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Digitalisation of SPLUMA to Enhance Smart Township Policies at Enoch Mgijima Local Municipality: Literature Paper

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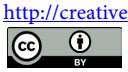

Abstract

Globally, digital planning platforms enable municipalities to identify economic opportunities and optimize infrastructure investment in Africa. Digital spatial planning has similar potential, particularly in addressing historical spatial inequalities and informal settlement challenges. For example, in South Africa, the digitalisation of SPLUMA enables municipalities to efficiently process land-use applications, plan township upgrades, and integrate economic nodes into development frameworks, thereby creating opportunities for small businesses and local communities and streamlining land-use approvals, creating a more business-friendly environment. This paper examines how digital tools can bridge the gap between policy intent and practical outcomes, using Enoch Mgijima Local Municipality (EMLM) as a case study. Key constraints include misalignment between political priorities and administrative capacity, fragmented planning and poor interdepartmental coordination, and limited institutional learning alongside weak community engagement. The findings of this study reveal that the implementation of smart township policies and the digitalisation of SPLUMA in EMLM are constrained by interconnected institutional factors. Firstly, there is a misalignment between political priorities and administrative capacity, which hampers translating policy intent into actionable programmes. Secondly, planning and coordination across municipal departments and spheres of government remain fragmented, resulting in duplication of efforts and inefficiencies. Thirdly, limited institutional learning and weak community engagement reduce the effectiveness of participatory processes, leaving local stakeholders underrepresented in decision-making. As a result, policies are often well-articulated in planning documents but remain weakly operationalised on the ground. Despite these challenges, the paper highlights opportunities to enhance LED through digital tools that can streamline planning, improve inter-

departmental coordination, and foster meaningful community participation. Overall, the results demonstrate that institutional realignment, capacity-building, and participatory approaches are essential to ensure that SPLUMA digitalisation contributes effectively to inclusive and sustainable township development.

Subject Areas

Rural Planning

Keywords

Digitalisation, SPLUMA, Smart Township Policies, Local Economic Development, Institutional Capacity, Enoch Mgijima Local Municipality

1. Introduction

Smart township initiatives have emerged as an important policy response to persistent spatial inequality, uneven service delivery, and limited economic opportunities in South Africa's townships and rural municipalities [1] [2]. These initiatives are embedded within national policy frameworks such as the National Development Plan (NDP) 2030, the Integrated Urban Development Framework (IUDF), and the District Development Model (DDM), which position municipalities as key actors in promoting inclusive local economic development [3] [4]. A central legislative instrument guiding spatial transformation is the Spatial Planning and Land Use Management Act 16 of 2013 (SPLUMA), which provides a statutory framework for spatial restructuring, land-use regulation, and coordinated planning [5].

Within a business ecosystem perspective, smart township initiatives extend beyond infrastructure development to include governance mechanisms that shape the spatial and institutional conditions enabling small, medium, and micro enterprises (SMMEs) to emerge and grow [6]. Spatial planning and land-use management are therefore critical components of this ecosystem, as they influence access to land, infrastructure, and market opportunities [2]. In this context, the digitalisation of SPLUMA through geographic information system (GIS)-based platforms, electronic land-use applications, and integrated spatial data systems has been promoted as a means to improve administrative efficiency, transparency, and coordination within municipal planning systems [7] [8].

Despite strong policy alignment and the integration of smart township priorities into municipal Integrated Development Plans (IDPs) and Local Economic Development (LED) strategies, implementation outcomes remain uneven [9] [10]. While existing studies frequently attribute these challenges to financial constraints and limited technical capacity, less attention has been given to the role of institutional arrangements within municipalities. In particular, the alignment between political leadership, administrative systems, governance coordination, and digital readiness remains underexplored.

Using EMLM as a case study, this study examines how institutional factors shape the implementation of smart township policy and the digitalisation of SPLUMA. By applying institutional and policy implementation theory, the study highlights how institutional coherence, coordination mechanisms, and organisational capacity influence the translation of policy intent into developmental outcomes.

2. Problem Statement

Smart township initiatives are increasingly promoted in South Africa as strategic policy instruments to address spatial inequality, improve service delivery, and stimulate local economic development [11]. These initiatives are embedded in national frameworks such as the National Development Plan 2030, the Integrated Urban Development Framework, and the District Development Model, and are reflected in municipal planning instruments including Integrated Development Plans (IDPs) and Local Economic Development (LED) strategies [12] [13]. Within this policy architecture, municipalities are expected to play a central role in coordinating and implementing development priorities in line with national spatial transformation objectives [14] [15].

Despite strong policy alignment, the implementation of smart township priorities at the municipal level remains inconsistent and often ineffective [16]. Many municipalities continue to experience a persistent gap between policy formulation and execution, where well-developed plans fail to translate into tangible development outcomes. This disconnect suggests deeper institutional constraints that extend beyond financial and technical limitations [17].

