

The Impact of Digitalization and Artificial Intelligence on Public Sector Financial Reporting: Opportunities, Challenges, and Future Directions

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Abstract

The rapid advancement of digital technologies and artificial intelligence (AI) is transforming public sector financial reporting by enabling greater efficiency, accuracy, transparency, and accountability. This paper examines the impact of digitalization and AI on public sector financial reporting in Malaysia, with particular emphasis on the opportunities and challenges associated with their adoption. Using a conceptual and literature-based approach, the study synthesizes existing research and Malaysian policy initiatives to identify the key implications of emerging technologies for public financial management. The analysis indicates that digitalization and AI provide significant opportunities through enhanced process automation, improved transparency and accountability, stronger fraud detection and risk management, data-driven decision-making, and long-term cost efficiency. However, their effective implementation is constrained by several challenges, including shortages of skilled personnel, fragmented legacy systems and data silos, cybersecurity and privacy risks, regulatory and ethical gaps, and high implementation costs, particularly among smaller public agencies. The paper therefore proposes targeted upskilling and reskilling programmes, a unified data governance framework, strengthened cybersecurity infrastructure, clear ethical guidelines for AI adoption, and greater utilisation of scalable cloud-based solutions. The study contributes to the emerging literature by highlighting the need for a balanced digital transformation strategy that integrates technological innovation with institutional readiness, governance, and human capabilities. Addressing these issues is essential for Malaysia to realise the full potential of digitalization and AI in achieving more efficient, transparent, accountable, and sustainable public sector financial reporting.

Keywords: Artificial Intelligence, Digitalization, Public Sector Financial Reporting, Digital Transformation, Malaysia

Introduction

The rapid advancement of digital technologies has fundamentally reshaped global governance, triggering a paradigm shift in how financial information is managed, processed, and reported in the public sector. In recent years, the global public sector has witnessed an unprecedented digital transformation driven by Industry 4.0 technologies. Increasingly, governments worldwide are adopting artificial intelligence (AI), blockchain, big data analytics, and cloud computing to modernize financial reporting, enhance transparency, and strengthen public accountability (Gunasilan, 2024). These developments are not merely technological upgrades; rather, they represent a critical institutional response to growing stakeholder expectations for real-time, reliable, and transparent financial information.

Theoretically, this evolution is deeply rooted in Public Accountability Theory, which posits that governments hold a fiduciary duty to provide transparent and timely accounts of public funds to ensure democratic oversight. Traditional public accounting methods—characterized by siloed manual processes, retrospective data entry, and fragmented systems—are increasingly inadequate in a volatile socio-economic landscape. These legacy methods often lead to delayed reporting and information asymmetry, which ultimately erode public trust (Benbunan-Fich et al., 2020). To mitigate these challenges and bridge the trust deficit, public institutions must navigate institutional pressures to transition toward digitalized infrastructure. Looked at through the lens of Institutional Theory, this digital migration represents a structural alignment where agencies adopt advanced technologies to secure public legitimacy and meet modernized regulatory standards. Digitalization offers multifaceted benefits: it accelerates data processing velocity, eliminates human error through robotic process automation (RPA), and fosters open governance by making financial insights universally accessible. Within this ecosystem, AI plays an increasingly pivotal role by deploying machine learning algorithms to detect accounting anomalies, optimize predictive risk modeling, and automate complex auditing functions before financial discrepancies escalate.

In the context of developing economies, Malaysia serves as a compelling and highly relevant case study for this digital migration. The Malaysian government has demonstrated a robust institutional commitment to integrating emerging technologies into public service delivery, as formalized through macro-level policies such as the MyDIGITAL Blueprint (2021), the National AI Roadmap, and the strategic establishment of the National AI Office (NAIO). These initiatives explicitly aim to streamline administrative operations, eradicate bureaucratic redundancies, and fortify public confidence in national financial management. By integrating AI, the Malaysian public sector gains the capacity to process massive volumes of budgetary data, identify structural anomalies in real time, and generate actionable predictive insights to inform macroeconomic decision-making.

