ISSUES PAPER: TECHNOLOGY AND INNOVATION AS A CROSS-CUTTING ENABLER FOR DECENTRALISATION (2026–2029)

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1. INTRODUCTION AND IMPORTANCE TO NATIONAL DEVELOPMENT

Technology and innovation are no longer optional features of governance systems—they are core enablers of state responsiveness, institutional efficiency, and civic trust. In the context of Ghana's decentralisation agenda, where the goal is to bring government closer to the people, technology must serve as both a connective tissue and an amplifier of performance.

Ghana's aspirations under the Ghana Digital Economy Policy (2020), the Coordinated Programme of Economic and Social Development Policies (2021–2025), and the NDC's 2024 Manifesto reflect a clear trajectory towards digitised public service delivery and digitally inclusive governance. International frameworks such as the AU Digital Transformation Strategy (2020–2030), the Smart Africa Manifesto, and SDG 16 also recognise the pivotal role of digital infrastructure and innovation ecosystems in achieving strong, inclusive institutions.

At the MMDA level, digital transformation allows for the redesign of service delivery systems to be more citizen-centred, data-informed, and scalable. However, transformation must be intentional. It requires institutional commitment, skilled talent, enabling infrastructure, and coordinated policy enforcement.

A digital-first approach to decentralisation aligns with multiple national priorities—ranging from job creation in the tech ecosystem to enhanced revenue mobilisation and disaster resilience. This paper proposes a pragmatic roadmap to mainstream technology and innovation across all six decentralisation thrusts.

2. GAPS IN DELIVERY AND REQUIRED ACTIONS

Despite growing awareness, technology and innovation remain underleveraged across Ghana's local governance system. Key gaps include:

1. Institutional Disconnect: ICT has not been institutionalised in most MMDAs. There are no digital KPIs in staff assessments or service-level performance indicators.

2. Weak Infrastructure Backbone: Many district assemblies lack stable electricity, internet access, or basic computing infrastructure, which significantly limits digitisation efforts.

3. Low Digital Fluency: Most staff are untrained in the use of planning, finance, or data management software. There is no competency framework to benchmark digital proficiency in local governance.

4. Fragmentation of Platforms: Existing national platforms (e.g., GIFMIS, e-Procurement, MMDA portals) are not fully integrated or standardised across MMDAs.

5. Ineffective Civic Interfaces: Where digital citizen engagement exists, it is either tokenistic or limited to broadcasting, not feedback loops or co-creation.

6. Undervalued Local Innovation: Local tech startups and academic institutions are rarely involved in solving MMDA-specific challenges, despite proven capabilities in areas such as mobile payments, geospatial mapping, and civic tech.

7. Missing Baseline on Digital Maturity: There is no national index or framework to assess and compare the digital readiness of MMDAs, making it hard to target support or incentivise progress.

Although basic ICT infrastructure standards and toolkits have been developed with support from NITA, implementation across MMDAs remains uneven. The absence of funding, monitoring, and capacity alignment has created a gap between policy intention and local practice.

8. Misalignment Between Central and Local ICT Policies: While national digital initiatives exist, they are not consistently translated into localised implementation frameworks. This creates disconnects and implementation bottlenecks at MMDA level.

9. Limited Innovation Budgets: Few MMDAs have budget lines dedicated to innovation or digital experimentation, making it difficult to test and adopt new solutions tailored to their context.

3.RECOMMENDATIONS BY POLICY THRUST

A. Political Decentralisation

Sub-objective 1: Enhance inclusive democratic participation and transparency through adaptive civic technology.

Strategy: Deploy trust infrastructure that enables citizens—especially women, youth, and persons with disabilities—to access and influence local decision-making through multiple formats.

Activities:

- Establish flexible multi-channel platforms for civic communication (e.g., messaging apps, interactive voice response systems, and community digital noticeboards), with capacity to evolve as new tools emerge.
- Create civic data walls (physical and digital) to display key performance indicators, procurement records, and service performance in accessible formats.
- Institutionalise quarterly community scorecards co-developed with civil society organisations, using disaggregated feedback from marginalised communities.
- Livestream and archive budget hearings and participatory forums, ensuring subtitles and local language versions are available.

Sub-objective 2: Strengthen political accountability through measurable digital performance.
Strategy: Integrate digital performance indicators into the performance contracts and oversight mechanisms for local leadership.
Activities:

- Assign digital transformation indicators to Metropolitan, Municipal, and District Assembly (MMDA) leadership (e.g., percentage of services digitised, volume of civic interactions, digital inclusion scores).
- Ensure citizen engagement metrics are linked to performance reviews and reporting systems within the Local Government Service.