This challenge is evident in EMLM, where smart township priorities are incorporated into the municipality's IDP and LED framework, yet progress in operationalising these initiatives remains limited [18]. Limited empirical research exists on how institutional arrangements, governance processes, and municipal capacity dynamics influence the implementation of smart township policies at the local level. Addressing this gap is critical for strengthening municipal capacity and improving the effectiveness of local development initiatives.

3. Research Question

Despite their strong presence in South Africa's policy frameworks, smart township initiatives have seen limited success at the municipal level. This study examines the underlying factors that contribute to this persistent policy implementation gap. Accordingly, the study is guided by the following research question: "What institutional factors constrain the implementation of smart township policy and the digitalisation of SPLUMA at the municipal level in EMLM, particularly in relation to governance arrangements, coordination processes, and municipal capacity dynamics?"

4. Objective of the Study

The primary objective of this article is to examine the institutional factors that

constrain smart township policy and digital SPLUMA implementation at the municipal level, using EMLM as a case study, with particular attention to governance arrangements, coordination processes, and municipal capacity dynamics.

5. Literature Review

Smart township initiatives have emerged in South Africa as policy responses to persistent spatial inequality, service delivery backlogs, and weak local economic performance in historically marginalised areas [2] [3]. These initiatives are closely aligned with national development priorities such as the objectives of the National Development Plan 2030, which emphasises spatial transformation, inclusive economic growth, and improved urban governance. Although the concept of smart townships lacks a single universally accepted definition, it broadly refers to the integration of digital technologies, infrastructure development, innovation ecosystems, and targeted support for small, medium, and micro enterprises (SMMEs) to stimulate inclusive local economic development [19]. In practice, smart township development seeks to address the structural legacy of apartheid spatial planning by improving connectivity, expanding access to economic opportunities, and strengthening the capacity of local economies to absorb investment and generate employment.

Central to this transformation agenda is the Spatial Planning and Land Use Management Act (SPLUMA), which provides the statutory framework for spatial restructuring, land-use regulation, and integrated development planning in South Africa. SPLUMA aims to promote spatial justice, efficiency, sustainability, and resilience through coordinated land-use management and strategic spatial planning. Effective spatial planning under SPLUMA is therefore essential for smart township development because it determines land accessibility, infrastructure coordination, zoning flexibility, and the regulatory environment within which local enterprises operate [7] [8]. In particular, the alignment between spatial planning instruments such as Spatial Development Frameworks (SDFs), land-use schemes, and infrastructure investment decisions plays a critical role in shaping the economic viability of township spaces.

Despite strong policy support, the implementation of smart township initiatives and SPLUMA reforms remains uneven, particularly in smaller, rural, and capacity-constrained municipalities [8]. Although these priorities are formally embedded in Integrated Development Plans (IDPs) and Local Economic Development (LED) strategies, municipal implementation frequently prioritises regulatory compliance and planning documentation rather than context-sensitive and coordinated execution. This reinforces a persistent gap between planning commitments and practical outcomes on the ground [9] [20]. To address these challenges, national and provincial governments have increasingly promoted the digitalisation of SPLUMA processes through Geographic Information Systems (GIS), electronic land-use application platforms, and integrated spatial databases intended to improve administrative efficiency, transparency, and interdepartmental coordination.

However, technological reform alone cannot guarantee effective implementation if underlying governance systems remain fragmented or under-capacitated.

Policy implementation theory suggests that weak administrative systems, fragmented coordination, and unclear institutional roles frequently undermine the translation of policy objectives into operational outcomes [21]. Within decentralised governance systems, such as South Africa's local government framework, municipalities are required to implement multiple national and provincial programmes simultaneously, often without adequate technical capacity, financial resources, or institutional stability. This creates significant implementation pressures that may limit the ability of municipalities to coordinate complex development initiatives [20] [22]. Institutional dynamics such as leadership instability, blurred political-administrative boundaries, and weak accountability mechanisms further complicate governance processes and constrain effective decision-making at the municipal level [17] [23].

Recent scholarship increasingly identifies an institutional disconnect in which ambitious policy frameworks outpace municipal administrative capacity, resulting in fragmented planning, siloed departmental coordination, and weak implementation outcomes [24]-[26]. Under such conditions, development initiatives may remain formally embedded within planning instruments while lacking the operational mechanisms necessary for effective delivery. However, limited empirical research examines how these institutional dynamics specifically influence the implementation of smart township initiatives and SPLUMA reforms within municipal governance systems. This gap is particularly evident in EMLM, where these policy priorities are formally embedded within municipal planning frameworks but remain weakly operationalised in practice. Against this backdrop, this study applies an institutional governance lens to examine how governance arrangements, interdepartmental coordination processes, and digital planning capacity influence the implementation of smart township initiatives and SPLUMA reforms at the municipal level.