Despite these strategic objectives, a significant research gap persists in contemporary literature. While current studies extensively document the adoption of AI and automated digital tools in the private commercial sector, empirical research focusing on the realities, systemic barriers, and governance outcomes of AI integration within *public sector financial reporting*—particularly within the unique institutional landscape of a developing nation like Malaysia—remains remarkably scarce. Most existing public sector literature remains conceptual or confined to general e-government services, leaving the specific intersection of AI, public accounting standards, and administrative culture largely under-explored.

Investigating this topic is highly justified and urgent, as the public sector operates under rigid regulatory frameworks and distinct accountability metrics that differ fundamentally from commercial enterprises. Public institutions face deep-seated systemic challenges, including uneven digital infrastructure across state and federal agencies, acute digital literacy gaps within the civil service workforce, stringent cybersecurity vulnerabilities, and a legacy institutional culture resistant to technological disruption. Consequently, integrating these advanced tools requires sophisticated change management and a paradigm shift in administrative behavior. By evaluating these dynamics, this study addresses a critical gap in literature, offering timely empirical insights into how digitalization and AI can be successfully leveraged to build transparent, efficient, and accountable public institutions, thereby strengthening national governance and public trust in the financial system (Gunasilan, 2024).

This paper aims to explore the impact of AI and digitalization on public sector financial reporting, focusing on both the opportunities and the challenges. The main objectives of this study are threefold:

To explore how AI and digitalization are currently applied in Malaysia's public sector financial reporting.

To identify the key opportunities offered by these technologies, particularly in enhancing transparency, accuracy, and fraud detection

To analyse the challenges associated with their implementation, along with potential recommendations for improvement.

Literature Review

The integration of digital technologies, particularly artificial intelligence (AI), into public sector financial reporting has gained considerable attention in both global and Malaysian academic literature. The concerns arise particularly in relation to promoting transparency, improving efficiency, and strengthening accountability, which are the core pillars of good governance. The adoption of AI in financial processes has been shown to improve audit quality and enhance the detection of anomalies. In a conceptual study on external auditing, Leocádio et al. (2024) argue that AI tools help auditors identify irregular patterns in financial data and support the planning and execution of more accurate audits. Such tools are particularly valuable in the public sector, where fraud prevention and public accountability are critical.

Another opportunity of AI is the automation of routine accounting functions. AI and digital automation are increasingly used to streamline financial operations, improve auditability, and support detection of fraud through analysing complex datasets (Zgarni, 2026). This integration thereby reduces manual errors and allows financial officers to focus on strategic analysis. In addition, Lee & Tajudeen (2020) highlight that this shift has already begun to reshape the roles of Malaysian accountants, including those in government-linked institutions, as they move away from repetitive work toward more analytical responsibilities. Beyond operational efficiency, national policy frameworks have also provided institutional support for digital transformation. Malaysia's MyDIGITAL Blueprint, National AI Roadmap, and the establishment of the National AI Office (NAIO) reflect a coordinated governmental push to embrace AI and emerging technologies across public services. These frameworks serve as strategic enablers for modernizing public financial systems and embedding

accountability mechanisms through real-time data access and transparent reporting (The Borneo Post, 2025).

Despite these opportunities, numerous challenges persist. According to Adnan et al. (2024) the most cited issues is the digital skills gap within the public sector workforce, many civil servants, especially in traditional financial roles, may not possess the technical knowledge required to effectively implement or manage advanced systems, leading to underutilization or misuse of these systems. Similarly, according to a study by Wan Mohamad Noor et al. (2024), over 80% of organizations in Malaysia, including those in public finance face difficulties in recruiting professionals with sufficient AI and data analytics expertise. The shortage of skilled personnel limits the ability of government agencies to deploy and maintain sophisticated digital systems effectively. Legacy infrastructure also poses significant obstacles. Outdated IT systems, siloed databases, and fragmented governance structures often hinder the smooth integration of digital tools. These outdated infrastructures are often incompatible with new AI-powered platforms, leading to inefficiencies and delays in implementation (Adnan et al., 2024). Apart from that, it often requires significant investment in infrastructure upgrades and cross-department coordination (OECD, 2020).

