaining the definition and key features of a lean organization, then proceeds to discuss Lean Management as the main management strategy, as well as tools supporting its implementation. The chapter concludes with an overview of the evolution of Lean Management, showing how the concept has adapted to changes in various industries and business environments.

The second chapter of the doctoral thesis is devoted to the concept of intelligent organization. It discusses the definitions and characteristics of this type of organizations, with an emphasis on their ability to learn and adapt. The key role of digitalization in shaping intelligent organizations was pointed out and the importance of knowledge management as a basic management concept was emphasized. It also reviews the evolution of the intelligent organization, showing how this concept has developed in response to technological and market changes. The chapter ended with the analysis and selection of Lean Management tools in terms of their ability to support the characteristics of an intelligent organization. It discusses how lean tools can be used to build flexibility, the ability to learn quickly, innovation and resistance to change. The criteria for selecting tools are presented, taking into account the specificity of the functioning of intelligent organizations and the need to adapt them to the dynamically changing business environment.

The third chapter of the doctoral thesis is devoted to presenting empirical research and the implementation model developed on their basis. This chapter consists of three main sections: empirical research methodology, empirical research results and description of the implementation model. The first part of this chapter describes in detail the methodology of the empirical research conducted. The research techniques used were presented and their selection was justified in the context of the research objectives. The process of selecting the research sample and the tools used to collect and analyze data were also discussed. The second section presents detailed results of the conducted research. The collected data were subjected to statistical analysis and interpretation, which allowed conclusions to be drawn regarding the phenomenon under study. This section also discusses how the research results influenced the development of theoretical assumptions and the construction of the implementation model. Key conclusions are presented, which constitute the basis for further analyzes and implementation work. The last section of the chapter focuses on the description of the developed implementation model. This model was designed on the basis of conclusions drawn from empirical research and aims to apply lean tools in the transformation of the Bischof Klein manufacturing company towards an intelligent organization. Its structure, implementation stages and expected benefits were discussed in detail. Assumptions regarding the implementation of the model in real conditions and possible difficulties that may arise during this process are also presented. This chapter is a key element of the work, combining theoretical analyzes with practical applications, which allows the research results to be translated into real implementation solutions.

The last chapter of the work, which concludes it, summarizes the main conclusions from research on the role of Lean Management tools in shaping an intelligent organization. The chapter presents a synthetic analysis of the results, emphasizing how effectively selected Lean tools can support the development of features characteristic of an intelligent organization, such as flexibility, innovation and adaptability. Attention was paid to the practical implications of the study for managers, pointing out the importance of integrating Lean tools with modern management strategies. The conclusion also addresses future research directions, suggesting further exploration of synergies between Lean Management and intelligent organizations.