6. Methodology

The literature review was guided by purposive sampling to identify sources most relevant to the study's focus on SPLUMA digitalisation, smart township initiatives, and LED. Scholarly articles, policy documents, and institutional reports were selected for their contributions to understanding institutional dynamics, governance structures, and implementation challenges at both the national and municipal levels. This approach ensured that the review captured critical theoretical insights from implementation theory and institutionalism, as well as empirical examples from South Africa and comparable global contexts. The selected literature informed the study's conceptual framework and guided the design of semi-structured interview questions, helping to identify key institutional themes such as intergovernmental coordination, administrative capacity, and community participation. By linking the literature review to the qualitative data collection and

analysis, the study established a coherent methodological foundation, ensuring that both theoretical perspectives and participant experiences were integrated to examine how digitalisation of SPLUMA can enhance LED in EMLM.

The literature review employed clear inclusion and exclusion criteria to ensure that the selected sources were both relevant and rigorous. Inclusion criteria focused on studies, policy documents, and reports that addressed institutional dynamics, governance structures, and implementation challenges related to SPLUMA, smart township initiatives, and Local Economic Development (LED) in South Africa and comparable international contexts. Literature that provided theoretical grounding in implementation theory or institutionalism was also prioritized, as it directly informed the study's conceptual framework. Exclusion criteria eliminated sources that were outdated, irrelevant to spatial planning or LED, or lacked empirical or theoretical rigour. Additionally, studies focused solely on unrelated sectors or geographical contexts outside of South Africa or comparable developing regions were excluded. These criteria ensured that the literature review remained focused, coherent, and directly applicable to the study's objectives, enabling a robust synthesis that guided data collection, coding, and thematic analysis in the qualitative case study of EMLM.

7. Summary of Findings

The data analysis revealed themes relating to the implementation of smart township initiatives in EMLM:

7.1. Misalignment between Political Priorities and Administrative Capacity

Participants reported that municipal political objectives frequently exceed the administrative capacity required for effective implementation [27]. Although strategic instruments such as Integrated Development Plans (IDPs) and Local Economic Development (LED) frameworks articulate ambitious smart township priorities, limited technical expertise, understaffing, and resource constraints undermine operationalisation. Officials often manage multiple programmes concurrently, reducing coordination, focus, and continuity in project delivery [20]. The misalignment between political ambition and administrative capacity reflects not only a resource deficit but also weaknesses in governance system design.

Digital SPLUMA platforms can mitigate capacity gaps by standardising procedures, automating workflows, and embedding measurable performance indicators into land-use management processes. Through procedural codification, digital systems enhance traceability between policy directives and administrative action [7] [8]. Nonetheless, evidence indicates that implementing digitalisation without adequate institutional preparedness can worsen existing capacity limitations instead of addressing them [28]. In this context, digital SPLUMA serves as both a governance reform instrument and a diagnostic tool, revealing structural weaknesses within municipal institutional frameworks.

7.2. Fragmented Planning and Coordination

Evidence from interviews and policy documents indicates persistent siloed planning and weak intergovernmental coordination within EMLM, where infrastructure, economic development, and digital initiatives are often implemented independently [9] [29]. This fragmentation leads to duplication of efforts, implementation delays, and misaligned development timelines, while overlapping responsibilities across local, provincial, and national spheres create uncertainty in accountability and decision-making [2] [8]. These coordination gaps undermine the effective implementation of smart township objectives and limit the transformative potential of the Spatial Planning and Land Use Management Act (SPLUMA). The digitalisation of SPLUMA through GIS-integrated platforms and shared spatial data systems offers a mechanism to centralise planning information and improve coordination. However, its effectiveness depends on integration within formal coordination structures, performance management systems, and intergovernmental reporting frameworks [7] [21] [28].

7.3. Limited Institutional Learning and Community Engagement

Participants indicated that institutional learning mechanisms, such as performance reviews, monitoring, and feedback loops, were weak or inconsistently applied [30]. Similarly, community participation processes were largely procedural rather than substantive, limiting local ownership of township projects. Focus group participants reported minimal consultation in project planning and limited follow-up on community inputs [2] [9]. Weak institutional learning and limited monitoring mechanisms constrain effective smart township implementation [31]. Digital SPLUMA platforms strengthen organisational learning by generating real-time performance data, tracking land-use approval timelines, and identifying procedural bottlenecks within administrative processes. Empirical research shows that digital governance systems improve transparency and administrative accountability by creating structured data environments that support continuous performance monitoring [7] [28].

Through systematised data capture, digitised platforms generate audit trails, measurable turnaround indicators, historical records of decision-making patterns, and enhanced data-driven evaluation capacity. Research on digital government systems demonstrates that structured information management improves oversight, transparency, and institutional memory by formalising administrative processes and enabling performance tracking [7]. Such systems strengthen policy feedback mechanisms and support evidence-based decision-making, thereby enabling municipalities to refine spatial planning processes and improve governance performance [21] [28].