Another major concern is regulatory and data governance. Public agencies manage large sensitive financial and personal information, making them vulnerable to cyberattacks or misuse of data. This condition forces data protection to be considered as top priority. Establishing clear policies for data privacy, accountability, and the responsible use of AI remains a critical step in ensuring public trust. Compliance with frameworks such as the Personal Data Protection Act (PDPA) and Risk Management in Technology (RMIT) introduces complexity when integrating new technologies into public sector environments. Shafie et al. (2023) argue that navigating these legal and procedural requirements requires considerable institutional readiness and inter-agency coordination. Finally, organizational culture and resistance to change also emerge as recurring themes. Employees in public institutions may be wary of automation, fearing job displacement or loss of control over decision-making processes. Overcoming such resistance requires thoughtful change management strategies, transparent communication, and adequate training to build confidence and trust in new systems.

Opportunities For Public Sector Financial Reporting

The rapid advancement of Artificial Intelligence (AI) and digitalization has significantly influenced public sector operations in Malaysia, including financial reporting, where AI-powered systems enhance efficiency, accuracy, and governance (Nabilah, 2024). National policies such as the Malaysia Digital Economy Blueprint (MyDIGITAL, 2021) and the National Artificial Intelligence Roadmap (2021–2025) highlight the government's strategic commitment to integrating AI and hybrid cloud infrastructure, targeting 80% public data migration by end-2022 to support smart public finance (The Edge, 2021). These developments underscore both the transformative potential and the practical challenges of adopting AI-driven solutions in public financial reporting, including digital infrastructure readiness, data governance, and alignment with government objectives of accountability and transparency. The rapid advancement of Artificial Intelligence (AI) and digitalization has brought numerous opportunities to public sector financial reporting, including enhanced efficiency and data automation, improved transparency and accountability, better fraud detection and risk

management, data-driven for effective decision making and long-term cost efficiency. The explanations for each point are provided below:

i. Enhanced efficiency and data automation

The integration of AI and digital systems has greatly improved efficiency within Malaysia's public sector financial reporting processes. The Ministry of Finance (MOF) has actively implemented e-payment and e-invoicing mechanisms that minimize human error and reduce processing time by linking digital invoices directly to financial systems for automatic reconciliation and real-time tracking. According to the Malaysia Digital Economy Blueprint (MyDIGITAL), the government set a national target for 80% of public services to be end-to-end online by 2025, including those related to budgeting, auditing, and financial transactions (Economic Planning Unit, 2021). Furthermore, robotic process automation (RPA) is increasingly applied in departments such as the Inland Revenue Board and the Ministry of Health to speed up repetitive data entry tasks and improve overall operational accuracy (Magdaleena Kowalczyk, 2024). This shift reduces dependency on manual processes and enables financial officers to focus on more strategic tasks such as forecasting and policy analysis.

ii. Improved transparency and accountability

AI and digital platforms contribute to greater transparency and accountability in Malaysia's public sector by enabling more timely and traceable financial disclosures. Platforms such as MyGovPortal, integrated with the National Audit Department's Accountability Index Scoring (AIS), use data analytics and real-time dashboards to display government spending activities and procurement records. These systems not only enhance oversight by internal and external auditors but also allow the public to access summarized financial information, supporting the principles of open government (MAMPU, 2020). In addition, digital trail features embedded in accounting software enable better traceability of public funds, thereby discouraging fraud and misappropriation. These efforts are in line with Malaysia's Government Transformation Programme (GTP), which emphasizes digital governance as a tool to promote ethical public service delivery (Rajput & Katamba, 2024).

