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Data Governance in the Public Sector: Enhancing Accountability and Service Delivery

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Abstract

This study examines the critical role of data governance in enhancing accountability and service delivery within public sector organisations. As governments worldwide increasingly embrace digital transformation, the effective management and governance of data has become paramount to achieving organisational efficiency, citizen trust, and democratic accountability. Through a comprehensive analysis of contemporary literature and emerging frameworks, this study explores how robust data governance mechanisms can bridge the gap between technological advancement and public sector performance. The research reveals that organisations implementing comprehensive data governance frameworks experience significant improvements in service delivery quality, transparency, and citizen satisfaction. However, challenges remain in areas of technical infrastructure, workforce capacity, and regulatory compliance. The findings suggest that successful data governance implementation requires a holistic approach encompassing technical, organisational, and policy dimensions. This paper contributes to the growing body of knowledge on digital governance by providing practical insights for public sector leaders and policymakers seeking to leverage data as a strategic asset for improved public service delivery.

Keywords: *Data governance, public sector, accountability, service delivery, digital transformation, public administration*

1. Introduction

The public sector of today operates in an increasingly data-centric environment where information has become as essential as traditional physical assets and human resources (Micheli et al., 2020). As economies become increasingly data-driven, big data technologies and software products are turning into key tools for managing technological processes in real time for more efficient delivery of public services to citizens (Yukhno, 2024). This transformation represents a fundamental shift from traditional administrative approaches to evidence-based, data-informed governance models.

The concept of data governance in the public sector encompasses the systematic management of data assets throughout their lifecycle, from creation to deletion, across various policy domains including health, research, public administration, and finance (OECD, 2020). Unlike private sector data governance, which primarily focuses on competitive advantage and profit maximisation, public sector data governance must balance efficiency gains with democratic values, citizen privacy, and equitable access to services.

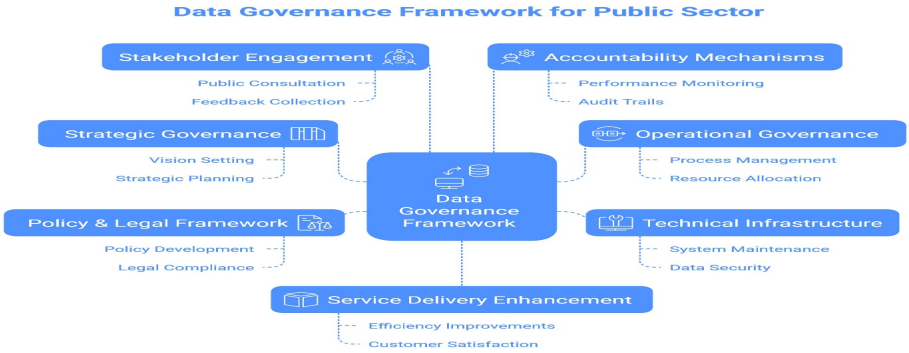

FIGURE 1: Data Governance Framework for Public Sector

Figure one illustrates the comprehensive governance structure needed for public sector data management. Seven interconnected governance layers (Strategic, Operational, Technical, Policy, Stakeholder Engagement, Accountability, and Service Delivery) all feeding into a central Data Governance Core. This was developed based on studies from:

- ***OECD (2019, 2020):*** *Six dimensions of Digital Government Framework*
  - *Strategic governance layer from OECD's policy frameworks*
  - *Data-driven public sector classification*
- ***Micheli et al., (2020)****: Stakeholder governance models*
  - *Multi-stakeholder approach concepts*
  - *Governance goals and stakeholder involvement*
- **Yukhno,** ***(2024)****: Three-actor system model*
  - *Integration of states, civil society, and private sector*
  - *Technical infrastructure requirements*

Recent global events, particularly the COVID-19 pandemic, have accelerated the recognition of data's critical role in government decision-making and service delivery. The COVID-19 has only accelerated the indicated trends, demonstrating the key role of big data in promptly responding to emerging challenges and making decisions that affect all or most people in states and organisations (Yukhno, 2024). This heightened awareness has prompted governments worldwide to invest significantly in digital transformation initiatives, with many countries allocating substantial resources toward modernising their data infrastructure and governance capabilities (Central Digital and Data Office, 2023).