This allows municipalities to move from reactive governance towards evidence-based, adaptive management. When institutional learning processes are embedded in digital systems, implementation becomes an ongoing, iterative process rather than a fixed, static one.

7.4. Reskilling of Officials

The successful digitalisation of SPLUMA requires not only technological infrastructure but also significant reskilling and institutional adaptation within the municipality [32]. The findings highlight that the participants indicated that many officials lack advanced competencies in Geographic Information Systems (GIS), digital land-use management platforms, data analytics, and electronic records management. While SPLUMA provides a legislative framework for spatial planning reform, its effective digital implementation depends on human capital capable of operating and sustaining digital systems [7].

Reskilling must therefore extend beyond basic ICT literacy to include specialised competencies in digital spatial planning, online application processing, electronic document workflow systems, and integrated data management. International evidence demonstrates that digital planning systems only improve efficiency where institutional actors possess the skills and organisational routines required to embed new technologies into daily administrative processes [28].

In the context of EMLM, capacity-building should form part of a structured institutional strategy that includes training in GIS and spatial data analysis, certification in digital planning systems and e-governance, cross-departmental digital coordination workshops, and partnerships with higher education institutions. Empirical research on digital government transformation shows that technological reforms do not automatically improve performance unless accompanied by organisational capacity development and institutional alignment [7]. Without systematic and sustained reskilling, the digitalisation of SPLUMA risks becoming a compliance-driven reform that merely transfers existing inefficiencies into electronic systems rather than fundamentally transforming institutional performance and governance outcomes. Studies further emphasise that digital platforms embedded in weak institutional environments often reproduce existing administrative fragmentation instead of resolving governance bottlenecks [21] [28].

7.5. New Data Sets

Digitalisation of SPLUMA creates opportunities to generate and integrate spatial and economic datasets that strengthen local economic development planning and spatial governance. Many municipalities still rely on fragmented, paper-based records and outdated cadastral systems, limiting data accuracy and coordination. Transitioning to digital platforms enables real-time spatial databases that integrate land-use applications, zoning schemes, infrastructure networks, informal settlement mapping, and economic activity nodes [7] [8]. Such systems enhance transparency, interdepartmental coordination, and evidence-based decision-making, reinforcing alignment between regulatory processes and development objectives within the SPLUMA framework [33].

Research on digital governance demonstrates that integrated information systems improve administrative accountability and policy coordination when embedded within institutional structures and planning systems [7]. In spatial gov-

ernance contexts, digital platforms strengthen regulatory alignment by improving data integration, workflow tracking, and intergovernmental information sharing [28]. For EMLM, integrated digital spatial datasets support the identification of underutilised land, mapping of township economic nodes, tracking of application processing timelines, and alignment of infrastructure investment with spatial priorities. Digital platforms also enable predictive planning through trend analysis, compliance monitoring, and infrastructure demand forecasting [28].

However, the expansion of digital datasets raises governance concerns regarding data accuracy, cybersecurity, ownership, and interoperability. Effective implementation therefore requires clear data governance frameworks, standardisation protocols, and secure shared access mechanisms to ensure reliable and coordinated spatial management.

7.6. Biased Legal Frameworks

Although SPLUMA was enacted to promote spatial justice and address apartheid-era inequalities, its implementation is often constrained by inherited regulatory practices and procedural rigidity that reproduce exclusionary spatial outcomes [5]. Complex zoning schemes, costly application requirements, and lengthy approval processes disproportionately affect small-scale developers and township-based enterprises [34]. Regulatory bias can emerge when formal planning systems unintentionally privilege established commercial actors while marginalising emerging enterprises [35]. In EMLM, stringent procedures and high compliance costs may limit access to land-use opportunities for SMMEs [4].

Digitalisation of SPLUMA offers an opportunity to reduce these structural constraints by simplifying and standardising application processes, improving transparency, publishing accessible zoning information, and automating workflows. Digital planning systems enhance procedural fairness, accountability, and predictability in land-use decisions [7], strengthening access to development rights for township enterprises and advancing spatial justice objectives [2] [36]. However, digital reform alone is insufficient it must be accompanied by legal and by-law reforms to ensure alignment with constitutional principles and inclusive development goals [14].

7.7. Digitalisation of SPLUMA as an Institutional Reform Mechanism

The Spatial Planning and Land Use Management Act 16 of 2013 (SPLUMA) was enacted to promote spatial justice, sustainability, efficiency, and resilience in South Africa's planning system [36]. While SPLUMA provides the legislative foundation for spatial transformation, its implementation remains heavily dependent on municipal institutional capacity. Increasingly, digitalisation has emerged as a critical mechanism for operationalising SPLUMA's principles [5].

