

## **STRESZCZENIE W JĘZYKU ANGIELSKIM**

### **The impact of IT systems on the functioning of the Aircraft Maintenance Service in Polish Air Force**

The work of the Aircraft Maintenance Service (AMS) is an essential element of the work of units belonging to the Air Force of the Republic of Poland. Considering the systematic expansion of the Polish Air Force, the increase in the complexity and diversity of the aircrafts used, IT systems have become an indispensable element of the work of the aviation and engineering service. This dissertation analyzes IT systems currently in place, based on available data and expert interviews with their users. Their advantages and disadvantages were determined, and from the conclusions of the research recommendations for improvements and unification of the functioning systems are made. Such changes would have a positive impact, among other things, on communication between AMS staff and logistics section employees.

As a summary of the analyzes undertaken, an algorithm of actions for AMS staff in the event of equipment failure is presented. It can be assumed that the presented solution would improve the flow of information between individual units of the technical service group and the aviation and technical supply team. Considering the complexity of the work performed by ground handling staff, their number, diversity and increasing technological progress, the implementation of artificial intelligence tools was proposed as an important aid in everyday activities related to aircraft ground handling.

The conclusions drawn from the dissertation made it possible to determine the impact of computerization on the quality and efficiency of work of the technical service group staff. The innovativeness of the presented content results from analyzes presented for the first time in literature regarding the observations of employees of discussed sector and the development of own strategies for modifying and expanding existing IT systems. In the light of developing artificial intelligence tools, taking into account this type of solutions in preparing the development strategy of the Polish Air Force is becoming particularly important.

**Keywords:** air force, aircraft maintenance service, IT systems, artificial intelligence, logistics support.