iii. Better fraud detection and risk management

AI also plays a key role in strengthening fraud detection mechanisms in the Malaysian public sector. The launch of the National Fraud Portal (NFP) by Bank Negara Malaysia (BNM) and PayNet in 2024 introduced predictive analytics to detect suspicious financial patterns across government-linked transactions. With AI-powered alerts and anomaly detection tools, financial irregularities can be flagged within minutes, significantly reducing investigation response times (Pamisetty et al., 2025). The Malaysian Anti-Corruption Commission (MACC) has also initiated pilot projects using AI to scan procurement contracts for red flags, enabling more proactive risk management in areas previously limited by manual review. These developments show AI's growing role in supporting integrity and compliance in public finance (Elsamad, 2025).

iv. Data-driven for effective decision making

Digitalization allows Malaysian government agencies to make better financial decisions using real-time, accurate, and consolidated data. Under the Outcome-Based Budgeting (OBB) framework, big data analytics are used to evaluate program effectiveness and guide budget

allocations toward high-impact initiatives. The existence of government data centres, national dashboards, and the Open Data Portal allows agencies to share and access financial data securely, ensuring informed decisions across ministries (Saari et al., 2025). For example, the Ministry of Education uses performance data to adjust resource distribution across schools, while the Ministry of Health utilizes health expenditure data for planning procurement. These practices promote data-driven budgeting aligned with the United Nations Sustainable Development Goals (SDGs) and Malaysia's strategic development priorities (Shawang et al., 2024).

v. Long-term cost efficiency

Over time, AI and digitalization contribute to cost savings by reducing reliance on manual labour, paperwork, and physical infrastructure. MAMPU's National Digital Government Strategy supports the use of shared services, cloud computing, and centralized platforms to prevent duplication of digital systems across ministries. These strategies are particularly beneficial for smaller agencies or local authorities with limited budgets. Instead of developing separate financial software, they can adopt shared platforms maintained by central agencies, reducing IT investment and maintenance costs (Economic Planning Unit, 2021). Moreover, automation reduces operational delays and enables better allocation of resources, allowing public institutions to optimize spending while maintaining service quality.

AI Challenges in the Public Sector Reporting

Despite Malaysia's ambitious digital public sector strategies such as MyDIGITAL and the National AI Roadmap, its implementation of AI and digitalization in public financial reporting remains uneven. A comprehensive study by the Malaysian Administrative Modernisation and Management Planning Unit (MAMPU) revealed that many agencies have only adopted digital tools partially, often using them merely as static data repositories due to insufficient IT infrastructure and security frameworks (Campion et al., 2022). Similarly, research within the Public Works Department highlighted critical issues in data governance: while 98% of respondents emphasized data quality's importance, fragmented and outdated records persist, and only 58% actively utilize digital systems due to training gaps and infrastructure limitations (Agostino et al., 2025).

Additionally, a recent meta-analysis of AI integration in Malaysian public administration confirmed that infrastructure constraints and low digital literacy among officials significantly hinder the scaling of AI applications (Mellouli et al., 2024; Sun & Medaglia, 2019). These findings collectively underscore the urgent need to improve digital infrastructure, enhance workforce capabilities, and break down data silos to fully leverage AI's benefits within public financial reporting. While the adoption of Artificial Intelligence (AI) and digitalization presents many opportunities for improving public sector financial reporting, it also introduces a range of challenges that can hinder effective implementation. Among the key issues are the shortage of skilled personnel, fragmented legacy systems and data silos, cybersecurity vulnerabilities, unclear regulatory frameworks, and the high cost of adoption, particularly for smaller agencies. These obstacles must be addressed to ensure that digital transformation efforts lead to meaningful and sustainable improvements in public sector accountability and efficiency. The explanations for each of these challenges are provided below.

