

[MINDSETS IN MOTION: EVALUATING THE IMPACT OF DIGITAL
TRANSFORMATION ON MUNICIPAL SERVICE MANAGEMENT AND
ORGANISATIONAL BEHAVIOUR IN OMAN]

ANJAKAN PEMIKIRAN: PENILAIAN IMPAK TRANSFORMASI DIGITAL
TERHADAP PENGURUSAN PERKHIDMATAN PERBANDARAN DAN TINGKAH
LAKU ORGANISASI DI OMAN

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Abstract

Digital transformation has emerged as a critical driver of innovation, efficiency, and citizen engagement in public sector service delivery. This study investigates the role of digital transformation strategies in enhancing municipal service management in Oman, in alignment with the objectives of Oman Vision 2040. Using a qualitative case study approach, data were collected through semi-structured interviews with municipal stakeholders and supported by document analysis of strategic plans and national digital policies. The findings reveal that leadership commitment, strategic alignment, technological readiness, and citizen-centric service design are key enablers of successful digital transformation. Conversely, organizational resistance, digital literacy gaps, system interoperability issues, cybersecurity concerns, and regulatory constraints remain significant challenges. The study further demonstrates how digital transformation contributes to improved operational efficiency, service accessibility, and citizen satisfaction through e-governance initiatives. The novelty of this study lies in its integration of the Technology-Organization-Environment (TOE) framework and digital governance perspectives within the municipal context of Oman, an area that remains underexplored in existing literature. Unlike previous studies that focus primarily on national-level digital transformation, this research provides empirical evidence from municipal governance and highlights the interaction between organizational, technological, and regulatory factors in shaping digital transformation outcomes. The study contributes to West Asian Studies by offering context-specific insights into public sector modernization in the Gulf region and advancing understanding of how digital transformation supports governance reform, sustainable development, and citizen-centred service delivery under Oman Vision 2040.

Keywords: Digitalisation; Oman Vision 2040; e-Governance; Public Sector Innovation; Mind-set Change.

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INTRODUCTION

In the public sector, the mind-set towards digital transformation has changed into viewing technology as a strategic imperative for reimagining governance. The rapid advancement of digital technologies has transformed various sectors worldwide, with public administration being a notable beneficiary. Digital transformation, defined as the integration of digital technologies into all aspects of an organisation's operations, holds the potential to improve efficiency, transparency and citizen satisfaction. In the municipal sector, digital transformation enables streamlined service delivery, data-driven decision-making, and improved stakeholder engagement.

Oman, a member of the Gulf Cooperation Council (GCC), has embraced digital transformation as a cornerstone of its national development strategy. Initiatives such as the e.Oman strategy and Oman Vision 2040 highlight the government's commitment to leveraging digital technologies for socio-economic progress. However, municipalities in Oman face unique challenges, including resource constraints, resistance to change, and varying levels of digital maturity (Bahauddin et al., 2016; Gill & VanBoskirk, 2016). Despite the growing emphasis on digital transformation, municipalities in Oman often struggle to fully capitalise on its benefits. Key questions arise: What role does a well-crafted digital transformation strategy play in municipal service management? What are the barriers and enablers influencing its success? This study addresses these questions through an in-depth case study of a municipal body in Oman (Times News Service, 2024).

This research aims to investigate the role of digital transformation strategies in enhancing municipal service management; identify enablers and barriers to successful digital transformation in a municipal context; and provide actionable recommendations for improving digital service delivery. The findings of this research contribute to the limited literature on digital transformation in the public sector of Oman and provide practical insights for policymakers and municipal managers. By examining a real-world case, this study bridges the gap between theory and practice, offering a blueprint for municipalities aiming to navigate their digital transformation journeys effectively.

While significant progress has been made in understanding digital transformation in the public sector, there is limited empirical research on its application in municipal service management, particularly in Oman. Existing studies often focus on broader national initiatives, overlooking the unique operational and organizational challenges at the municipal level. This research contributes to the field by examining the role of digital transformation strategies in a specific Omani municipality, offering practical insights and policy recommendations (Janssen et al., 2017; Méndez-Rivera, 2023).

LITERATURE REVIEW

Theoretical Foundations of Digital Transformation

Digital transformation is a multifaceted process that integrates digital technologies into organisational practices, aiming to improve operational efficiency, innovation, and service quality. Theories such as the Technology-Organisation-Environment (TOE) Framework (Bahauddin et al., 2016), Diffusion of Innovation (DOI) Theory (Arabian Daily, 2024) and Institutional Theory have been widely employed to analyse digital transformation in organizations. These frameworks highlight the interplay between technological capabilities (Patricia Ordoñez de Pablos, 2023), organisational readiness, and environmental factors in shaping digital transformation outcomes (The Arabian Stories, 2024).

