

**Information and Communication Technology as a Driver of Knowledge Management in
Local Government**

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Abstract

Local government is the tier of administration closest to citizens, yet it is often the tier least equipped with the technological infrastructure needed to capture, store, and apply institutional knowledge. This paper examines Information and Communication Technology (ICT) as a driver of knowledge management in local government administration, using the SECI knowledge-creation model and the Technology Acceptance Model (TAM) as its theoretical foundation. Using a qualitative comparative-review methodology drawing on recent Nigerian and comparative international literature (2014–2025), the paper finds that ICT adoption is consistently associated with improved operational efficiency, record accessibility, and service delivery at the local government level, but that adoption remains constrained by inadequate infrastructure, poor power supply, low digital literacy among personnel, and weak integration between ICT systems and the tacit institutional knowledge that career civil servants hold. The paper argues that ICT should be understood not merely as a record-keeping tool but as the infrastructure through which local governments convert individual and tacit knowledge into shared, explicit, retrievable organizational knowledge. It recommends sustained investment in digital infrastructure, mandatory ICT literacy training tied to knowledge-sharing objectives, and knowledge management strategies explicitly designed around the realities of local government administration rather than borrowed wholesale from private-sector or federal-level models.

Keywords: Information and communication technology, knowledge management, local government, SECI model, technology acceptance model, e-governance

1.0 Introduction

Local governments are custodians of vast amounts of administrative, fiscal, and community-level knowledge , land records, tax rolls, project histories, community demographics, and the accumulated tacit expertise of long-serving personnel. In much of Nigeria, this knowledge base remains largely undigitised, fragmented across paper files, and vulnerable to loss through staff turnover, poor storage, or simple administrative neglect. Information and Communication Technology (ICT) has been positioned globally as the infrastructure that allows organizations to convert such scattered, often tacit knowledge into shared, explicit, and reusable institutional assets. Whether Nigerian local governments have been able to realise this potential , and what specifically stands in the way , is the question this paper investigates.

The paper treats knowledge management not as an abstract organizational ideal but as a concrete function that ICT either enables or constrains at each stage of the local government knowledge cycle: capturing what officials know, storing it reliably, sharing it across departments, and applying it to improve service delivery.

2.0 Literature Review

2.1 Conceptual Clarification

Information and Communication Technology in this context refers to the combination of hardware, software, networks, and digital tools , computers, internet connectivity, databases, and e-governance platforms , that local governments use to process and communicate information.

Knowledge management is the deliberate organizational process of creating, capturing, sharing, and applying knowledge to improve institutional performance. A foundational body of work in this area emphasizes that ICT combines information, knowledge, processes, and technology to provide a foundation for driving efficiencies and fuelling innovation within organizations, including government bodies (Suleiman, 2022).

2.2 ICT and Knowledge/Information Management in Nigerian Local Government

Evidence on the state of ICT in Nigerian local government administration is mixed but converges on a consistent pattern. Foundational research on ICT applications in Nigerian local government information management found that while ICT implementation can significantly enhance

operational efficiency and administrative cost reduction, many local governments still face challenges in effective adoption, resulting in incomplete records and accessibility problems, with inadequate digital education, high equipment costs, and poor power supply identified as core constraints. A more recent 2022 review of ICT mediation in Nigerian local government administration similarly frames ICT as a major driving force for building information societies and improving governance practices, noting that improved information management and availability is seen as a way of increasing accountability and decision-making quality, while flagging that ICTs are not yet living up to their full promise at the local government level (Suleiman, 2022).

A 2025 study using the Technology Acceptance Model to examine ICT adoption across Aguata, Awka South, and Onitsha North Local Government Areas in Anambra State found that strategic ICT adoption remains a critical driver of institutional modernization and effective public service delivery in grassroots governance, but identified inadequate digital training, weak technical infrastructure, and poor system reliability as major constraints limiting the full realization of ICT benefits (Okpala, 2025). A separate 2025 study examining ICT adoption's mediating role in local government revenue generation in Kwara State found that well-trained personnel and robust technological infrastructure act synergistically: ICT adoption converts human and technological resources into tangible organizational outcomes only when both personnel capability and infrastructure are present together (AbdulKareem et al., 2025). This finding is significant for knowledge management specifically, because it suggests that ICT infrastructure alone, without a trained workforce capable of using it to capture and share institutional knowledge, produces limited returns.

Complementary evidence from Enugu State examined ICT utilisation in social service delivery across local government councils, identifying e-health, e-construction, and e-education service packages as available ICT applications, while also identifying infrastructural and capacity barriers similar to those found in Anambra and Kwara States. A 2025 bibliometric analysis of 128 Scopus-indexed publications on ICT in Nigerian public administration confirms that this is now an active and growing research field, with leading contributions concentrated around a small number of Nigerian and South African universities (Ishola, Maramura& Gumbo, 2025).

