


# Chapter 4

## Examining the Challenges of Adopting Modern Technologies in Public Sector Human Resource Management

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### **ABSTRACT**

*HRM in the public sector is undergoing digital transformation, presenting opportunities and challenges. This chapter examines ethical considerations, strategic planning, teamwork, monitoring, and adaptation. It addresses algorithmic bias, emphasizing transparency, accountability, and fairness. The digital divide and equal access are crucial. Interagency collaboration and compatibility enable effective information exchange. Ongoing monitoring and adaptability maximize technology usage and employee satisfaction. Recruitment, Onboarding, Performance Management, and Engagement Technologies are explored. Communication, change leadership, and legal factors are highlighted. This chapter provides a roadmap for successful digital transformation, encompassing ethics, collaboration, inclusivity, and technology integration.*

### **INTRODUCTION**

Recent technological advancements have significantly impacted various industries, including human resource management (HRM) (Kim, Wang & Boon, 2021). Public sector organisations recognise the need to leverage technological advancements to enhance HRM effectiveness, efficiency, and employee satisfaction (Ogedengbe et al., 2023). However, implementing modern technologies in public sector HRM comes with unique challenges that require careful planning (Cho, Choi & Choi, 2023). This chapter aims to provide an overview of the digital transformation taking place in public sector HRM and to establish

DOI: 10.4018/979-8-3693-2889-7.ch004

the context and importance of digital transformation in public sector HRM processes. The chapter also explores the classification of modern technologies commonly adopted in public sector HRM and examines various types of modern technologies used in recruitment, on-boarding, performance management, and employee engagement within the public sector. It also identifies the challenges in implementing modern technologies in public sector HRM. The chapter further discusses the common obstacles faced by public sector organisations when implementing digital HRM initiatives, including resource constraints, cultural barriers, data privacy concerns, digital skills gaps, compatibility issues, and ethical considerations.

Strategies for successful implementation of modern technologies in public sector HRM are provided through guidance on building a digital readiness framework, change management, stakeholder engagement, and upskilling HR professionals to overcome implementation challenges and ensure successful adoption of modern technologies. The chapter highlights real-world examples of public sector organisations that have effectively implemented digital HRM processes, offering insights and lessons learned and provides insights on globalisation of such HRM processes in the global south. The chapter explores the potential impact of emerging technologies, such as artificial intelligence, robotic process automation, enhanced data analytics, virtual and augmented reality, blockchain, and the ethical and social implications of technology adoption.

Public sector organisations have a critical role in delivering public services to citizens (Wirtz & Müller, 2023). The adoption of modern HRM technologies can greatly impact their efficiency, effectiveness, and employee satisfaction (Agustian, Pohan & Zen, 2023). Kambur and Yildirim (2023) highlight that digital transformation in HRM enables public sector organisations to improve data management, automate administrative tasks, and streamline processes. By leveraging these technologies, talent acquisition and retention can be enhanced through optimised workforce planning, recruitment, and selection procedures. Digital HRM tools, as mentioned by Shukla, Mishra, and Agnihotri (2023), enable easier access for employees to update personal data, submit leave requests, and manage performance.

The adoption of contemporary HRM technologies in the public sector enables data-driven decision-making (Colombari & Neirotti, 2023). Analytics and predictive modelling provide insights into skill gaps, inform targeted training programs, and offer workforce trend analysis. This data-driven approach improves decision-making and enables efficient resource allocation. Digital HRM technologies also contribute to increased employee engagement and satisfaction (Mer & Srivastava, 2023). User-friendly self-service platforms empower employees to manage their HR-related responsibilities, reducing administrative workloads, enhancing accessibility, and fostering transparency and empowerment.

## **Overview of Digital Transformation in Public Sector HRM**

Public sector HRM differs from the private sector as it prioritises the public interest and social responsibility. Transparency, fairness, and equity are crucial in Human Resources (HR) practices (Hammon, Gillis & Icenogle, 2023). Legal and regulatory complexities are prominent, requiring compliance with various laws and guidelines (Shahaab et al., 2023). Budgetary constraints, political influence and public scrutiny are common issues that the public sector must contend with (Di Carlo, 2023). Balancing efficiency, talent retention, and high performance is difficult due to diverse employee skills and motivations in the public sector. Therefore, managing a multi-generational workforce, promoting diversity, and fostering engagement are essential to strike the balance, (Kirtzalidou, 2023). Research has shown that digital transformation offers both opportunities and challenges for public sector HRM. Utilising modern technologies such as data analytics, machine learning, and artificial intelligence (AI) enables data-driven

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