Digital SPLUMA systems involve the use of electronic land-use application platforms, GIS-enabled spatial planning tools, online zoning registers, and inte-

grated data dashboards to streamline administrative processes and improve transparency. Empirical studies demonstrate that digital planning platforms enhance procedural efficiency, reduce processing time, and improve coordination across municipal departments [7] [8].

From an institutional perspective, digitalisation represents not merely a technological upgrade but a governance reform that restructures organisational routines, accountability mechanisms, and interdepartmental coordination [37]. Although SPLUMA was enacted to promote spatial justice and address apartheid-era inequalities, its implementation is often constrained by inherited regulatory practices and procedural rigidity that reproduce exclusionary spatial outcomes. Complex zoning schemes, costly application requirements, and lengthy approval processes disproportionately affect small-scale developers and township-based enterprises. Regulatory bias can emerge when formal planning systems unintentionally privilege established commercial actors while marginalising emerging enterprises [5]. These regulatory constraints highlight the need for more adaptive and digitally enabled planning systems capable of simplifying development procedures, improving transparency, and widening access to spatial development opportunities for township entrepreneurs [38]. In EMLM, stringent procedures and high compliance costs may limit access to land-use opportunities for SMMEs.

Digitalisation of SPLUMA offers an opportunity to reduce these structural constraints by simplifying and standardising application processes, improving transparency, publishing accessible zoning information, and automating workflows. Digital planning systems enhance procedural fairness, accountability, and predictability in land-use decisions [7], strengthening access to development rights for township enterprises and advancing spatial justice objectives [2] [36]. However, digital reform alone is insufficient it must be accompanied by legal and by-law reforms to ensure alignment with constitutional principles and inclusive development goals [14].

8. Discussions

8.1. Interpreting Implementation Failure through an Institutional Lens

This study demonstrates that the stalling of smart township initiatives in EMLM is not primarily the result of weak policy design, but rather reflects deeper institutional misalignments that shape how policies are interpreted, prioritised, and enacted at the municipal level. Drawing on implementation theory and institutionalism, the findings reveal that smart township policies falter when political ambition, administrative capacity, and governance arrangements are insufficiently aligned. This confirms the argument that policy outcomes are contingent not only on formal plans, but on the institutional conditions under which implementation occurs [21] [37]. The misalignment between political priorities and administrative capacity identified in EMLM illustrates what institutional theorists describe as a divergence between formal authority and operational capability.

While political leadership articulates ambitious development agendas within IDPs and LED strategies, administrative systems lack the skills, staffing stability, and organisational routines required to translate these ambitions into practice [39] [40]. This institutional disconnect results in implementation overload, fragmented responsibility, and weakened accountability, reinforcing the planning–practice gap observed in South African local government. and highlights the importance of strengthening municipal institutional capacity, particularly through skills development, organisational stability, and digital governance systems.

8.2. Institutional Disconnect as a Mechanism of Policy Stalling

The concept of institutional disconnect provides a useful analytical mechanism for explaining why smart township initiatives stall during implementation [25] [41]. In EMLM, this disconnect manifests across three interrelated institutional domains: political–administrative relations, intergovernmental coordination, and organisational learning [24]. Rather than operating as isolated challenges, these institutional weaknesses interact to undermine coherent policy execution [26].

Fragmented planning and coordination across municipal departments and government spheres reflect a lack of integrative governance mechanisms capable of aligning infrastructure development, local economic development, and digital initiatives [20]. Implementation theory highlights that multi-actor policy environments require clearly defined roles, coordination platforms, and shared accountability frameworks to prevent duplication and inertia [21]. In the absence of institutional coordination and learning mechanisms, smart township initiatives risk becoming compliance-driven exercises embedded in planning documents without operational traction [38] [42].

The findings further indicate that institutional disconnect is not only structural but also procedural and relational. Weak intergovernmental coordination and siloed departmental planning are reinforced by limited institutional learning and largely procedural forms of community participation that seldom shape substantive decision-making [43] [44]. Such conditions undermine feedback loops, reduce administrative adaptability and constrain municipalities' capacity to recalibrate implementation strategies in response to emerging socio-economic and spatial challenges [45].

8.3. Institutional Capacity Beyond Resources and Skills

The findings extend existing scholarship by showing that institutional capacity constraints in EMLM go beyond technical skills and financial resources to include governance coherence, institutional learning, and participatory quality. Rather than defining capacity narrowly in terms of staffing or budgets, this study emphasises organisational routines, monitoring systems, and institutional memory as central to implementation performance [37]. Weak performance tracking and procedural participation limit accountability and continuity, reinforcing stalled implementation across planning cycles [46] [47].