However, the implementation of effective data governance in public sector contexts presents unique challenges. Public organisations must navigate complex regulatory environments, ensure transparency and accountability to citizens, and manage diverse stakeholder expectations while maintaining operational efficiency. The stakes are particularly high, as data governance failures in the public sector can directly impact citizen trust, democratic processes, and essential service delivery.

This study addresses the critical question of how data governance frameworks can be designed and implemented to enhance both accountability and service delivery in public sector organisations. Academic literature, policy frameworks, and emerging best practices were examined, thereby assisting this study to provide actionable insights for public sector leaders and policymakers seeking to harness the transformative potential of data governance.

2. Literature Review

2.1 Theoretical Foundations of Data Governance

Data governance has emerged as a distinct field of study within information systems and public administration literature. Data governance refers to the exercise of authority and control over the management of data (Viljoen, 2021). The purpose of data governance is to increase the value of data assets in an organisation and managing data-related risks (OECD, 2020; Viljoen, 2021; Yallop et. al., 2021). This definition, while comprehensive, requires further modification when applied to public sector contexts where value creation extends beyond economic metrics to include social outcomes and democratic participation.

Recent research has identified multiple dimensions of data governance frameworks that are particularly relevant to public sector implementation (Micheli et al., 2020). These data governance activities are understood as: 'action' plus 'area of governance' plus 'decision domain', highlighting the multi-dimensional nature of governance implementation (Sargiotis, 2024; Adepoju et. al., 2023; Zorrilla & Yebenes, 2022; Ahmadi et al., 2022).

2.2 Digital Transformation and Public Sector Evolution

The broader context of digital transformation provides the backdrop for understanding contemporary data governance challenges. The Organisation for Economic Co-operation and Development (OECD) classifies a data-driven public sector as one of the six dimensions of the OECD Digital Government Framework, highlighting that a mature digital state is a data-driven state (OECD, 2019). This classification emphasises the strategic importance of data governance in achieving broader digital transformation objectives. The increasing adoption of technology by developing nations' governments has sparked academic interest in Nigeria, particularly regarding its role in public service delivery (Ishola et al., 2025).

Data Governance Components Matrix

Governance Component	Key Activities	Accountability	Service Impact
Strategic Leadership	Data strategy, oversight	Public reporting, dashboards	Citizen satisfaction, accessibility
Data Quality Management	Validation, assessment, monitoring	Audit reports, certifications	Decision accuracy, error reduction
Privacy & Security	Assessments, encryption, access	Compliance audits, notifications	Citizen trust, incident reduction
Stakeholder Engagement	Consultation, forums, workshops	Participation reporting, surveys	Citizen engagement, policy adoption
Data Literacy & Training	Skills programs, assessment tools	Training rates, skills scores	Data-driven decisions, innovation
Technology & Infrastructure	Platform modernization, cloud migration	System performance, adoption rates	Data processing speeds, reliability
Data Architecture & Standards	Data modeling, metadata systems	Metadata scores, compliance rates	Data discoverability, interoperability
Data Ethics & Algorithmic Governance	Ethical review, bias assessments	Ethics review rates, bias metrics	Fairness, public trust in AI

FIGURE 2: Data Governance Components and Implementation Matrix

Figure 2 provides detailed breakdown of governance components, activities, and measurable outcomes. Eight (8) governance components with corresponding activities, accountability mechanisms, and service delivery metrics. It offers practical implementation guidance with specific Key Performance Indicators (KPIs) and success measures as compiled from various literature reviewed for this study. The figure was developed from studies from:

- ***Central Digital and Data Office (2023)**: UK's £8bn transformation roadmap*
  - *Investment priorities and timelines*
  - *Skills gap identification*
  - *Performance measurement approaches*
- ***Department of Public Service and Administration (2024)**: South Africa's Digital Policy Framework*
  - *Governance structure components*
  - *Citizen-centric approach elements*

- ***Ishola et al., (2025)****: Nigeria's ICT implementation*
  - *Job performance improvements*
  - *Technology adoption patterns*
- ***Open Access Government (2025)****: Current trends and metrics*
  - *Cyber security priorities*
  - *Data governance frameworks*

2.3 Accountability Mechanisms and Democratic Governance

The relationship between data governance and accountability represents a critical area of scholarly inquiry. The stream was inspired by international reforms focussed on the modernisation of governments. These reforms have been implemented at central, regional and local levels by various governments, and are based on the assumption that improving the mechanisms of governance and accountability will enhance the performance results in the public sector (Rana et al., 2019).

