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BLOG

Embracing Uncertainty: M&E Lessons from an Evolving Ecosystem Programme

Adapted from an internal learning brief by Daniel Moody

As international development and urban governance initiatives grow more complex, capturing their true impact requires monitoring and evaluation (M&E) frameworks that are as dynamic as the environments they measure. This article reflects on the core M&E lessons that emerged from the data technical assistance project of the UK FCDO's Urban Resilience Programme. By examining what worked, what evolved, and where our assumptions were challenged, we hope to share valuable insights for practitioners navigating institutional change in local government ecosystems.

Approach

MijiBora combined peer learning with technical assistance, to encourage eThekwini Municipality and 6 neighbouring districts and local municipalities to work together to achieve data governance objectives such as:

- Writing a data strategy,
- Developing a data working group,
- Identifying a chief data officer and other custodians and champions,
- Identifying foundational datasets and developing data catalogues,
- Working on unified views and interoperability,
- ‘Pitching’ to investors and partnership building

A toolkit was developed as a starting point for these organisations, based largely off of the City of Cape Town’s data strategy, as well as the UK GDS’s open principles and other global best practice. Armed with the toolkit, municipalities came together quarterly over 18 months to share progress towards their milestones. Over this time 2 other metros and 1 additional secondary city joined the community of practice.

The theory of change resulted in improved urban resilience

Our collaboration with cities had a clear Theory of Change (ToC): that through (1) peer learning, (2) technical use case support, and (3) capacity building on strategic data governance, we could materially and positively impact the lives of residents in urban areas and increase urban resilience. This theory of change was operationalised through several key use cases tackling core service delivery issues, co-developing municipality-specific data strategies and supporting a local Community of Practice for municipal practitioners.

The theory of change proved successful in practice. For example, in the City of Cape Town, within six months of use case implementation for electricity asset management, missed inspections of electricity assets were reduced from 60 to 1. This operational turnaround resulted in a 30% reduction in power outages, directly benefiting communities, especially those in the most vulnerable locations. Early signs show that applying a similar approach to water assets, the City is able to reduce water losses through leaks. Improved management of critical infrastructure and reduction in water and electricity losses, is a key indicator of urban resilience and local government reform.

Institutional readiness and time are critical enablers of the theory of change

While the core logic holds true, the ToC only functions effectively under highly specific institutional conditions:

- Institutional readiness: This is indicated by political stability, strong political buy-in, alignment with political priorities, and mandated, cross-departmental functions for implementation.
- Structural commitment: Success is further enabled by an adopted data strategy, public announcements, an assigned Chief Data Officer, and an active inter-departmental working group.
- Time for adoption, iteration and institutionalisation (3 - 5 years)

One of the clearest gaps in the original ToC is the assumption that once data assets are built and handed over, they will be quickly adopted and immediately produce efficiency or decision-making improvements. Similarly, the assumption that the development and even adoption of data strategies will shift internal culture and practice right away does not hold true in our experience.

Institutional readiness and time are critical enablers of the theory of change

In practice, programme experiences show that data asset adoption and institutionalisation efforts often take much longer than originally anticipated. In reality, tool and strategy development marks the start of a change process, not the end. Institutionalising these tools requires additional steps, such as:

- Strengthened internal capabilities
- Consistent and relevant training
- Dedicated change management and workflow integration
- Sustained leadership buy-in

In many cases, however, these factors are compromised by municipal restructuring, leadership turnover, limited internal capacity, competing operational priorities, and fiscal constraints. The recommendations below are derived from seeing institutional readiness and adoption pathways as part of the delivery of the outputs, rather than a separate element to be ‘managed’.

Recommendations

Recommendations to effectively monitor a programme under such complex and uncertain conditions are as follows:

1. Embrace long lead times: Our learnings show that if shorter term external technical assistance is to succeed, it must be embedded in longer term government driven programmes and teams that have the ability to take on multiple rounds of funding and support. This emphasises the need for more flexible evaluation timelines in initiatives of this nature. Rather than assuming a fixed window between tool deployment and assessment, evaluation approaches must be adapted, in collaboration with municipal partners, to better reflect the true time required for tools to be adopted, embedded into workflows, and ultimately used to influence organisational practice.