Digital SPLUMA systems can strengthen governance by improving monitoring, reducing discretionary decision-making, enhancing interdepartmental coordination, and enabling accessible public participation. When embedded within institutional structures, digital platforms enhance transparency and policy coordination [7]. However, in contexts of weak institutional coherence, digitalisation may reproduce fragmentation if not accompanied by organisational alignment and capacity development [21] [28]. Thus, digital SPLUMA should be understood as an institutional transformation process rather than a standalone technical reform functioning as a catalytic mechanism to reshape governance alignment and implementation dynamics [5].

8.4. Theoretical Implications for Smart Township and Local Governance Research

This study contributes to implementation theory by demonstrating that institutional disconnect mediates the relationship between policy alignment and implementation outcomes in a municipal context. While existing scholarship acknowledges the gap between policy intention and delivery, the findings show that this divide is actively reproduced through institutional misalignment and weak coordination within local governance systems [48].

By applying institutionalism to smart township initiatives, the paper extends smart city literature beyond its conventional technological focus, arguing that implementation success is primarily governance-dependent rather than technology-driven [3]. Smart township development should therefore be conceptualised as an institutionally embedded process requiring sustained alignment between political leadership, administrative systems, and participatory governance structures [11].

The digitalisation of SPLUMA should be conceptualised as an institutional governance reform rather than a technical upgrade. Recent analyses show that land-use management reforms reshape administrative authority, coordination mechanisms and accountability systems within local government [5]. Digital SPLUMA therefore holds potential to address political-administrative misalignment and fragmented coordination. Yet, evidence from South Africa's digital government experience indicates that technology alone is insufficient; effective transformation requires institutional realignment, reskilling and integrated governance frameworks [43] [49]. When embedded within coherent regulatory and interdepartmental systems, digital planning platforms can enhance approval efficiency, strengthen spatial data integration and support LED by accelerating enterprise formalisation and aligning infrastructure investment with spatial priorities [50] [51].

9. Conclusions

This study investigated the factors contributing to the stalling of smart township policies during implementation at the municipal level, using EMLM as a case study. The findings show that implementation challenges do not primarily arise from weak policy design or lack of strategic alignment, but from institutional dis-

connects within the municipal system. Misalignment between political priorities and administrative capacity, fragmented coordination across departments and spheres of government, and limited institutional learning mechanisms collectively undermine effective policy execution, even where smart township objectives are embedded in IDPs and LED strategies.

The study makes a theoretical contribution by demonstrating that the implementation gap in township development contexts is best explained through the interaction of policy implementation dynamics and institutional arrangements. Integrating implementation theory with institutionalism highlights how governance norms, organisational routines, and accountability structures shape the interpretation and enactment of policies. This extends the existing smart township scholarship by foregrounding institutional coherence as a critical determinant of sustained implementation.

Empirically, this study offers context-specific evidence from a resource-constrained municipality, demonstrating the influence of institutional arrangements on development outcomes and addressing a gap in municipal-level smart township research. From a practical perspective, the findings highlight the importance of strengthening administrative capacity, clarifying governance roles, improving coordination, institutionalising monitoring and learning processes, and fostering meaningful community participation.

Future research should examine the effectiveness of institutional reforms across multiple municipalities and assess their long-term impact on local economic development and inclusive township growth. Overall, effective smart township implementation depends on strengthening institutional coherence and governance capacity to translate policy commitments into tangible socio-economic outcomes.

While digitalisation of SPLUMA presents significant opportunities to streamline land-use management and support local economic development, its success depends on institutional readiness, administrative reskilling, regulatory reform, and intergovernmental alignment. Digital transformation should therefore be embedded within broader municipal governance reform to ensure that technological innovation translates into inclusive spatial and economic outcomes.

Conflicts of Interest

The authors declare no conflicts of interest.

References

[1] Nyamwanza, S., Chakwizira, J., Beattie, M. and Ingwani, E. (2025) Spatial Planning Constraints in Marginalised Areas. *Town and Regional Planning*, **86**, 62-76. https://doi.org/10.38140/trp.v86i.8765

[2] Turok, I., Visagie, J. and Scheba, A. (2021) Social Inequality and Spatial Segregation in Cape Town. In: van Ham, M., Tammaru, T., Ubarevičienė, R. and Janssen, H., Eds., *Urban Socio-Economic Segregation and Income Inequality*, Springer, 71-90. https://doi.org/10.1007/978-3-030-64569-4_4

[3] Department of Cooperative Governance and Traditional Affairs (COGTA) (2016)

Integrated Urban Development Framework: A New Deal for South African Cities and Towns.

[4] National Planning Commission (NPC) (2025) Service Delivery Research Report. NPC.

