

# Chapter 4

## AI-Driven Tools for Sustainable Public Administration: Identification of Potential Barriers to AI Adoption in Public Administration Including Technological

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### **ABSTRACT**

*This chapter examines the technological, economical and societal obstacles that may prevent Artificial Intelligence from being widely used in public administration. In order to fully utilise AI's potential to improve public administration, obstacles must be addressed. Adoption of AI necessitates a large initial financial outlay, which is sometimes limited by financial constraints and conflicting goals in the public sector. Additional financial strains are incurred by long-term maintenance and training costs. Social resistance to AI originates from worries about data privacy, distrust of automated systems, and fears about job displacement. Furthermore, the acceptance of AI may be slowed down by public awareness of its ethical ramifications. In order to fully utilise AI's potential to improve public administration decision-making, efficiency, and transparency, it is imperative that these obstacles be addressed. This chapter gives a detailed analysis of these barriers, offering stakeholders and policymakers insights in advancing AI adoption.*

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## INTRODUCTION

Artificial intelligence adoption in government might transform public service delivery, improve decision-making, and completely change the way government functions. However, we must consider a few potential obstacles to the use of AI in public administration.

Artificial intelligence (AI) adoption in the public administration sphere presents a potential for transforming the public administration holistically. AI not only improves service delivery but also increases efficiency and effectiveness. Despite the good that may be presented by AI adoption, it must be noted that AI is fraught with barriers in the public administration space, and these barriers fall under three main categories, namely financial, social, and technological. This chapter seeks to identify and examine these potential barriers in the public administration sector. Identifying AI barriers will assist in ensuring that there is a smooth adoption of strategies relevant to AI adoption and a smooth integration of AI adoption in public administration.

Most of the current knowledge about AI innovation in the public sector comes from theoretical perspectives and in-depth case studies of specific AI tools that are still in the early stages of development and implementation, showing how organisational, technical, ethical, and legal barriers obstruct the adoption of AI (van Noordt, Misuraca & Mergel, 2024).

Regarding technology, there are challenges prone to infrastructure in the process of trying to blend the old systems, which may be incompatible with AI adoption. This poses a significant threat to the adoption of AI, especially when considering the sensitive nature of government data across various public administration domains. The primary obstacle is the technological barrier. The development of AI applications for the public sector necessitates the machine-exploitable formalisation of a wide range of data, as well as the knowledge of governmental experts. Wirtz et al. (2021) denote that this procedure can be intricate and resource-intensive, particularly in the public sector, where data may be fragmented, unstructured, or segregated across various agencies. The public sector frequently lacks the infrastructure and technical know-how necessary to install and manage AI technologies, further hindering adoption. (Misuraca & Noordt, 2020).

Financial barriers are a significant obstacle. When embarking on any project, finances are key. With inadequate finances, it becomes a challenge to invest in the equipment, personnel, and systems required to adopt AI. In addition, the continuous maintenance and servicing of infrastructure necessitates financial resources. With limited finances, it becomes extremely challenging to implement and maintain the AI adoption process. Furthermore, securing funding in public administration presents a greater challenge compared to private enterprises. In public administration,

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