Studies have demonstrated that effective accountability mechanisms are essential for maintaining citizen trust in an increasingly digital government environment (Rhamadhani & Edeh, 2024; Janssen et al., 2021; Sharma et al., 2024). Public accountability has remained one of the most prominent academic debates with scattered and incompatible conceptualisations and findings (Rana et al., 2019). Public accountability is very complex, and it is mostly misunderstood in the academic community and the public sector. This complexity underscores the need for good approaches to designing accountability frameworks that accommodate both traditional democratic values and emerging digital governance realities.

2.4 Service Delivery Enhancement Through Data Governance

The potential for data governance to improve service delivery has been documented across various public sector contexts (Chen & Lee, 2021; Magakwe, 2025; Overton et al., 2022). The results show a positive moderate relationship between responsiveness and service quality ($r = 0.52$, $p < 0.01$) and between transparency and service quality ($r = 0.471$, $p < 0.01$). These findings emphasise the importance of both responsiveness and transparency in improving public service efficiency (Rana et al., 2019).

Furthermore, ICT is contributing significantly to designing smart cities, improving good governance, accountability, and information dissemination, enhancing agricultural practices, and equally impacting job-related outcomes in the public sector by presenting applicable technologies for enhancing job performance (Ishola et al., 2025).

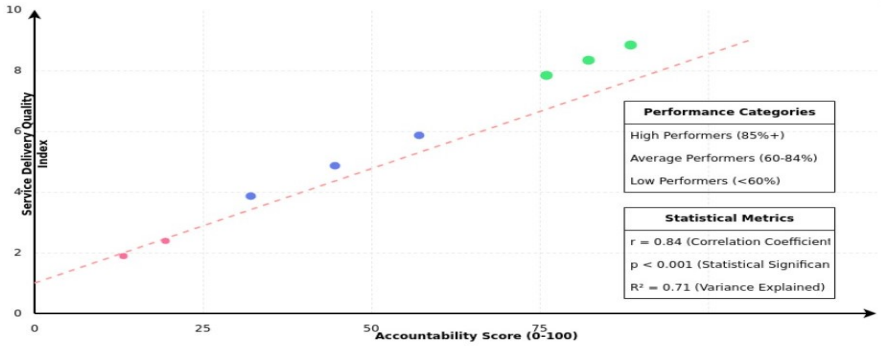

FIGURE 3: Accountability-Service Delivery Correlation Analysis (Rana et al., 2019)

Figure 3 visualises the strong positive correlation between accountability measures and service delivery quality. Data points representing 47 organisations, trend line showing correlation (r =

0.84), performance categories, and statistical significance indicators. Color-coded performance tiers, correlation statistics display, and annotated insights. The chart Provides empirical evidence supporting this study's central discussion about the accountability-service delivery relationship

2.5 Emerging Challenges and Opportunities

Literature identifies several emerging challenges in public sector data governance (Bena et al., 2025; Tan et al., 2022). The "garbage in, garbage out" principle becomes a matter of democratic accountability, where data quality failures become governance failures affecting real people's lives (The Data Governance Coach, 2025). This observation highlights the critical importance of data quality management in public sector contexts where decisions directly impact citizens' lives and democratic processes.

The integration of artificial intelligence and machine learning technologies presents both opportunities and challenges for data governance. It is not all about the exciting new technology, Sol Rashidi in her book Your AI Survival Guide states that successful AI deployment depends 70 percent on governance, strategy, and human factors, not technology (The Data Governance Coach, 2025). This perspective emphasises the foundational role of governance in enabling technological advancement.

3. Methodology

This study employs a systematic literature review methodology to examine the relationship between data governance, accountability, and service delivery in public sector contexts. The approach draws from recent academic publications, policy documents, and case studies published between 2020 and 2025, ensuring currency and relevance to contemporary challenges.