[5] Heukelman, A. and Cilliers, E.J. (2025) SPLUMA: The Transformation of Land Use Planning Administration and Governance in South Africa. *Potchefstroom Electronic Law Journal*, **28**, 1-36. https://doi.org/10.17159/1727-3781/2025/v28i0a17997

[6] Stam, E. and van de Ven, A. (2021) Entrepreneurial Ecosystem Elements. *Small Business Economics*, **56**, 809-832. https://doi.org/10.1007/s11187-019-00270-6

[7] Manda, M.I. (2022) Power, Politics, and the Institutionalisation of Information Systems for Promoting Digital Transformation in the Public Sector: A Case of the South African's Government Digital Transformation Journey. *Information Polity*, **27**, 311-329. https://doi.org/10.3233/ip-200233

[8] Mashau, N.L. and Kroeze, J.H. (2023) Challenges That Affect Smart City Implementation in Small and Rural Municipalities. *SA Journal of Information Management*, **25**, a1703. https://doi.org/10.4102/sajim.v25i1.1703

[9] South African Local Government Association (SALGA) (2022) State of Local Government Report. SALGA.

[10] Marawu, N.M., Utete, R. and Zhou, S. (2023) Good Governance as an Economic Driver for Service Delivery: Lessons for South African Government. *International Journal of Management, Entrepreneurship, Social Science and Humanities*, **6**, 71-93. https://doi.org/10.31098/ijmesh.v6i2.1219

[11] Ahmed, S. and Gillwald, A. (2020) Smart Townships Will Build Smarter Cities. Policy Brief No. 3, Research ICT Africa.

[12] Department of Cooperative Governance and Traditional Affairs (COGTA) (2023) District Development Model Booklet. COGTA.

[13] Teti, M., Nzewi, O.I. and Lungisa, S. (2024) The District Development Model as a Catalyst for Improved Integrated Development Planning. *Journal of Local Government Research and Innovation*, **5**, a153. https://doi.org/10.4102/jolgri.v5i0.153

[14] Republic of South Africa (1996) Constitution of the Republic of South Africa. Government Printer.

[15] Republic of South Africa (2000) Local Government: Municipal Systems Act 32 of 2000. Government Printer.

[16] Department of Planning, Monitoring and Evaluation (DPME) (2020) Assessment of the Performance of Municipalities against the Back-to-Basics Programme.

[17] Auditor-General of South Africa (AGSA) (2022) Consolidated General Report on National and Provincial Audit Outcomes. AGSA.

[18] Enoch Mgijima Local Municipality (EMLM) (2024) Final Integrated Development Plan (2023/24 Review). EMLM.

[19] Van Rooyen, E.J., Nel, J.E. and Akbar, K. (2025) Social Value of Integrated Development Planning. *International Journal of Development and Sustainability*, **14**, 846-856.

[20] Mpolweni, N., Kabange, M. and Fagbadebo, O.M. (2024) Integrated Development Plan Strategies for Service Delivery in Nelson Mandela Metropolitan Municipality. *Africa's Public Service Delivery & Performance Review*, **12**, a835. https://doi.org/10.4102/apsdpr.v12i1.835

[21] Hill, M. and Hupe, P. (2021) Implementing Public Policy: An Introduction to the

Study of Operational Governance. 4th Edition, Sage.

[22] Fourie, D.J. and der Waldt, G.V. (2021) Participative Integrated Development Planning Praxis in Local Government: The Case of Selected South African Municipalities. *Journal of Local Government Research and Innovation*, **2**, a43. https://doi.org/10.4102/jolgri.v2i0.43

[23] Nzewi, O.I. (2025) Adaptive Governance for Resilient Local Service Delivery. *Journal of Local Government Research and Innovation*, **6**, a322. https://doi.org/10.4102/jolgri.v6i0.322

[24] Matlala, L.S. (2025) A Review of South Africa's Outcome-Based Approach. *Administratio Publica*, **33**, 41-67. https://doi.org/10.61967/adminpub.2025.33.2.3

[25] Malan, C., Fourie, D. and van der Waldt, G. (2025) Gauging the Institutional Readiness and Resilience of Local Government. *Administratio Publica*, **33**, 1-24. https://doi.org/10.61967/adminpub.2025.33.3.1

[26] Ceesay, A. and Asmorowati, S. (2025) Beyond the Peace Agreement: Institutional Weakness and Governance Challenges in Post-Conflict South Sudan. *Journal of Asian and African Studies*. https://doi.org/10.1177/00219096251376658

[27] Muringa, T. and Shava, E. (2025) 'It's All Talk but No Action'—Navigating Political and Administrative Will in Transforming Local Government. *Cogent Social Sciences*, **11**, Article: 2516078. https://doi.org/10.1080/23311886.2025.2516078

[28] Domorenok, E., Graziano, P. and Polverari, L. (2021) Introduction: Policy Integration and Institutional Capacity: Theoretical, Conceptual and Empirical Challenges. *Policy and Society*, **40**, 1-18. https://doi.org/10.1080/14494035.2021.1902058

