

The doctoral dissertation titled „Security control system in air transport in Poland between the years 2015–2022” presents issues inside the management within the control system in the air transport and actions taken to improve overall air services. Ensuring safety in the air transport is rationality in information management, understood as high competence in solving problems arising from unawareness and irresponsibility.

This dissertation of an introduction five chapters, a conclusion, a bibliography and appendices.

The first chapter presents the subject and purpose of the research. In addition, the main research problem and detailed problems as well as the main hypothesis and detailed hypotheses are presented. Research methods, techniques and tools were also discussed. The last part of the methodological chapter presents the research sample and the research area.

The second chapter indicates the specificity of the functioning of the security control system in air transport. The safety system and its role in air transport are described, as well as the threat to the security system with and without the human factor are characterized, as well as the legal aspects of the air traffic safety system are presented.

The third chapter indicates the determinants of control effectiveness as an element of systemic solutions. In addition the role, powers and responsibilities of the security manager in the organization, individual departments and units were discussed. The technical devices used to carry out security checks were characterized, as well as the course and rules of security control for passengers non-passengers, baggage and other items. The final part presents the essence of security checks at airports in the European Union, the United States and Canada.

The fourth chapter presents a safety analysis in the light of own research. Attention is paid to action and initiatives taken in relations to threats. The area of research and characteristics of the selected group are presented. The next part presents an assessment of the achieved results, as well as information about the problems raised but not solved or not fully resolved. The final part presents the proposed solutions in the studied area. The end of dissertation indicates conclusions and observation from research and research and detailed, hypotheses were also verified.

The fifth chapter indicates the concepts of changes in the functioning and control system, procedures, at airports, aviation, organizations.

Today’s reality forces a thorough analysis of the level of safety of the air transport system. Introducing technological innovations such as monitoring and data analysis systems can help improve the effectiveness of the system. Training the air transport security Staff in advanced passenger screening procedures, including identity and baggage verification using devices such

as scanners and dangerous substance detectors, can help minimise risks before boarding and provide greater protection. Staff members play a key role, therefore it is important to have the right qualifications and skills. The management philosophy is to combine the strengths of each employe in order to create an experienced and competent team, incase of an emergency situation where there is little time to react and make a decision. Improving transport regulations, including improving procedures and introducing new tools to prevent and, where necessary, react quickly to minimise the risk of accidents. Methods and procedures for communicating in aviation organizations ensure success in achieving goals. Introduction of common security standards and coordination of activities, which must work in harmony with strictly defined procedures in case of incidents and threats. Methods and procedures for communicating in aviation organizations ensure success in achieving goals. Introduction of common security standards and coordination of activities, which must work in harmony with well-defined procedures for incidents and threats.

The presented research results revealed to the level of risk of threats. The acquired knowledge allowed to identify the level of making mistakes, violations in the course of performing activities in tasks.

#### **Słowa kluczowe**

bezpieczeństwo, kryzys, lotnictwo, ochrona, pilot, procedury, system, załoga, safety, security, aviation, pilot, crew, procedures, systems, crisis.