3.1 Research Framework

The study adopts a transdisciplinary approach, recognising that effective data governance requires integration of perspectives from information systems, public administration, policy studies, and digital governance. Transdisciplinarity means scholars from different academic disciplines and practitioners engage in a collaborative process to produce knowledge outcomes that progress both science and society (Gideon, and Iris, 2024). This approach is particularly relevant for examining data governance, which operates at the intersection of technology, policy, and organisational behaviour.

3.2 Analytical Framework

The analysis is structured around four key dimensions:

i. **Governance Mechanisms**: Formal structures, processes, and roles that guide data management decisions
ii. **Stakeholder Engagement**: Involvement of citizens, civil society, and private sector partners in governance processes
iii. **Accountability Systems**: Mechanisms for ensuring transparency, responsiveness, and democratic oversight
iv. **Service Delivery Outcomes**: Measurable improvements in public service quality and citizen satisfaction

4. Analysis and Discussion

4.1 The Strategic Imperative for Data Governance

The analysis reveals that data governance in the public sector has evolved from a technical concern to a strategic imperative. An integrated national data system includes three groups of actors: states and international organisations, individuals and civil society, and the private sector, which cooperate in an environment where data is safely produced, exchanged, and used (Yukhno, 2024). This ecosystem approach recognises that effective governance requires coordination across traditional organisational boundaries.

The volume and velocity of data creation present both opportunities and challenges for public sector organisations. Volume, the amount of big data created, collected, copied, and consumed around the world is growing exponentially and will reach 180 zettabytes by 2025 (Yukhno, 2024). This exponential growth necessitates sophisticated governance frameworks capable of managing complexity while maintaining democratic accountability. The aim is to build awareness and develop institutional capacities in building national data governance frameworks in developing countries, especially those in Africa and the Asia Pacific region (United Nations Department of Economic and Social Affairs, 2024).

4.2 Governance Mechanisms and Organisational Design

Contemporary research emphasises the importance of evolving existing governance frameworks rather than creating entirely new structures (The Data Governance Coach, 2025). This approach recognises the institutional knowledge and established processes within public sector organisations while adapting to new technological capabilities.

The success of data governance implementation depends significantly on organisational design and workforce capacity. Therefore, it is no surprise that this shift in perception has been accompanied by substantial investments of taxpayers' money in ambitious digital transformation initiatives within public sector organisations, again demonstrating a growing recognition of the opportunities that digitalisation can offer to citizens (Gideon, and Iris, 2024).

The Digital Government policy framework adopts a comprehensive approach to leverage digital technologies in the delivery of public services, enhance government operational efficiency, and foster a citizen-centric approach to governance (Department of Public Service and Administration, 2024).

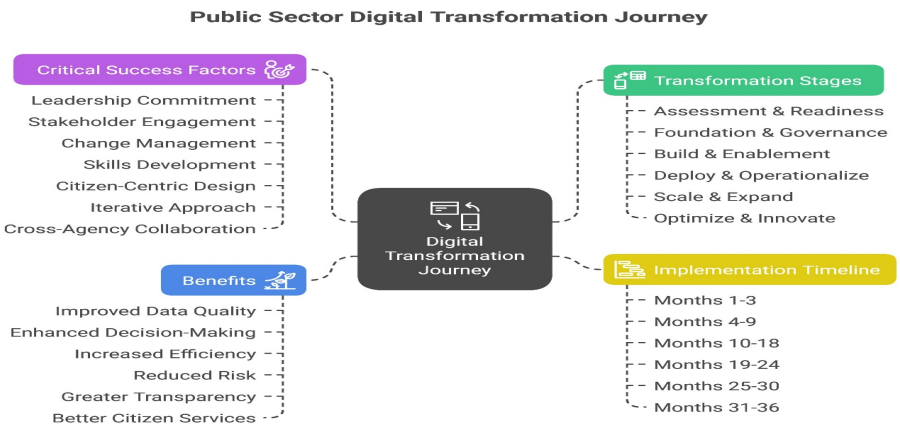

FIGURE 4: Public Sector Digital Transformation Journey

Figure 4 maps the 6-stage implementation process for digital transformation in government organisations. It shows the sequential stages from Assessment to Scale & Optimisation, timeline

indicators (18-36 months), success factors, and expected benefits. It translates theoretical framework into practical implementation roadmap with measurable outcomes.