Recommendations

2. Greater use of qualitative metrics in our logframe

Our initial logframe relied heavily on quantitative indicators to track and monitor progress. While these provided useful insights into programme activities and reach, integrating deliberate qualitative indicators from the start would have strengthened the framework for both programme management and impact monitoring. Although the programme did collect qualitative insights through interviews, learning exercises, and narrative reporting, this was done in a fairly unstructured manner. Future programmes should incorporate rubric-based qualitative indicators or systematic case study tracking to illustrate how activities influence outcomes like institutional change, decision-making, or governance improvements. This adds a more nuanced level of analysis, helping to explain “why change has occurred,” not just “what change has occurred.”

Recommendations

3. Refining Communities of Practice (CoPs) metrics

Another key learning relates to the indicators used to measure the impact of Communities of Practice (CoPs). The initial metrics provided limited insight into how CoPs contribute to broader outcomes and were not always useful for day-to-day programme management. These indicators were originally developed when the programme was still experimenting with the role CoPs would play. With nearly three years of implementation experience, the team now has a clearer understanding of how CoPs drive knowledge sharing, capacity building, and institutional change.

Future programmes should adopt more targeted indicators, including:

- The number of municipalities actively participating in CoPs.
- The number of outputs being developed by the municipalities themselves (in our case, data strategies, but could be any selected milestone).
- Documented examples of skills development or institutional change traced back to CoP engagement.
- The number of cross-municipal collaborations or initiatives emerging from the CoP.

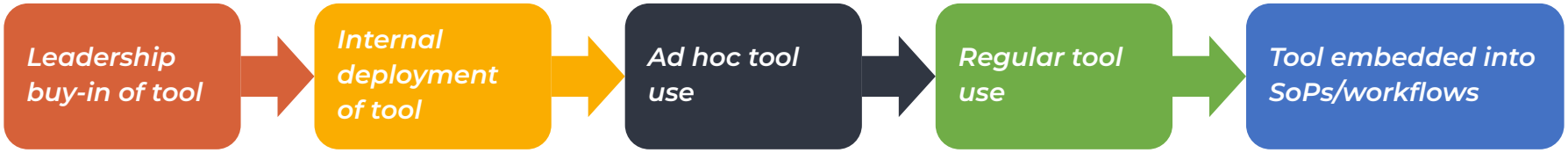
Furthermore, there is clear scope to incorporate qualitative indicators and "ways of knowing" into CoP-related activities, specifically focusing on narrative case studies of direct benefit.

Recommendations

4. Redefining "Adoption"

From the outset of the programme, we recognized that adoption is not a binary "yes" or "no." There is immense nuance in what adoption looks like across different contexts. We initially catered to this by taking an expansive, "broad church" approach to be as flexible as possible.

As the programme unfolded, we developed a more structured framework for assessment, viewing adoption as a progressive scale rather than an event. Typically, this adoption scale follows a predictable maturity logic:



The table below presents our nascent framework for tracking and categorising asset adoption, developed directly from programmatic use case experience.

Recommendations

Phase 1	Phase 2	Phase 3	Phase 4	Phase 5
Leadership buy-in & endorsement	Deployed onto municipal infrastructure	Some targeted officials are using the tool	All targeted officials are using the tool	Tool is fully embedded into the SOPs / workflows

Rather than acting as a retrospective post-project check, this framework can serve as a practical monitoring and planning tool throughout the use case life cycle. At the initiation of a project, this framework can be workshopped collaboratively with public officials to establish a shared vision and target. As the use case progresses, it serves as both a roadmap and an accountability mechanism—moving the intervention away from an assumed understanding of adoption toward an agreed-upon, well-understood path to institutionalisation.

Conclusion

Ultimately, driving data-driven impact within local government is less about the technical build and more about navigating the human and political ecosystems around it. By evolving our M&E frameworks to embrace qualitative nuance, defining adoption as a multi-stage journey, and embedding structured checkpoints for adaptive management, we can better align project realities with institutional timelines. Embracing this uncertainty allows delivery teams and donors alike to move past rigid logframes and build sustainable, resilient digital infrastructure that outlives the lifecycle of a grant.

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