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Public Sector Capability & Institutional Systems

Strengthening data to improve service delivery in Local Government: Open Cities Lab

Open Cities Lab demonstrates how strengthening municipal data governance and digital maturity improves infrastructure planning, financial sustainability and service delivery. By pairing data strategy reform with practical, co-designed use cases and peer learning, it offers a replicable pathway for Commonwealth cities to embed evidence-based decision-making within everyday institutional practice.

Data sharing workshop, South Africa. *Open Cities Lab*

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1. Executive Summary

Many municipalities struggle to use data effectively due to fragmented systems, limited internal capacity, and weak governance structures. As a result, digital investments often fail to translate into better planning or improved service delivery.

Over the past decade, Open Cities Lab (OCL)[1] has worked with municipalities across South Africa to strengthen how data and digital systems are used in local government decision-making and service delivery. This case study reflects on that experience, focusing on what it takes to build data and digital maturity inside municipal institutions and where those efforts fall short.

The following highlights an approach that focuses first on creating an enabling environment through clear data strategies, defined ownership, shared standards, and leadership alignment and then implementing targeted use cases that address real service delivery challenges. By pairing governance reform with practical, co-designed solutions, municipalities are able to embed data into everyday decision-making rather than treat it as a standalone technical function.

Examples include an information management system aimed at improving how a city manages and uses data about informal settlements demonstrates how existing data can be leveraged to improve reliability and decision-making. Peer learning through Communities of Practice further strengthens this work by connecting officials facing similar challenges across cities.

The key lesson is that sustainable digital transformation in local government and ultimately improved service delivery depends as much on governance, ownership, and capacity as it does on technology.

[1] Open Cities Lab: https://www.opencitieslab.org/

2. Context and Challenge

Local governments around the world sit at the frontline of service delivery, yet many still manage data in fragmented and reactive ways. This makes effective planning and consistent delivery far more difficult than it should be and the consequences are felt across departments from Infrastructure and Technical Services including water and electricity provision through to Housing and Development Planning.

One major blocker is institutional and technical fragmentation. Critical information is locked inside departmental silos, with limited sharing across teams. Different departments often operate separate systems that do not integrate. Customer records are scattered across platforms. Asset information sits in spreadsheets. Staff rely on emails, manual processes, or printed documents to access what they need. At the same time, municipalities frequently invest in expensive software that locks them into long contracts but still does not meet day-to-day operational needs. The result is that no one has a complete, trusted view of customers, infrastructure, or performance. Decisions are made with partial information, and opportunities for coordination and efficiency are lost.

A second challenge is limited internal data capacity. Municipal teams are expected to manage dashboards and databases without dedicated roles, sufficient training, or ongoing technical support. Data often becomes the domain of a few individuals rather than a shared organisational resource.

Third, many municipalities lack a clear data strategy or governance framework. Without agreed standards, defined ownership, and a culture that treats data as an asset, information is collected inconsistently and shared cautiously. Together, these weaknesses undermine proactive planning, infrastructure management, revenue collection, and ultimately the quality of services delivered to residents.

3. Approach or Experience

What we have found most effective in addressing fragmented systems, weak governance, and limited capacity is creating an enabling environment first and then building solutions within it.

That enabling environment begins with a clear data strategy. Rather than introducing technology in isolation, we work with municipalities to map existing systems, clarify data ownership, agree on standards, and prioritise realistic next steps. This process helps surface duplication, identify quick wins, and build alignment between leadership and operational teams. We developed a practical Data Strategy Toolkit that is full of templates, exercises, and guides that municipalities can adapt regardless of their level of data maturity. In the past three months alone, eight municipalities have drafted data strategies using this approach. These are not compliance documents, but working frameworks that guide investment, coordination, and accountability.

Alongside strategy, we support departments to implement focused use cases that address real service delivery challenges. The starting point is always a clearly defined need. In one South African municipality, we co-designed an information management system aimed at improving how the City manages and uses data about informal settlements. It was developed to address the persistent challenge of fragmented systems and outdated information that made service delivery near-impossible for the nearly 600 informal settlements, home to roughly a quarter of the city's population. In another instance, we supported a metropolitan Informal Settlements Department to strengthen urban planning by addressing critical data gaps through a reusable digital survey tool and an integrated data portal linking field information directly to core city systems. This enables more accurate settlement profiling, better upgrade planning, and faster, evidence-based responses to the needs of residents living in informal settlements.

These use cases are co-designed with officials and embedded within existing systems. Short cycles of research, prototyping, and testing ensure that tools fit real workflows and build internal capability along the way. They also help create momentum for broader data governance reforms.

Increasingly, this work aligns with a Digital Public Infrastructure (DPI)[2] approach by supporting municipalities to adopt modular, extensible solutions that allow them to retain ownership of their data rather than depend on closed vendors.

Finally, we have prioritised peer learning through our Community of Practice, MijiBora[3]. Officials share tools, challenges, and lessons across cities. We are seeing growing interest from municipalities who want to join, and early signs suggest that peer exchange reduces duplication and strengthens confidence in practical, incremental reform.

[2] Digital Public Infrastructure: https://www.undp.org/digital/digital-public-infrastructure
[3] MijiBora: https://mijibora.africa/

4. Insights and Lessons

Across ten years of work, a few clear lessons stand out.

The projects that lasted all shared one feature: they solved a specific, practical challenge for a defined group of users. When data helped teams prioritise maintenance, reconcile billing, or plan infrastructure more effectively, it proved its value. The work endured when it became part of everyday decision-making rather than an extra tool sitting alongside existing systems. At times, this required pushing back on funder requests or internal pressures that did not align with real user needs. This work requires both strategic and operational buy-in. Senior leadership provides mandate and direction, while mid-level officials drive implementation. Balancing these levels is critical.

Another lesson is that municipalities are at different stages of readiness. Some have the capacity and leadership buy-in to move quickly into use case implementation. Others need foundational support and coaching before technical work can take hold. A tiered approach is essential. We have also seen the value of connecting stakeholders to one another. Through our Community of Practice, officials realised they were not alone in facing similar challenges. Joint problem-solving built confidence and reinforced the legitimacy of incremental reform.

Finally, politics and institutional capacity often shape outcomes more than technology. Shifting priorities, unclear ownership, or limited internal capability can stall progress. In some cases, the responsible decision is to pause or close a project when the conditions for sustainable change are not in place.

5. Key Takeaways

- Digital maturity is driven by people, ownership, and institutional readiness not technology alone.
- Pair technical work with strategy and governance; policy intent needs structure and ownership to stick.
- Start with specific operational problems that matter to municipal users.
- Secure both political mandate and operational buy-in; progress depends on both.
- Use peer learning to reduce duplication and build confidence; cities often learn best from each other.

This Case Study was prepared by Ms Sarah Findlay and Ms Michelle Hinrichsen from the Open Cities Lab[4] by way of contribution to the work of the CSCC Housing Action Group, March 2026

[4] Open Cities Lab: https://www.opencitieslab.org/

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