i. Skilled talent gap in the public sector

Despite Malaysia's strong commitment to AI-driven public sector transformation, many government offices still face a significant shortage of digital skills. For example, the Ministry of Digital's National AI Office (NAIO) recently secured AI training for 445,000 civil servants under the "AI at Work 2.0" initiative in partnership with Google Cloud, and conducted a "Train-the-Trainer" programme for 200 civil service change ambassadors, yet this follows years of underutilization caused by previous low AI literacy (Wan Sulaiman et. al., 2025). Studies also show that a large portion of older public sector workers lack foundational AI knowledge, which hinders their ability to effectively use AI-powered tools in financial reporting. Without comprehensive retraining programmes facilitated by INTAN and JPA, automation initiatives risk becoming superficial, with staff unable to fully adapt and leverage the new systems (NAIO, 2025).

ii. Data silos and legacy systems

Many Malaysian public agencies still operate on isolated legacy systems, making it difficult to consolidate financial data across ministries, a fundamental requirement for accurate AI-driven analytics. While the Public Sector Data Centre and MyDATA's Open Data Portal offer consolidated datasets, siloed departmental systems persist in inhibiting real-time data exchange (Asia Society, 2021). Bureaucratic hurdles, coupled with a lack of standardized API-based interoperability, obstruct the efficient flow of information. To move toward integrated financial reporting, Malaysia must implement a National Data Sharing Policy and migrate older systems to shared-cloud platforms under MAMPU's modernization efforts.

iii. Cybersecurity and privacy risk

Vulnerabilities in public sector websites, including past exposures in the PADU portal, highlight Malaysia's pressing need to secure financial reporting systems. Although the Cyber Security Act 2024 and initiatives like Zero Trust architectures are positive steps, these measures must be complemented by AI-assisted threat detection and alignment with international standards like ISO 27001 (Baladari, 2020). Moreover, civil servants must receive regular training in digital hygiene, and agencies should conduct rigorous penetration testing and periodic audits to identify emerging risks. Without these safeguards, the integrity of automated financial systems remains vulnerable to cyberattacks and data breaches (Nabilah, 2024).

iv. Regulatory and ethical gaps

Malaysia's current Personal Data Protection Act (PDPA) 2010 does not explicitly address automated decision-making (ADM), leaving gaps in accountability, transparency, and fairness (Mohammad Belayet Hossain et al., 2024). Although amendments proposed in March 2024 aim to expand coverage to government-held data, they fall short of addressing explainability and bias in AI models (Nabilah, 2024). To properly safeguard public sector financial reporting, Malaysia should establish a comprehensive AI governance framework consistent with OECD ethical guidelines and include provisions such as transparency rules, audit logs, and mandatory fairness testing for algorithmic models used by agencies.

v. High Implementation costs

Many smaller agencies, especially local councils, struggle with the high costs associated with implementing AI and modern digital platforms. While MAMPU offers shared cloud services

and the Smart Automation Grant, uptake remains low among agencies with limited budgets or digital capability (Economic Planning Unit, 2021). To democratize access, the government should establish digital incubators and leverage programs under MDEC, such as the Data Star and ADAX initiatives, which provide subsidized infrastructure and training. Additionally, public-private partnerships aimed at cost-sharing and proof-of-concept pilots can help these agencies scale AI adoption more affordably (Caroline Geetha et al., 2024).

Suggestions

To overcome inherent problems, a multifaceted and strategic strategy is necessary while negotiating the complexity of digitalisation and Artificial Intelligence (AI) within Malaysia's public sector financial reporting. This entails a deliberate attempt to close the skilled talent gap by implementing focused upskilling and reskilling initiatives that guarantee the workforce has the requisite AI and digital skills. To eliminate data silos and ensure the accuracy and accessibility of financial data, it is imperative to simultaneously build a cohesive data strategy and a strong governance framework (Alhosani & Alhashmi, 2024).

