

Chapter 9

Operationalization of Digital Technologies and Skills in Public Services: The Robots in Security Policies

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ABSTRACT

This chapter explores the changes in security processes caused by robots used in various functions in different areas of public security and their effects on strategy and policies. The chapter predicts robots in public security may have various results in two perspectives. The first addresses the use of robots as a tool for ensuring public security, requiring an increase in the digital skills of individuals and developing their capacity to adapt to these technologies. The second perspective considers the robots directly replacing people's positions and become an employment subject. Building a hybrid approach based on these perspectives, the chapter conveys the development of robot technology and how robots are integrated into public security policies. Finally, it gives a case study on the USA, which emerges as the most concrete and saturated example of robotics in security developments, and Türkiye, which the researchers, have selected as an excellent example in terms of both familiarity and relative development difference as their homeland.

DOI: 10.4018/979-8-3693-6547-2.ch009

INTRODUCTION

The literature on the association of robots with security policies focuses more on technology from defense industry. Even at a very early stage, Boddy and Lovering (1984) draw attention to the critical impact of technology on the formation and continuity of the high-tech sector in defense facility-located regions by the air defense production and the procurement policies of the Ministry of Defense. In a more recent study by Bezuidenhout and Bean (2022), the focus continues to be on the importance of focusing on operational processes rather than mechanisms between the supplier and the buyer, emphasizing the importance of local buyer management, financial resources and planning, supply chain management, and local production planning as critical factors in the efficiency of the process. Thus, in the process, the benefits of Industry 4.0, such as improved quality control, increased efficiency, enhanced security, and optimized supply chains (Ullah et al., 2024), provide a more optimal integration of technology into security policies. Focusing on more specific security applications, advanced technologies that enable early recognition and monitoring of various threats to national security come to the fore. The rapid advancement of advanced sensor devices, the significant increase in usable computing power in embedded designs, and the development of air and ground uncrewed vehicles offer vast opportunities to combat various pathologies affecting national security (Nawrat et al., 2018). Similarly, the preliminary credibility assessment screening system (PCASS) shows that the sensors provide security forces with reliable technologies to identify and neutralize internal threats (Reis et al., 2021). Therefore, for a technology-driven advanced security policy, it is possible first to fulfill operational capabilities and requirements and create technological conditions to support them (Debicka, 2018).

In the context of public security policies, defense robots are used by armies and security forces (Khurshid et al., 2004, pp. 771-773). It aims to protect soldiers from harm as much as possible while enhancing their abilities. Defense robots make a military and tactical contribution by providing various advantages to their elements (Work & Brimley, 2014, pp. 22-25). On the other hand, their most important function is to protect soldiers. They are also used to carry heavy equipment needed in the field, to hold soldiers back in dangerous situations, and to rescue injured soldiers on battlefields. Robots produced for defense can be reconfigured for attack capabilities by making various modifications. Defense robots are now essential for armies and law enforcement agencies, whether used in modern battlefields or for security purposes (Scharre, 2014, pp. 44-47).

With a significant contribution potential to the existing knowledge by directly focusing on robotic applications, this chapter examines the transformative impact of rapidly developing robotics on public security policies. It explores the changes in security processes caused by robots used in different functions in different ar-

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