[29] Rulashe, T. and Ijeoma, E.O.C. (2022) An Exploration of Public Accountability and Service Delivery at the Buffalo City Metropolitan Municipality in the Eastern Cape Province, South Africa. *Africa's Public Service Delivery & Performance Review*, **10**, a535. https://doi.org/10.4102/apsdpr.v10i1.535

[30] Shava, E. and Muringa, T.P. (2024) Curbing Bureaucratic Limitations through Continuous Learning in Local Government in South Africa. *Frontiers in Political Science*, **6**, Article 1435414. https://doi.org/10.3389/fpos.2024.1435414

[31] Adom, R.K. and Simatele, M.D. (2024) Overcoming Systemic and Institutional Challenges in Policy Implementation in South Africa's Water Sector. *Sustainable Water Resources Management*, **10**, Article No. 69. https://doi.org/10.1007/s40899-024-01040-3

[32] South African Local Government Association (SALGA) (2022) In.Know.Vation 8th Edition: Municipal Innovation and Technology Edition. https://www.salga.org.za/Documents/Knowledge-products-per-theme/Municipal%20Innovation%20n%20Technology/in.Know.vation%208th%20Edition.pdf

[33] Matshika, L.P. and Gumbo, T. (2023) A Framework for Spatial and Socio-Economic Sustainability of Cities in the Global South: Learning from City of Ekurhuleni. *Journal of Inclusive Cities and Built Environment*, **3**, 85-97.

[34] Buthelezi, N.B.C., Onatu, G.O. and Aigbavboa, C.O. (2025) Planning Approval of Housing Developments: Case Study of the City of Johannesburg and Tshwane Metropolitan Municipalities of South Africa. *Frontiers in Sustainable Cities*, **7**, Article 1468965. https://doi.org/10.3389/frsc.2025.1468965

[35] Levi-Faur, D., Kariv-Teitelbaum, Y. and Medzini, R. (2021) Regulatory Governance: History, Theories, Strategies and Challenges. Oxford Research Encyclopedia of Politics.

[36] Republic of South Africa (2013) Spatial Planning and Land Use Management Act

(SPLUMA) 16 of 2013. Government Printer.

[37] Hoefer, R. (2022) Institutionalism as a Theory for Understanding Policy Creation: An Underused Resource. *Journal of Policy Practice and Research*, **3**, 71-76. https://doi.org/10.1007/s42972-022-00059-0

[38] UN-Habitat (2022) World Cities Report 2022: Envisaging the Future of Cities. UN-Habitat.

[39] Chesa, E., Shopola, A. and Juta, L. (2025) The Effectiveness of Service Provision in the South African Local Municipalities. *International Journal of Research in Business and Social Science* (2147-4478), **14**, 192-198. https://doi.org/10.20525/ijrbs.v14i1.3633

[40] Cloete, H.C.A. (2023) Contextualising the Factors Influencing Human Resource Development in Municipalities. *Journal of Local Government Research and Innovation*, **4**, a119. https://doi.org/10.4102/jolgri.v4i0.119

[41] Prakash, D. (2025) Why Do Smart City Projects Fail to Create Impact? Understanding Decision-Making in Smart City Policy Implementation. *Urban Governance*, **5**, 45-53. https://doi.org/10.1016/j.ugj.2025.02.004

[42] Organisation for Economic Co-Operation and Development (OECD) (2021) Government at a Glance 2021. OECD Publishing.

[43] Human Sciences Research Council (HSRC) (2025) Embedding Digital Participation in Municipality Planning and Policymaking. HSRC.

[44] World Bank (2023) World Development Report 2023: Migrants, Refugees and Societies. World Bank.

[45] Ansell, C. and Torfing, J. (2021) Public Governance as Co-creation. Cambridge University Press. https://doi.org/10.1017/9781108765381

[46] Matlala, L.S. (2025) Why Oversight Recommendations Fail. Cogent Social Sciences.

[47] Mamokhere, J. and Meyer, D.F. (2022) A Review of Mechanisms Used to Improve Community Participation in the Integrated Development Planning Process in South Africa: An Empirical Review. *Social Sciences*, **11**, Article 448. https://doi.org/10.3390/socsci11100448

[48] Sager, F. and Gofen, A. (2022) The Polity of Implementation: Organizational and Institutional Arrangements in Policy Implementation. *Governance*, **35**, 347-364. https://doi.org/10.1111/gove.12677

[49] Ngcaweni, B. (2025) Digital Government Can Benefit Citizens. Wits University News.

[50] Almulhim, A.I. and Yigitcanlar, T. (2025) Smart Governance of Sustainable Cities: A Review and Multidimensional Framework. https://doi.org/10.20944/preprints202506.0394.v1

[51] Department of Land Reform and Rural Development (2025) Strategic Plan 2025-2029.