

Abstract of the doctoral dissertation

written under the scientific supervision of Professor Aleksandra Kuzior, DSc, PhD, Silesian University of Technology, entitled: *“Implementation of a dynamic business process management model in Sumitomo SHI FW Energia Polska Sp. z o.o.”*

The dissertation is devoted to the issue of dynamic business process management in the context of a changing economic environment, with particular emphasis on the energy sector. The starting point of the study was the observation that traditional management models, based on a functional approach, do not provide organizations with sufficient flexibility and adaptability. The literature analysis indicated the existence of a research gap: the lack of a complete process management model that would support organizations in dynamically responding to environmental changes, while being consistent with the requirements of the international ISO 9001:2015 standard and its dynamic elements introduced in the most recent edition. At the same time, such a model should be applicable to organizations of different sizes.

The main objective of the dissertation was to identify the factors determining the dynamics of process management and to use them in the conceptualization and implementation of a dynamic process management model in Sumitomo SHI FW Energia Polska. The dissertation is both theoretical and empirical in nature: the theoretical part includes a review of the literature and normative requirements, while the empirical part focuses on the assessment of the organization's process maturity, the study of factors influencing the dynamics of management, and the implementation of the author's model.

The research resulted in the development of a dynamic process management model compliant with ISO 9001:2015, enabling the organization to respond proactively to changes in the business environment. The model is based on mechanisms of monitoring the environment and stakeholder expectations, identifying risks and opportunities, and designing flexible processes. An additional result is an original process modeling scheme that does not require specialized software, making it accessible also for small and medium-sized enterprises.

The conducted research confirmed that implementing the model in practice increases the organization's ability to adaptively and effectively manage processes while supporting compliance with international standards. The developed solutions are of a universal nature and can be applied across a wide range of organizations, constituting a contribution both to the development of management science and to management practice in industrial enterprises.

Thus, the main objective of the dissertation was achieved. Moreover, the work defined and implemented specific detailed objectives:

Cognitive objectives:

- systematization of knowledge in the field of process management,
- review of methods and tools supporting process management,
- review of approaches to process management, including available models.

Practical objectives:

- assessment of the completeness and compliance of SFW EP processes with the ISO 9001:2015 standard,
- assessment of the process maturity level of SFW EP,
- evaluation of factors determining the dynamics of process management,
- conceptualization of a dynamic process management model compliant with ISO 9001:2015,
- implementation of the model in SFW EP,
- development of a process mapping scheme as a recommendation for the SFW Global group.

The hypotheses formulated in the dissertation were positively verified.

The dissertation consists of five chapters:

- Chapter One introduces the subject matter, presents the rationale for the research problem, and highlights its practical and scientific significance.
- Chapter Two presents the research methodology, the conceptual framework of the dissertation in relation to the identified research gap, and defines the main objective, detailed objectives, research questions, and hypotheses. It also describes the subject and object of the study.
- Chapter Three discusses the results of the literature review, covering the development of process management concepts, process maturity, process management models, and methods and notations of process modeling.
- Chapter Four contains the empirical part of the dissertation – the results of research in Sumitomo SHI FW Energia Polska, including the assessment of process maturity, the evaluation of factors determining the dynamics of process management, and the conceptualization of the author's dynamic management model.
- Chapter Five summarizes the dissertation – presenting conclusions, verifying hypotheses, evaluating the achievement of the main objective, and highlighting the theoretical and practical values of the developed solution. The chapter concludes with reflections on limitations and directions for further research.

In conclusion, the dissertation addresses an identified research gap and makes a significant contribution to the development of knowledge in the field of process management, presenting a model that combines compliance with quality standards with the requirement of dynamic adaptability to a turbulent economic environment.