The most important aspect of this transition is the ongoing development of cybersecurity procedures and infrastructure to protect private financial data from changing threats. Furthermore, the development and adherence to clear ethical guidelines for AI deployment are essential to foster public trust and ensure transparent, fair, and accountable automated processes. Finally, leveraging cost-effective cloud-based solutions will provide the scalable and resilient technological foundation required to implement these advanced systems efficiently, collectively paving the way for a more accurate, efficient, and transparent public financial landscape in Malaysia.

i. Targeted Upskilling and Reskilling Programs

Developing a digitally proficient public sector workforce is crucial for effective AI and digitalization adoption in financial reporting. Malaysia is actively working on this through initiatives like the "Innovative AI and Data Solutions for Public Sector Professionals" program, which aims to enhance capabilities in AI and data science, focusing on practical applications and robust data governance (MOH, 2025). This aligns with the broader national agenda to prepare Malaysia's workforce for an AI-driven future, as highlighted by MIDA, which notes that 79% of Malaysian professionals anticipate role changes due to AI. The Malaysian government has implemented programs like the Malaysia Digital Economy Blueprint and the National AI Roadmap 2021-2025, reflecting a commitment to upskilling and reskilling. Strategies also include offering tax incentives for companies investing in AI training and subsidizing reskilling programs for mid-career workers, ensuring equitable access to digital infrastructure, and integrating AI-focused education into curricula to foster skills in machine learning, data analysis, and automation (MIDA, 2025). These efforts are vital to bridge skill mismatches and build a resilient workforce capable of driving innovation in public services.

ii. Develop a Unified Data Strategy and Governance Framework

A unified data strategy and robust governance framework are essential to overcome data silos and ensure data integrity in the public sector. As Malaysia embraces AI to drive innovation and enhance public services, there's a strong focus on ensuring AI deployment is safe, secure, and inclusive, which necessitates ethical frameworks and robust data governance (Marzouki et al., 2023). This framework needs to ensure consistency in standards and practices for data

management and AI development, establish comprehensive risk management protocols, and ensure regulatory alignment with evolving data protection acts (Ogu et al., 2025). The interdependence of data and AI means that the quality, accuracy, and fairness of AI systems heavily rely on the underlying data. Malaysia's National AI Governance Guidelines and the Digital Asset and AI Advisory Council support these efforts, aiming to build public trust through transparency, fairness, and accountability in AI systems. Continuous efforts are needed to harmonize regulatory approaches and principles across jurisdictions to ensure Malaysia's AI governance remains coherent, effective, and equitable on a regional and global scale (UNIMAS CDO Office, 2024).

iii. Strengthen Cybersecurity Infrastructure and Protocols

As the public sector increasingly digitalizes financial reporting and adopts AI, strengthening cybersecurity infrastructure and protocols becomes paramount to protect sensitive data and critical systems. Malaysia recognizes cybersecurity as a national priority, evident in the formulation of the National Cyber Security Policy (NCSP) in 2006 and the establishment of the National Cyber Security Agency (NACSA), which oversees national cybersecurity functions (MKN, 2020). The recently enacted Cyber Security Bill 2024 further strengthens the regulatory framework for safeguarding critical information infrastructure (International Trade Administration, 2024). Bank Negara Malaysia emphasizes the need for resilient key financial infrastructures, particularly against cyber threats, and advocates for an open data ecosystem with strong policies and safeguards for responsible and ethical data usage (Bank Negara Malaysia, 2023). Despite increasing cyber budgets, there remains significant room for improvement in cybersecurity implementation within Malaysian organizations, with only half fully or partially realizing the benefits (PwC, 2023). This highlights the need for continued investment in advanced threat detection, regular security audits, and comprehensive incident response plans, alongside continuous employee training and awareness programs to foster a security-conscious culture (MKN, 2020; PwC, 2023).