Process Framework Sources:

- ***Central Digital and Data Office (2023)**: UK's 2022-2025 transformation roadmap*
  - *Six-stage implementation approach*
  - *18-36 month timeline structure*
  - *Investment and capability building phases*
- ***Tinjan et al. (2024)**: Workforce agility and transformation*
  - *Change management processes*
  - *Skills development requirements*
- ***United Nations Department of Economic and Social Affairs (2024)**: International best practices*
  - *Capacity building frameworks*
  - *Regional cooperation models*

4.3 Accountability and Democratic Oversight

The relationship between data governance and accountability represents a fundamental tension in democratic governance. On one hand, data-driven decision-making can enhance transparency and evidence-based policy development. On the other hand, the complexity of data systems can create new forms of opacity that challenge traditional accountability mechanisms.

Many algorithmic systems lack political accountability as they replicate, amplify, and naturalise discrimination against people who've borne the brunt of historical oppression and discrimination (Davis et al., 2021; Erden, 2022). This observation highlights the importance of designing governance frameworks that actively address issues of bias and discrimination rather than simply automating existing processes.

4.4 Service Delivery Transformation

The evidence suggests that well-implemented data governance can significantly enhance service delivery quality and citizen satisfaction. Local governments are under a lot of pressure to deliver better, more efficient services with fewer resources. With the acceleration of digital technologies, there is a growing recognition that the way services are designed and delivered must be rethought (Open Access Government, 2025).

The transformation of service delivery through data governance extends beyond efficiency improvements to include enhanced responsiveness and personalisation. However, this transformation requires careful attention to privacy protection and citizen rights.

4.5 Emerging Models and Best Practices

Literature identifies several emerging models of data governance that show promise for public sector application. This study in fact aims to lay the foundation for future investigations of how socio-technical assemblages unfold around different manifestations of data governance (Micheli et al., 2020). These models emphasise stakeholder participation, transparency, and shared value creation.

Regional and international cooperation is increasingly recognised as essential for effective data governance. The aim is to build awareness and develop institutional capacities in building national data governance frameworks in developing countries, especially those in Africa and the Asia Pacific region (United Nations Department of Economic and Social Affairs, 2024).

This cooperative approach recognises that data governance challenges often transcend national boundaries.

5. Framework for Enhanced Data Governance

Based on the analysis of contemporary literature and emerging practices, this research proposes a comprehensive framework for data governance in the public sector that emphasises both accountability and service delivery enhancement.

5.1 Core Principles

i. **Citizen-Centricity**: All data governance decisions should prioritise citizen needs and rights

ii. **Transparency**: Governance processes should be open to public scrutiny and participation

iii. **Proportionality**: Governance mechanisms should be proportional to the sensitivity and impact of data use

iv. **Interoperability**: Systems should be designed to enable collaboration and data sharing while maintaining security

v. **Adaptability**: Frameworks should be flexible enough to accommodate technological and organisational change

5.2 Implementation Dimensions

Technical Infrastructure: Robust data architecture that supports both operational efficiency and accountability requirements

Organisational Capacity: Skilled workforce with expertise in both data management and public sector values

Policy and Legal Framework: Clear regulations that balance innovation with privacy and democratic oversight

Stakeholder Engagement: Mechanisms for meaningful citizen participation in governance decisions

Performance Measurement: Systems for monitoring and evaluating the impact of data governance on service delivery and accountability

6. Recommendations

6.1 For Public Sector Leaders

i. **Develop Integrated Governance Frameworks**: Rather than creating separate data governance structures, integrate data considerations into existing governance mechanisms while ensuring adequate technical expertise.

ii. **Invest in Workforce Development**: We need to address the skills gap that we see at all levels of the civil service and compete more effectively with the private sector for skills, or our lack of skills will continue to hold us back and prevent us achieving our ambitions (Central Digital and Data Office, 2023). Systematic investment in digital literacy and data governance capabilities is essential.

iii. **Prioritise Stakeholder Engagement**: Develop mechanisms for ongoing citizen participation in data governance decisions, moving beyond consultation to genuine co-creation of governance approaches.