In the public sector, digital transformation is often framed within the concept of e-Governance, which focuses on leveraging technology to enhance service delivery, improve transparency, and increase citizen engagement. The Digital Maturity Model, a framework commonly used to assess organizational progress, underscores the importance of strategic

alignment, governance, and technological adoption in achieving digital transformation (The Arabian Stories, 2025).

Municipal Service Management and Digital Transformation

Municipalities play a critical role in local governance by providing essential services such as waste management, urban planning, and licensing. The adoption of digital technologies in municipal service management has been shown to improve service efficiency, reduce administrative burdens, and enhance citizen satisfaction (Gulf Press, 2024). However, research indicates that municipalities face unique challenges in this domain.

One key challenge is organisational resistance, where entrenched practices and a lack of digital culture hinder the successful adoption of new technologies (The Arabian Stories, 2024). Resource constraints also pose significant barriers, as limited budgets and technical expertise restrict municipalities' ability to implement large-scale digital initiatives (Times of Oman, 2020). Furthermore, data integration issues stemming from fragmented and siloed systems complicate real-time decision-making and hamper the delivery of seamless public services (Al Helou, E., 2024).

Global and Regional Perspectives

Globally, municipalities in advanced economies have increasingly adopted emerging technologies such as artificial intelligence (AI), the Internet of Things (IoT), and block chain to optimize services and address urban challenges (Times of Oman, 2020). For example, smart city initiatives in Europe and North America illustrate how digital solutions can effectively manage traffic congestion, waste disposal, and energy efficiency, thereby enhancing urban liveability and sustainability (Watch, 2024).

In the Gulf Cooperation Council (GCC) region, digital transformation is gaining momentum, driven by national strategies such as Saudi Arabia's Vision 2030 and the United Arab Emirates' Smart Government initiative. In Oman, the e.Oman strategy has laid the foundation for digitisation in public administration, with a strong emphasis on citizen-centric services and the streamlining of bureaucratic processes (Méndez-Rivera, 2023). Despite these efforts, limited scholarly research exists on the specific digital transformation challenges facing Omani municipalities (Al-Hinai, 2023), highlighting a significant knowledge gap that this study aims to address.

The Sultanate of Oman has intensified its digital transformation agenda through Vision 2040 and the e.Oman initiative, which emphasize institutional modernization, public sector efficiency, and citizen-centred governance. Recent studies on Oman have highlighted the importance of governance reforms, institutional adaptation, and strategic leadership in supporting national transformation initiatives. These developments demonstrate that digital transformation is not solely a technological process but also an organisational and governance reform agenda that requires strong institutional commitment and stakeholder engagement (Al-Hinai, 2023). Furthermore, studies focusing on contemporary socio-political developments in Oman suggest that public sector modernization is closely linked to broader national development goals, including administrative efficiency, public participation, and sustainable governance. Despite these advancements, empirical studies specifically examining digital transformation at the municipal level remain limited, indicating a significant research gap that warrants further investigation.

METHODOLOGY

This research methodology describes the research design, case selection process, data collection techniques, analytical frameworks, ethical considerations, and study limitations. Methodological rigor ensures the credibility, reliability, and validity of the findings, while comprehensively addressing the research objectives (Bahauddin et al., 2016).

Research Design

The research uses a qualitative case study methodology to explore how digital transformation strategies impact municipal service management. This approach is suitable for in-depth exploration of complex socio-technical phenomena in their real-world contexts (Bahauddin et al., 2016). This approach allows the researcher to capture diverse stakeholder perspectives and the nuanced interplay between technology, organisational culture, and governance processes. One municipality in Oman was selected as a representative case to provide contextual insights into the enablers, barriers, and impacts of digital transformation in public administration.

Case Selection

The case study municipality was selected using a purposive sampling method based on the following criteria:

- a. **Strategic Relevance:** The municipality has recently launched digital transformation initiatives aligned with Oman Vision 2040.
- b. **Practical Ease:** The availability of key stakeholders for interviews and access to official documents facilitated comprehensive data collection.
- c. **Operational Relevance:** As a provider of essential public services, the selected municipality represents a suitable setting for assessing the transformation of municipal governance processes (Gill & VanBoskirk, 2016).

This strategic selection ensures that the case study provides valuable empirical insights while maintaining alignment with the study objectives.