B. Administrative Decentralisation

Sub-objective 1: Institutionalise digital governance as a core function of local administration.
Strategy: Develop robust Information and Communication Technology (ICT) governance frameworks and resourcing standards at the MMDA level.
Activities:

- Mandate each MMDA to develop a digitally inclusive ICT strategy aligned with the national digital policy and sector-specific goals.
- Establish dedicated ICT units with clear staffing profiles, reporting lines, and allocated budgets for infrastructure, software, and staff capacity-building.
- Develop and distribute a national electronic governance toolkit (including Human Resource Management Information Systems, digital records management, cloud-based collaboration tools, and email systems) that complies with accessibility and interoperability standards.

Sub-objective 2: Mainstream innovation within MMDA administrative structures.
Strategy: Embed structured innovation partnerships and funding instruments in MMDA operations.
Activities:

- Launch formal innovation partnerships between MMDAs, local universities, and technology incubators to co-create digital public solutions.
- Institutionalise innovation funds with eligibility criteria that reward youth-led, inclusive, and environmentally sustainable initiatives.

C. Fiscal Decentralisation

Sub-objective 1: Modernise revenue systems through integrated digital platforms.
Strategy: Deploy comprehensive digital revenue tools that increase compliance, visibility, and financial accountability.
Activities:

- Introduce mobile-first, 24/7 tax and fee payment systems integrated into district-level budget processes.
- Build real-time dashboards to track Internally Generated Funds (IGF) by revenue stream and geographic area.
- Ensure full integration with the Ghana Integrated Financial Management Information System (GIFMIS), electronic procurement platforms, and financial planning tools used by MMDAs.

Sub-objective 2: Link digital maturity to fiscal incentives.
Strategy: Create a Digital Readiness Index and embed it in performance-based public finance allocations.
Activities:

- Implement a Digital Readiness Index that measures infrastructure, institutional capacity, inclusion metrics, and digital service delivery across all MMDAs.
- Link District Assemblies Common Fund (DACF) disbursements and digital transformation grants to performance on this Index.
- Facilitate regional peer-learning and public benchmarking to promote digital best practices across assemblies.

D. Decentralised Planning

Sub-objective 1: Make planning data-driven, inclusive, and climate-resilient.
Strategy: Institutionalise Geographic Information Systems (GIS) and Artificial Intelligence (AI) into the local planning cycle.
Activities:

- Equip MMDAs with GIS and AI toolkits for infrastructure, education, sanitation, public health, and disaster risk planning.
- Train district-level planning staff in the use of spatial data, equity mapping, and digital scenario modelling.
- Support the creation of "digital twins" for selected districts—interactive virtual models to simulate policy impacts and infrastructure needs under different conditions.

E. Local Economic Development

Sub-objective 1: Stimulate youth employment and small enterprise growth through local digital ecosystems.
Strategy: Position MMDAs as conveners of innovation, enterprise, and technology enablement.
Activities:

- Establish Innovation Clusters in collaboration with technology hubs, universities, and private sector partners to serve as testing and scaling environments.
- Launch annual innovation challenge funds for local actors to design and pilot solutions to municipal challenges.
- Promote digital commerce ecosystems by supporting informal businesses to adopt mobile payment systems and access online markets.

Sub-objective 2: Improve investment readiness using spatial and digital intelligence.
Strategy: Use planning data and analytics to attract local and international investment.
Activities:

- Map and maintain digital registries of public markets, commercial corridors, transport infrastructure, and economic zones.
- Create live investment dashboards displaying demographic, infrastructure, and economic data to support district-level investment promotion.

F. Popular Participation and Accountability

Sub-objective 1: Make citizen engagement inclusive, continuous, and representative.
Strategy: Institutionalise civic technology tools that allow for broad participation from different population segments.
Activities:

- Deploy mobile-accessible civic feedback platforms that support text, audio, and visual input—especially for non-literate users and persons with disabilities.
- Disseminate budget and service updates through low-bandwidth channels, local radio, and community screens to reach rural and excluded populations.
- Publicly display community responses and MMDA follow-up actions on accessible digital boards and local media.

Sub-objective 2: Build institutional trust through transparency and citizen-facing data systems.
Strategy: Operationalise open data and community accountability tools.
Activities:

- Establish open performance dashboards displaying MMDA spending, procurement, and project status in public-facing formats.
- Institutionalise inclusive citizen scorecards developed with civil society organisations and community leaders.
- Adopt data governance policies ensuring transparency, privacy protection, and public access across all MMDA platforms.

CROSS-CUTTING ISSUE MATRIX: TECHNOLOGY AND INNOVATION

Policy Thrust	Objective (Technology & Innovation)	Sub-objective	Strategy	Indicative Activities
Political Decentralisation	Promote inclusive and transparent citizen engagement through digital platforms.	Increase participation and visibility for all citizens, including women, youth, and	Deploy flexible, trust-based digital infrastructure for local decision-making.	• Establish civic engagement platforms using messaging apps, community boards, and mobile-accessible tools.