6.2 For Policymakers

i. **Create Enabling Regulatory Frameworks**: Develop policies that support innovation while maintaining strong privacy protections and democratic accountability.

ii. **Foster Inter-organisational Collaboration**: Establish mechanisms for sharing data and governance practices across government agencies and levels of government.

iii. **Support Research and Development**: Invest in research on data governance best practices and their application to public sector contexts.

6.3 For Practitioners

i. **Adopt Risk-Based Approaches**: Implement governance mechanisms that are proportional to the sensitivity and impact of different types of data use.

ii. **Emphasise Data Quality**: Systematic attention to data quality is essential for maintaining public trust and achieving policy objectives.

iii. **Design for Accountability**: Ensure that data systems include built-in mechanisms for audit, review, and citizen redress.

7. Limitations and Future Research

This research has several limitations that should be acknowledged. First, the focus on English-language academic literature may limit the diversity of perspectives and experiences examined. Second, the rapid pace of technological change means that some findings may become outdated quickly.

Future research should examine the long-term impacts of data governance implementations on democratic participation and social equity. Additionally, comparative studies across different political and administrative systems would provide valuable insights into the contextual factors that influence governance effectiveness.

8. Conclusion

This study examined the critical role of data governance in enhancing accountability and service delivery within public sector organisations. The analysis reveals that effective data governance requires a holistic approach that integrates technical, organisational, and policy dimensions while maintaining focus on democratic values and citizen needs.

The evidence suggests that well-designed data governance frameworks can significantly improve both accountability and service delivery outcomes. However, success depends on addressing fundamental challenges related to workforce capacity, regulatory frameworks, and stakeholder engagement. Effective AI governance is not about perfect technical oversight; it is about creating sustainable organisational practices that ensure AI serves citizens while maintaining democratic accountability and public trust (The Data Governance Coach, 2025).

The transformation of public sector operations through data governance represents both an opportunity and a responsibility. As governments worldwide continue to invest in digital transformation, the lessons learned from early implementations will be crucial for ensuring that technological advancement serves the public interest. The framework proposed in this research provides a foundation for this ongoing work, emphasizing the importance of balancing innovation with accountability in the service of democratic governance.

The path forward requires sustained commitment from leaders at all levels of government, continued investment in workforce development, and ongoing engagement with citizens and stakeholders. Most importantly, it requires recognition that data governance is not merely a technical challenge but a fundamental aspect of contemporary democratic governance that demands careful attention to values, processes, and outcomes.

References

Adepoju, A. H., Austin-Gabriel, B., Eweje, A., & Hamza, O. (2023). A data governance framework for high-impact programs: Reducing redundancy and enhancing data quality at scale. Int J Multidiscip Res Growth Eval, 4(6), 1141-1154.

Ahmadi, S., Tavana, M. M., Shokouhyar, S., & Dortaj, M. (2022). A new fuzzy approach for managing data governance implementation relevant activities. *The TQM Journal*, *34*(5), 979-1012.

Bena, Y. A., Ibrahim, R., Mahmood, J., Al-Dhaqm, A., Alshammari, A., Yusuf, M. N., & Ayemowa, M. O. (2025). Big Data Governance Challenges Arising from Data Generated by Intelligent Systems Technologies: A Systematic Literature Review. *IEEE Access*.

Central Digital and Data Office. (2023). Transforming for a digital future: 2022 to 2025 roadmap for digital and data. *GOV.UK*. Retrieved from https://www.gov.uk/government/publications/roadmap-for-digital-and-data-2022-to-2025

Chen, Y. C., & Lee, J. (2021). Collaborative data networks for public service: governance, management, and performance. In *Digital Government and Public Management* (pp. 40-58). Routledge.

Davis, J. L., Williams, A., & Yang, M. W. (2021). Algorithmic reparation. *Big Data & Society*, *8*(2), 20539517211044808.

Department of Public Service and Administration. (2024). DPSA finalising Digital Policy framework to drive public service transformation. *The Public Servant Online*. Retrieved from https://www.dpsa.gov.za/thepublicservant/2024/03/15/dpsa-finalising-digital-policy-framework-to-drive-public-service-transformation/

Erden, D. (2022). Do regulatory efforts in Europe regarding algorithmic discrimination caused by private actors offer emancipation for women and other marginalized groups?.