Data Collection Methods

To gain a comprehensive understanding of the transformation process, the study combined primary and secondary data sources.

1. Primary Data

Primary data was collected through semi-structured interviews and focus groups. Interviews were conducted with 10 to 15 key stakeholders, including municipal leaders, IT staff, policymakers, and project managers. Each session lasted between 45 and 60 minutes and followed an interview guide that allowed for flexibility and exploration of emerging themes (The Arabian Stories, 2025).

In parallel, focus group discussions were held with frontline staff to elicit operational-level perceptions, particularly regarding the ease of use of digital tools, implementation challenges, and changes in service delivery. This participatory approach facilitated the extraction of empirical knowledge and helped triangulate findings.

2. Secondary Data

Secondary data included official documents such as strategic plans and reports issued by the municipality, national policy documents, including the Digital Oman Initiative, academic and industry literature related to digital governance and municipal services. These sources were effective in contextualizing the findings and validating the primary data.

Analytical Framework

A robust, multi-layered analytical framework was used to extract valuable insights from the collected data:

1. Thematic Analysis

Interview transcripts and focus group notes were analyzed thematically to identify recurring patterns and themes, such as leadership influence (Al-Zadjali, 2020), institutional readiness, and citizen engagement (Gill & VanBoskirk, 2016). NVivo software was used to support the coding process, ensuring consistency and transparency.

2. SWOT Analysis

A Strengths, Weaknesses, Opportunities, and Threats (SWOT) analysis was conducted to assess the municipality's digital transformation strategy. This strategic tool identified internal capabilities (such as existing infrastructure and strategic leadership) and external factors (such as policy opportunities and cybersecurity threats) that impact the transformation process.

3. Digital Maturity Model

The study applied the Digital Maturity Model to assess progress across five key dimensions: (i) Strategic Alignment, (ii) Technology Infrastructure (iii) Process Automation (iv) Workforce Digital Capabilities, and (v) Citizen-Centric Engagement. This assessment provided a structured assessment of the municipality's progress in its digital journey and highlighted areas for improvement.

Ethical Considerations

Ethical integrity was adhered to throughout the research process. Informed consent was obtained from all participants prior to conducting the interviews and focus groups. Participants were informed of the study objectives (Al-Zadjali, 2020), and their identities and confidentiality were strictly maintained during data transcribing and analysis (Arabian Daily, 2024). The study was reviewed and approved by the university's Ethics Review Board, ensuring full compliance with academic and institutional ethical standards.

LIMITATIONS

There are several limitations that are acknowledged:

- i. Contextual Generalizability: Due to the single-case design, the findings may not be broadly generalizable to all Omani municipalities or those in different geopolitical contexts.
- ii. Voluntary Participation Bias: Relying on willing participants may introduce bias, as participants who were more engaged in the digital transformation process were more likely to participate.
- iii. Temporal Limitations: Digital transformation is an evolving process. The study captures a temporal snapshot and may not reflect future developments or long-term outcomes.

Despite these limitations, the methodology offers a robust and contextually sensitive approach to understanding municipal digital transformation in Oman.

FINDING AND DISCUSSION

The findings of this study reveal that digital transformation has become a significant catalyst for improving municipal service management and delivery in Oman. Through the analysis of semi-structured interviews, focus group discussions, and policy documents, several interrelated themes emerged, highlighting both the opportunities and challenges associated with digital transformation initiatives. These findings are discussed in relation to the Technology-Organization-Environment (TOE) Framework, Digital Maturity Model, and contemporary literature on public sector digital transformation.

Strategic Vision and Leadership Commitment

The findings indicate that leadership commitment is one of the most influential factors in determining the success of digital transformation initiatives within municipal organizations. Participants consistently emphasized that senior management's active involvement and commitment to digitalization facilitated organizational alignment, resource allocation, and

employee acceptance of new technologies. The municipality's digital initiatives were closely aligned with the objectives of Oman Vision 2040, reflecting a strategic commitment to public sector modernization and innovation. Leaders played a crucial role in communicating the benefits of digital transformation and fostering a culture that encouraged experimentation and continuous improvement. As one participant explained:

“The mayor’s strong endorsement of digital transformation has created a culture of innovation in the municipality.”

This finding supports the Technology-Organization-Environment (TOE) Framework, which highlights organizational readiness and leadership support as essential determinants of technology adoption (Tornatzky & Fleischer 1990). Recent studies similarly emphasize that transformational leadership significantly enhances digital readiness by promoting organizational learning and innovation capabilities (Vial 2019; Verhoef et al. 2021). In the public sector, leaders serve as institutional champions who help overcome resistance and facilitate cross-departmental collaboration (Mergel, Edelman & Haug 2019).

