

Improvements in the process of managing research and development projects, upgrading the effectiveness of managing research and development projects implemented in the area of defence and state security.

SUMMARY

The doctoral dissertation entitled „**Improvements in the process of managing research and development projects, upgrading the effectiveness of managing research and development projects implemented in the area of defence and state security**”, as intended by the author, concerned the identification of popular approaches, methodologies and standards for R&D project management, opportunities and needs of adopting them, and the role of a project manager and other project team members. That information had to be compared with the management process requirements set by the financing and controlling institution in order to present possible changes to the project management process to increase its effectiveness.

Taking advantage of research methods including but not limited to analysis, abstraction, synthesis, comparison and inference of the literature on the subject, theoretical foundations were collected covering the explanation of the phenomenon of the process, and project as well as operational and project activities in organizations.

The dissertation presents an analysis of the legal basis for the functioning of the National Centre for Research and Development and the methods of conducting competition procedures by them for the implementation of projects for the defence and security of the state.

According to the subject and purpose of the research, the main research problem of the dissertation was determined by the question: *What changes should be made in the process of managing research and development projects for defence and national security in order to execute them effectively?* As part of the research, a hypothesis was verified, which is an assumption that: *in the currently used project management processes, elements related to managing the involvement of project stakeholders should be developed, which I consider a crucial factor for the project's success. Project stakeholders (as people who have a greater or lesser impact on the project or are affected by the project in any way) can significantly contribute to increasing the*

efficiency of work as well as obtaining benefits resulting from correctly identified, designed and delivered project products.

The main reason why the author undertook to write this doctoral dissertation, on the one hand, was the professional experience collected during the participation in projects, including research and development projects, also those realised for the defence and state security, and, on the other hand, the desire to improve the effectiveness of the research and development projects in the aforementioned area by increasing the effectiveness of the project management process.

Based on the literature on the subject as well as his own experience from participation in both research and development and commercial projects realised for domestic and foreign recipients, using multiple methodologies and standards, the author decided to collect elements that, in his opinion, contributed to the success of these projects and propose improvements described in this dissertation.

The dissertation, putting aside the introduction and ending, consists of four substantive chapters:

- Chapter 1 – Methodological basis of research;
- Chapter 2 – The role of processes in organizations conducting research and development works;
- Chapter 3 – Processes supporting the management of a research and development project in the area of national security;
- Chapter 4 – The concept of national security research and development project management process.

The first chapter discusses in detail, the subject and purpose of the research, the research problem, working hypotheses and methods and techniques used for empirical research.

The second chapter presents the theory, specificity and role of processes in the operational and project activities of the organization. It introduces the concepts of process, and project including their management activities. This section of the thesis also describes the legal basis for the functioning of the National Centre for Research and Development and the methods the Centre implements the competition procedures.

The third chapter presents approaches to project implementation as well as popular project management methodologies and standards: PMBOK, PRINCE2 and Scrum. It also presents the areas of project management necessary to prepare an

application for project financing and other requirements regarding the project management process set by the National Centre for Research and Development.

The fourth chapter is the empirical part of the work, covering the author's research, taking into account the opinions of experts as well as his own observations. They are the basis for proposing improvements in the process of managing research and development projects implemented for defence and national security.

The doctoral dissertation is an overview of knowledge in the field of the discussed subject and is a collection of comprehensive content relating to the process of project management, including research and development in the field of defence and national security. The conducted analysis of the literature allowed for the creation of a compact, innovative and exhaustive study of the main research assumptions.