iv. Establish Clear Ethical Guidelines

Establishing clear ethical guidelines is critical to ensure responsible and trustworthy AI adoption in public sector financial reporting, particularly concerning data security, privacy, and human rights. Malaysia is actively developing its AI governance, with initiatives like the launch of the Public Sector Artificial Intelligence (AI) Adaptation Guidelines, which aim to be a foundational reference for responsible, ethical, and effective AI adoption in line with MADANI values (Nabilah, 2024). These guidelines emphasize accountability, transparency, and fairness, ensuring AI does not operate as a "black box" but rather through robust checks and balances (Adnan et al., 2024). Bank Negara Malaysia, for instance, has conducted preliminary surveys on AI/ML use by financial service providers and has issued guidance to ensure sound and transparent AI/ML systems, promote clear accountability, and address fairness and ethical concerns, including potential discrimination (BNM Report, 2022). The ASEAN Guide on AI Governance and Ethics also provides a framework encouraging alignment within ASEAN and fostering interoperability of AI frameworks across jurisdictions, offering recommendations for responsible AI system design, development, and deployment. This ongoing development of regulatory and ethical frameworks is crucial for building public trust and ensuring AI benefits all segments of society while upholding social justice and inclusivity.

v. Leverage Cloud-Based Solutions

Leveraging cloud-based solutions is a strategic approach to overcome high implementation costs and enhance the efficiency and scalability of digitalization and AI initiatives in public sector financial reporting. Cloud computing offers significant benefits for managing and storing data, as well as for implementing effective cloud accounting systems, by allowing organizations to lease resources from cloud service providers rather than maintaining their own infrastructure (Oktari, 2026). This aligns with Malaysia's "cloud-first strategy" and the Malaysia Digital Economy Blueprint, which aims to transform the nation into a high-tech country by 2030, leading in AI, big data analytics, automation, robotics, and IoT (PwC, 2023; Wibisana et al., 2026). The adoption of cloud services surged during the COVID-19 pandemic, accelerating digital transformation efforts, with a significant increase in global spending on cloud services (Collina, 2026). While AI adoption in Malaysia is still in its infancy compared to other technologies, the growth of AI usage, particularly when integrated with cloud-based accounting software, is expected to accelerate productivity and improve efficiency. This shift to cloud-based solutions, often adopting a hybrid approach involving both public and private providers, allows for agile and regularly updated plans to effectively address challenges associated with hyperscale cloud services, providing a scalable and cost-effective foundation for AI and digitalization in public sector financial reporting (PwC, 2023).

Conclusion

The digital transformation, propelled by advancements in AI and other technologies, is fundamentally reshaping public sector financial reporting in Malaysia and globally. This shift moves away from traditional, often manual, methods toward a more agile, transparent, and accurate system. As outlined in this paper, the integration of AI and digitalization offers significant opportunities to enhance efficiency through automation, improve transparency and accountability, strengthen fraud detection and risk management, enable data-driven decision-making, and achieve long-term cost efficiencies. Malaysia's commitment to these technologies, evidenced by initiatives like the MyDIGITAL Blueprint and the National AI Roadmap, underscores its proactive stance in modernizing public financial management.

However, the journey toward a fully digitalized public financial landscape is not without its challenges. Key hurdles include the persistent shortage of skilled personnel, the complexities of fragmented legacy systems and data silos, growing cybersecurity vulnerabilities, the need for clearer regulatory frameworks, and the substantial costs associated with implementation. These obstacles can hinder the effective and equitable adoption of advanced digital tools.

To overcome these challenges and fully realize the potential of AI and digitalization, a multi-faceted and strategic approach is crucial. This involves targeted upskilling and reskilling programs to develop a digitally proficient workforce, the establishment of a unified data strategy and robust governance framework to ensure data integrity and interoperability, and continuous efforts to strengthen cybersecurity infrastructure and protocols to protect sensitive financial information. Furthermore, it is essential to establish clear ethical guidelines for AI deployment to foster public trust and ensure fairness and accountability. Finally, leveraging cost-effective cloud-based solutions can provide a scalable and efficient technological foundation, making these advanced systems more accessible, particularly for smaller agencies. By addressing these challenges proactively and strategically, Malaysia can continue to advance its public sector financial reporting, fostering greater transparency,

efficiency, and accountability, ultimately strengthening public confidence in its financial system.

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