		persons with disabilities.		• Display performance and budget data on digital civic data walls. • Archive participatory forums and feedback loops. • Institutionalise gender- and youth-inclusive scorecards.
Administrative Decentralisation	Institutionalise digital governance within local government structures.	Establish digital leadership roles, systems, and budgets within all local authorities.	Mandate digital transformation strategies and staffing for every Metropolitan, Municipal, and District Assembly (MMDA).	• Require digital governance strategies at the MMDA level. • Create dedicated digital transformation units with full-time personnel. • Distribute toolkits for human resources, communications, records, and internal collaboration. • Track staffing, performance, and inclusivity.
Fiscal Decentralisation	Modernise and make transparent local revenue systems using digital tools.	Increase efficiency and visibility of Internally Generated Funds and fiscal accountability.	Introduce integrated mobile revenue tools, tracking dashboards, and budget transparency mechanisms.	• Enable mobile-first tax collection and digital payments. • Launch dashboards showing revenue by category and district. • Ensure integration with national budgeting and procurement platforms such

				as the Ghana Integrated Financial Management Information System.
Decentralised Planning	Strengthen evidence-based, inclusive, and climate-resilient district-level planning.	Improve the quality and inclusiveness of spatial and predictive planning tools.	Institutionalise the use of Geographic Information Systems and Artificial Intelligence for local development.	• Deploy geospatial planning tools for health, sanitation, education, and disaster response. • Train district planners in spatial equity and digital data use. • Develop 'digital twins' of districts to simulate growth and infrastructure outcomes under multiple scenarios.
Local Economic Development	Enable innovation ecosystems and digital entrepreneurship at the local level.	Drive youth employment and informal sector growth using local digital economies.	Establish MMDA-led innovation hubs and inclusive funding instruments.	• Launch municipal innovation clusters in partnership with universities and local startups. • Provide challenge funds prioritising youth and inclusive tech solutions. • Promote formalisation through mobile marketplaces and digital identity-linked services.

Popular Participation and Accountability	Build trust and transparency through continuous, inclusive citizen feedback and data access.	Ensure diverse community voices are heard and reflected in governance.	Deploy participatory tools and open data systems tailored to low-resource and rural settings.	• Roll out low-cost, mobile-accessible platforms for feedback collection (voice, text, visual). • Display feedback and responses on local noticeboards and digital dashboards. • Co-create scorecards with civil society organisations, disaggregated by gender and age. • Adopt data transparency policies at MMDA level.

5.Intersections of Technology and Innovation with Other Cross-Cutting Themes

Cross-Cutting Theme	Implications for Technology & Innovation	Strategic Digital Governance Response
Climate Change and Environmental Management	Climate variability intensifies the need for adaptive and spatially responsive governance. MMDAs must plan for floods, droughts, land degradation, and changing settlement patterns. Without integrated environmental data, local	Digital systems must embed geospatial and environmental datasets as core components—not overlays. This includes using GIS and AI models to anticipate infrastructure vulnerability, simulate climate impact scenarios (e.g., for roads or housing), and plan resilient land use. Digital policies should

	decisions risk being reactive and misaligned.	mandate climate sensitivity in system design and data architecture.
Gender, Disability and Social Inclusion (GDSI)	Structural exclusion manifests in technology when systems are built without accounting for differences in access, language, literacy, and visibility. Women, persons with disabilities, and marginalised youth are underrepresented in both datasets and decision-making interfaces.	Inclusion must be baked into the digital governance strategy—not as an afterthought but a baseline. This includes universal design standards, participatory tech design involving GDSI groups, and mandatory disaggregation of digital planning and service datasets. ICT job roles should reflect inclusion as a skillset, and procurement should require GDSI compliance.
Mindset and Change Management	Even the most sophisticated systems fail when leadership resists transparency or staff fear redundancy. Cultural norms and siloed bureaucracies make digital transformation fragile without psychological readiness.	Technology policy must embed change leadership. This includes dedicated "digital champions" in MMDAs, incentives for adoption, continuous capacity-building, and internal storytelling around the value of digital systems. Monitoring systems should not only track system usage but also assess digital culture maturity and openness to innovation.
24-Hour Economy	The expectation that government services should be accessible at any time—especially for informal sector actors—creates pressure on traditional service models that rely on	MMDA platforms must support asynchronous services: automated approvals, mobile payments, and self-service information access. Tech design should prioritise mobile-first architecture, data syncing after hours,

	physical presence or fixed hours.	and multi-channel access. Digital service KPIs should measure 24/7 availability and transaction success outside office hours.
Security and Safety	Insecurity—whether physical or digital—erodes trust in public systems. Communities in high-crime areas, women in public spaces, and youth in volatile environments often face limited access or retaliation when reporting issues.	Civic tech systems must offer safe, anonymous reporting features and integrate local safety data into planning tools. MMDA platforms should visualise safety trends and integrate with national security response systems. Policies must also regulate responsible use of surveillance and protect data privacy—especially where AI and CCTV are used.

6. CONCLUSION

A decentralised governance model that ignores digital transformation will inevitably fall short of its goals. Ghana must embrace a new operating model where every MMDA is a digital service unit, every citizen can engage through trusted platforms, and every decision is informed by real-time data.