Furthermore, strong leadership commitment contributes to the development of a shared digital vision, which reduces uncertainty and encourages employee participation. This aligns with findings by Jonathan and Kuika Watat (2024), who argue that public-sector digital transformation initiatives are more successful when leaders actively communicate strategic objectives and provide consistent support throughout implementation.

Technological Infrastructure and Organizational Readiness

The municipality has invested substantially in digital infrastructure, including cloud computing platforms, Geographic Information Systems (GIS), integrated databases, and electronic service delivery systems. These investments have enhanced operational efficiency, data accessibility, and decision-making processes. However, despite these technological advancements, participants reported persistent challenges related to interoperability among legacy systems, data integration, and cybersecurity vulnerabilities. One municipal employee noted:

“While the new systems are impressive, compatibility issues with legacy systems have caused delays in service delivery.”

These findings demonstrate that technological infrastructure alone is insufficient for successful digital transformation. Rather, transformation requires an integrated ecosystem where technologies, processes, and organizational structures operate cohesively. Recent research suggests that interoperability remains one of the most significant barriers to digital government initiatives worldwide, particularly in developing countries where fragmented information systems continue to dominate public administration (OECD 2023; United Nations 2024).

Similarly, cybersecurity concerns have become increasingly important as municipalities digitize critical public services and store larger volumes of citizen data (World Bank 2023). The Digital Maturity Model emphasizes that organizations progress through different stages of digital development, requiring not only technological investment but also governance structures, workforce competencies, and continuous innovation (Berghaus & Back 2016). The findings indicate that the municipality remains in a transitional phase where technological modernization has advanced considerably, but integration and optimization challenges remain.

Citizen-Centric Service Delivery

One of the most significant outcomes of digital transformation was the improvement in citizen service delivery. Participants reported that digital platforms, online portals, and mobile applications reduced processing times, increased accessibility, and improved transparency in municipal operations. Services such as permit applications, complaint management, tax payments, and service requests became more efficient through digital channels. Citizens

appreciated the convenience of accessing services without needing to visit municipal offices physically.

According to one respondent:

“The online portal has reduced waiting times, but we need more support to help elderly citizens navigate the system.”

These findings align with the principles of e-Governance, which emphasize accessibility, transparency, accountability, and citizen participation (Janowski 2015). Digital service delivery improves government responsiveness and strengthens public trust when citizens experience faster and more reliable services. However, the study also identified significant digital literacy challenges among elderly citizens and individuals with limited technological skills.

This digital divide may undermine the inclusiveness of digital transformation initiatives if left unaddressed. Recent studies indicate that digital inclusion remains a critical determinant of successful e-government implementation, particularly in developing and emerging economies (United Nations E-Government Survey 2024). Governments must therefore complement technological innovation with educational and capacity-building programs to ensure equitable access to digital services.

Organizational Culture and Resistance to Change

Resistance to change emerged as one of the most significant organizational barriers. Employees expressed concerns regarding job security, increased workload, and difficulties adapting to unfamiliar technologies. A municipal IT technician remarked:

“We need more training sessions to feel confident with the new systems.”

These findings are consistent with organizational change theories, which suggest that employees often perceive technological transformation as a threat to established routines and professional identities (Kotter 2012). Older employees were particularly affected due to limited digital competencies and concerns about their ability to adapt. The findings support previous studies demonstrating that organizational culture significantly influences digital transformation outcomes (Kane et al. 2019).

A culture characterized by learning, experimentation, and adaptability is more likely to facilitate successful transformation than one dominated by hierarchical decision-making and risk aversion. Recent research further suggests that employee engagement and digital upskilling programs are essential mechanisms for reducing resistance and fostering acceptance of technological innovations (Schallmo, Williams & Boardman 2021). Therefore, municipal leaders should prioritize continuous professional development and create opportunities for employees to participate actively in digital transformation initiatives.

Policy and Regulatory Challenges

Policy and regulatory issues were identified as another major obstacle to digital transformation. Participants reported delays arising from procurement procedures, data-sharing restrictions, and uncertainty surrounding data privacy regulations. One policymaker stated:

“While we have a clear vision, regulatory bottlenecks remain a significant hurdle.”