2.3 Comparative International Evidence

Outside Nigeria, a widely cited study applied the Technology Acceptance Model directly to a Spanish City Hall, examining how perceived usefulness and perceived ease of use shaped citizen engagement with e-government services at four levels , null, publish, interact, and transact (Cegarra-Navarro, Moreno & Córdoba-Pachón, 2014). This remains one of the clearest empirical demonstrations that local government technology adoption follows the same acceptance logic as private-sector systems, reinforcing the applicability of TAM to the Nigerian local government context. Separately, knowledge management research applying the SECI model within a public-sector case study (the Virgin Islands public service) found that knowledge sharing enhances employee engagement, leadership development, and succession planning, suggesting that ICT-enabled knowledge processes have organizational benefits well beyond simple efficiency gains.

3.0 Theoretical Framework

The SECI Model (Nonaka& Takeuchi, 1995) explains knowledge management as a spiral of four conversion processes: Socialization (sharing tacit knowledge through direct interaction), Externalization (converting tacit knowledge into explicit, documented form), Combination (integrating explicit knowledge from different sources), and Internalization (embedding explicit knowledge back into individual tacit understanding through practice). In local government, this framework highlights a specific vulnerability: much of the operational knowledge held by long-serving personnel remains tacit and undocumented, so that when such staff retire, transfer, or die in service, the institution loses that knowledge entirely unless ICT-supported Externalization and Combination processes have already captured it in accessible, digital form.

The Technology Acceptance Model (Davis, 1989) explains ICT adoption itself as a function of perceived usefulness and perceived ease of use, which shape attitude toward using a system and, in turn, behavioural intention and actual use. Applied to local government, TAM explains why ICT systems introduced without regard to staff perceptions of usefulness or ease of use often fail to achieve real adoption regardless of how much infrastructure investment accompanies them , a pattern directly reflected in the Nigerian evidence, where infrastructure alone did not guarantee ICT-driven outcomes without corresponding personnel training and buy-in (AbdulKareem et al., 2025; Okpala, 2025).

Together, SECI and TAM offer a two-part diagnostic: SECI explains *what* knowledge management process ICT needs to support at each stage, while TAM explains *whether* local government personnel will actually adopt the ICT tools meant to support it.

4.0 Methodology

This paper adopts a qualitative comparative-review (documentary/content-analysis) design, drawing on peer-reviewed studies of ICT and knowledge/information management in Nigerian local government (2015–2025) and comparative international e-government research, cross-checked against publisher and institutional-repository records. Sources were synthesised around the SECI knowledge-conversion stages and TAM's adoption constructs.

Note: as with the earlier papers in this set, this is a literature-based synthesis. If you want a field-based Chapter Four for a specific LGA , population of council staff, sample size formula, a Likert-scale instrument measuring ICT usefulness/ease of use and knowledge-sharing behaviour, and Spearman's Rank-Order Correlation or Chi-square hypothesis testing , tell me the local government area and I will build it in your usual house style.

5.0 Discussion

Three findings recur across the literature reviewed. First, ICT adoption in Nigerian local government is real but shallow: efficiency gains and improved record accessibility are documented, but coverage remains uneven and infrastructure-dependent (foundational ICT-LGA research; Okpala, 2025). Second, infrastructure and personnel capability are complementary, not substitutable , ICT investment without trained staff produces limited knowledge management gains, and trained staff without reliable infrastructure cannot act on what they know (AbdulKareem et al., 2025). Third, the knowledge management dimension of ICT adoption , as opposed to its administrative-efficiency dimension , remains underexplored in the Nigerian local government literature specifically, even though the SECI framework and comparative e-government research (Cegarra-Navarro et al., 2014) show its relevance clearly. This is the paper's central contribution: reframing ICT adoption in Nigerian local government not just as a digitisation or efficiency question, but as a knowledge-continuity question , whether tacit institutional knowledge survives staff turnover.

6.0 Conclusion and Recommendations

ICT is a necessary but not sufficient driver of knowledge management in Nigerian local government. Its value depends on deliberate design around the SECI knowledge-conversion cycle and on personnel actually accepting and using the systems provided, as TAM predicts. The paper recommends:

1. Sustained investment in digital infrastructure and reliable power supply, identified consistently as the binding constraint on ICT-enabled knowledge management.
2. Mandatory, recurring ICT literacy training explicitly linked to knowledge documentation tasks (Externalization), not just general computer literacy.
3. Structured knowledge-capture protocols , exit interviews, digitised standard operating procedures, searchable case/record databases , specifically designed to convert the tacit knowledge of experienced staff into explicit, retrievable institutional knowledge before it is lost to turnover.
4. Local ICT system design that is evaluated for perceived usefulness and ease of use by the personnel who will actually use it, rather than adopted top-down from federal or donor-driven templates.
5. Future empirical research measuring the direct relationship between ICT adoption and knowledge-sharing behaviour (not just administrative efficiency) within specific LGAs, using validated instruments and inferential hypothesis testing.

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