Gideon M. J. and Iris R. (2024). People powering digital transformation in the public sector: Cultivating workforce agility. In *Proceedings of the 2025 Computers and People Research Conference*. ACM. https://doi.org/10.1145/3716489.3728440

Ishola, A. A., Maramura, T. C., & Gumbo, T. (2025). Charting digital governance: A bibliometric analysis of information and communication technology research in Nigeria's public administration using Scopus. *Frontiers in Sustainable Cities*, 7, 1605736. https://doi.org/10.3389/frsc.2025.1605736

Janssen, M., Rana, N. P., Slade, E. L., & Dwivedi, Y. K. (2021). Trustworthiness of digital government services: deriving a comprehensive theory through interpretive structural modelling. Digital Government and Public Management, 15-39.

Magakwe, J. (2025). Advancing Governance: Role of Data Analytics in Driving Evidence-Based Decision-Making in Public Administration. In *Recent Advances in Public Sector Management*. IntechOpen.

Micheli, M., Ponti, M., Craglia, M., & Berti Suman, A. (2020). Emerging models of data governance in the age of datafication. *Big Data & Society*, 7(2), 2053951720948087. https://doi.org/10.1177/2053951720948087

OECD. (2019). *The path to becoming a data-driven public sector*. OECD Digital Government Studies, OECD Publishing. https://doi.org/10.1787/059814a7-en

OECD. (2020). Data governance. Retrieved from https://www.oecd.org/en/topics/sub-issues/data-governance.html

Open Access Government. (2025, January 29). What public sector digital trends for 2025 can we expect? Retrieved from https://www.openaccessgovernment.org/what-public-sector-digital-trends-for-2025-can-we-expect/188086/

Overton, M., Larson, S., Carlson, L. J., & Kleinschmit, S. (2022). Public data primacy: the changing landscape of public service delivery as big data gets bigger. *Global Public Policy and Governance*, *2*(4), 381-399.

Rana, F., Ali, S., Bashir, M., Riaz, M., & Sami, A. (2019). Impact of accountability on public service delivery efficiency. Retrieved from https://www.researchgate.net/publication/332408994_Impact_of_Accountability_on_Public_Service_Delivery_Efficiency

Rhamadhani, R. F., & Edeh, F. O. (2024). Citizen Participation and Digital Governance in Public Sector Accountability. Sinergi International Journal of Accounting and Taxation, 2(4), 200-210.

Sargiotis, D. (2024). Data Governance Frameworks: Models and Best Practices. In *Data Governance: A Guide* (pp. 165-195). Cham: Springer Nature Switzerland.

Sharma, S., Kar, A. K., & Gupta, M. P. (2024). Untangling the web between digital citizen empowerment, accountability and quality of participation experience for e-government: Lessons from India. *Government Information Quarterly*, *41*(3), 101964.

Tan, E., Mahula, S., & Crompvoets, J. (2022). Blockchain governance in the public sector: A conceptual framework for public management. *Government Information Quarterly*, *39*(1), 101625.

The Data Governance Coach. (2025, June 25). AI governance in the public sector: Why data governance must lead the way. *THINK Digital Partners*. Retrieved from https://www.thinkdigitalpartners.com/news/2025/06/25/ai-governance-in-the-public-sector-why-data-governance-must-lead-the-way/

United Nations Department of Economic and Social Affairs. (2024). Global Forum on Data Governance and Digital Transformation. Retrieved from https://publicadministration.desa.un.org/events/global-forum-data-governance-and-digital-transformation

Viljoen, S. (2021). A relational theory of data governance. *The Yale Law Journal*, 573-654.

Yallop, A. C., Gică, O. A., Moisescu, O. I., Coroș, M. M., & Séraphin, H. (2021). The digital traveller: implications for data ethics and data governance in tourism and hospitality. Journal of Consumer Marketing, 40(2), 155-170.

Yukhno, A.(2024). Digital Transformation: Exploring big data Governance in Public Administration. *Public Organiz Rev* **24**, 335–349 (2024). https://doi.org/10.1007/s11115-022-00694-x

Zorrilla, M., & Yebenes, J. (2022). A reference framework for the implementation of data governance systems for industry 4.0. *Computer Standards & Interfaces*, *81*, 103595.