These findings highlight the importance of establishing supportive legal and institutional frameworks that facilitate rather than hinder digital innovation. Effective digital transformation requires clear governance structures, regulatory certainty, and standardized procedures for data management. Recent literature emphasizes that regulatory frameworks must evolve alongside technological advancements to support digital government initiatives (OECD 2023; European Commission 2024). In many developing countries, outdated regulations continue to impede innovation and delay technology adoption. The findings suggest that Oman has

made substantial progress through Vision 2040 and national digital strategies; however, further regulatory reforms are necessary to enhance interoperability, cybersecurity governance, and procurement efficiency.

Enablers and Barriers of Digital Transformation

The analysis identified several critical enablers and barriers that collectively shape digital transformation outcomes with key enablers and key barriers. The key enablers are Strategic alignment with Oman Vision 2040, Strong leadership commitment and governance support, Investments in modern digital infrastructure, Organizational readiness and innovation culture and Growing citizen demand for digital services. For those key barriers are Resistance to organizational change, Digital skills gaps among employees and citizens, Technical interoperability challenges, Cybersecurity risks, Regulatory and procurement constraints, Limited financial resources for large-scale digital projects. These findings support contemporary digital transformation literature, which views technological, organizational, and environmental factors as interdependent determinants of success (Vial 2019; Verhoef et al. 2021).

Implications for Municipal Management

The findings suggest that digital transformation can significantly improve operational efficiency, service quality, and citizen satisfaction when supported by strong leadership, adequate infrastructure, and effective governance mechanisms. Municipal managers should adopt a holistic approach that integrates technology, organizational culture, human resource development, and policy reform. Rather than viewing digital transformation as merely a technological initiative, municipalities should recognize it as a comprehensive organizational change process. Investment in employee training, citizen digital literacy programs, cybersecurity enhancement, and regulatory modernization will be essential for sustaining long-term transformation outcomes.

Alignment with Existing Literature

The study's findings are consistent with global research on public-sector digital transformation. Similar challenges have been identified in municipalities across Europe, Asia, and the Middle East, where organizational resistance, digital skill shortages, and regulatory constraints frequently impede transformation efforts (Mergel et al. 2019; OECD 2023; United Nations 2024). At the same time, the findings contribute new empirical evidence from Oman, where municipal digital transformation remains relatively underexplored in academic literature. The study therefore extends existing theoretical frameworks by demonstrating how leadership, institutional readiness, and citizen engagement interact within the specific socio-cultural and administrative context of Oman.

NOVELTY OF THE STUDY

This study is novel in three important respects it provides one of the first qualitative examinations of digital transformation in municipal governance within the Sultanate of Oman, it integrates the Technology-Organization-Environment (TOE) framework with digital governance perspectives to explain digital transformation outcomes in local government settings and it generates context-specific evidence from West Asia, particularly the GCC region, by examining how organizational, technological, and regulatory factors influence municipal digital transformation under Oman Vision 2040. For contribution to West Asian Studies, this study contributes to West Asian Studies by expanding the literature on governance modernization and public sector reform in the Gulf region.

Providing empirical evidence on digital transformation implementation at the municipal level, an area largely overlooked in existing West Asian scholarship, demonstrating how digital governance initiatives support sustainable development and state modernization agendas within the socio-political context of Oman and the broader GCC region and offering

a regional perspective that bridges public administration, digital governance, and development studies in contemporary West Asia.

CONCLUSION

In conclusion, this study demonstrates that digital transformation has become an essential mechanism for improving municipal service management and enhancing the quality of public service delivery in Oman. The findings reveal that leadership commitment, strategic alignment with Oman Vision 2040, technological readiness, and citizen-centred approaches are critical drivers of successful transformation, while organizational resistance, digital literacy gaps, interoperability challenges, and regulatory constraints continue to impede progress. Beyond its practical implications, this study offers several important theoretical and empirical contributions. Its primary novelty lies in providing one of the few empirical investigations of digital transformation at the municipal level in Oman, thereby addressing a significant gap in the literature on public sector digitalization in West Asia. The study extends the application of the Technology-Organization-Environment (TOE) framework and digital maturity perspectives to the municipal governance context, demonstrating how technological, organizational, and institutional factors interact within a developing Gulf state.

Furthermore, the study contributes to West Asian Studies by enriching scholarly understanding of governance transformation, public sector modernization, and digital reform in the Gulf Cooperation Council (GCC) region. While existing research on digital transformation in West Asia has predominantly focused on national strategies and macro-level policy initiatives, this research highlights the realities of implementation at the local government level. The findings provide valuable insights into how municipalities can support national development agendas through digital innovation while addressing contextual challenges unique to the region. Consequently, this study contributes both to the growing literature on digital governance and to broader discussions on sustainable development, institutional reform, and state modernization in contemporary West Asia.

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