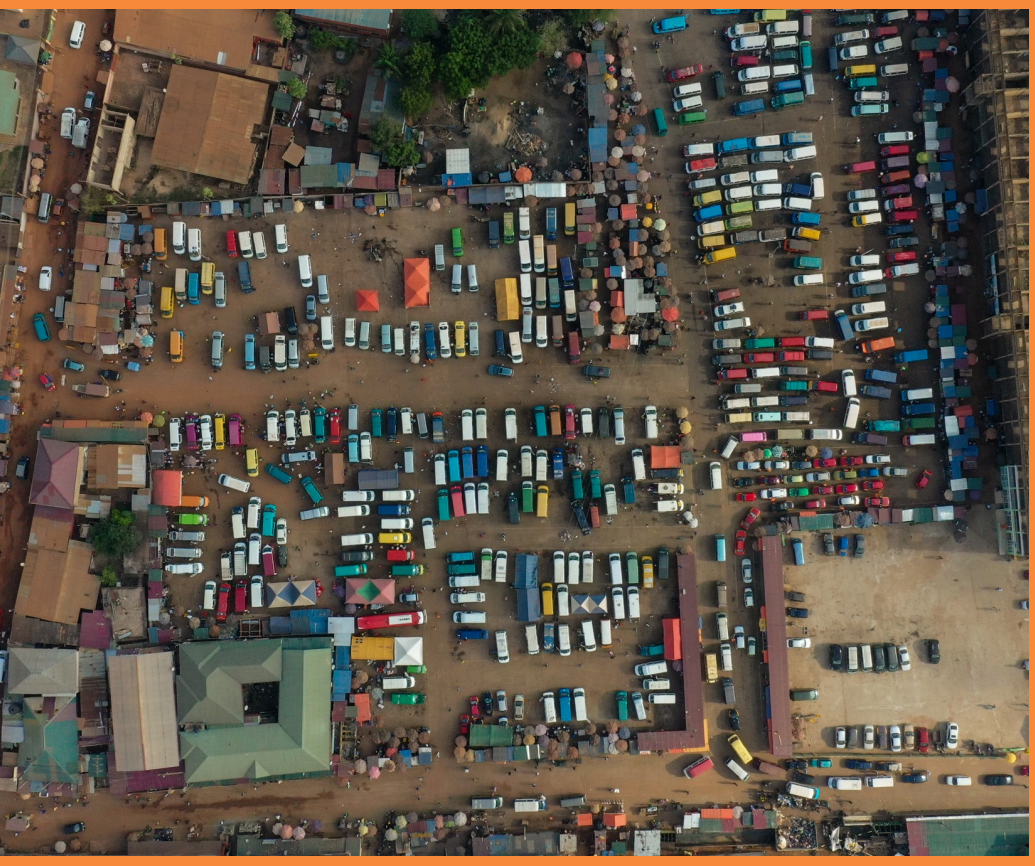
CITIES FORUM MENTORSHIP KNOWLEDGE SERIES

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THE CITY THAT PLANS ITSELF

What African Cities Teach Us About Informal Urban Intelligence and the Institutions That Must Learn From It





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CONTENTS

	Abstract and Keywords	04
1	Introduction: From a Planning Binary to a Learning Question	05
1.1	The Claim and Its Boundaries	05
2	What Makes Local Knowledge Urban Intelligence?	06
3	Why Continuous Urban Intelligence Matters Now	07
4	A Six-Part Framework of Informal Urban Intelligence	08
4.1	Sensing: The City as a Continuous Observation System	09
4.2	Mapping: Turning Lived Geographies into Shared Evidence	10
4.3	Coordinating: Recognising the Systems That Already Organise the City	11
4.4	Designing: From Consultation on Layouts to Shared Spatial Decisions	12
4.5	Financing: Seeing Who Already Pays for Urban Function	13
4.6	Negotiating: Planning as the Organisation of Authority	15
5	Continental Evidence Map	16
6	Why Conventional Planning Systems Struggle to Learn	17
7	From Participation to Continuous Institutional Learning	18
7.1	The Institutional Learning Test	19
8	Whose Intelligence Counts? Equity, Ownership and Data Justice	19
9	From Site Upgrading to System Upgrading	20
9.1	Agbogbloshie: Learning Before Intervening	20
10	A Continental Operating Model for Planning Institutions	23
10.1	The Minimum Institutional Architecture	24
10.2	An Indicative Implementation Pathway	24
11	The Planner as Institutional Designer	25
12	Africa as a Laboratory of Distributed Urban Intelligence	26
13	Conclusion: The Future of Planning Is Planning That Can Learn	27
	References	28
	Image Credits and Licensing	30
	About the Authors	31

ABSTRACT

African cities are frequently interpreted through a binary: formal planning on one side and informal growth on the other. That binary misses a central feature of urban life. Residents, workers, associations and local networks continually sense, map, coordinate, design, finance and negotiate the city. This article calls that distributed capacity informal urban intelligence. Drawing on documented practices from Accra, Tema-Ashaiman, Lagos, Cotonou, Nairobi, Dar es Salaam, Cairo, Tunis, Kinshasa, Douala, Cape Town and Johannesburg, it argues that the decisive planning question is no longer whether local knowledge exists, but whether institutions can learn from it continuously. The cases are not presented as a universal account of African urbanism. They reveal recurring mechanisms through which situated observations become actionable intelligence. The article distinguishes data, knowledge and intelligence; separates participation as an engagement mechanism from institutional learning as a durable capability; and identifies the barriers that prevent conventional planning systems from adapting. It proposes a learning-oriented operating model for planning institutions, grounded in representation, data justice, statutory integration, public investment, feedback and accountability. A city that plans itself is not a city without government. It is a city whose institutions can recognise, test, protect and act on intelligence already at work. The future of urban planning is not less planning. It is planning that can learn.

KEYWORDS

Informal urban intelligence; institutional learning; African cities; co-production; community mapping; participatory planning; paratransit; urban governance; data justice

1 INTRODUCTION: FROM A PLANNING BINARY TO A LEARNING QUESTION

The question is not whether African cities are planned. They are.

The question is not whether African cities are planned. They are. Every day, millions of residents make decisions about movement, water, work, childcare, safety, shelter, trade, drainage and neighbourhood reciprocity under conditions that formal plans often fail to see or serve. These decisions are not random. They are practical acts of observation, interpretation, coordination and adaptation. They generate detailed understanding of where a path floods, which route remains safe after dark, when a water point fails, how a street market functions, who can mobilise labour and what an infrastructure intervention may unintentionally disrupt.

This is not an argument for abandoning statutory planning. Public authorities remain responsible for equitable infrastructure, land governance, housing, mobility, public health and environmental protection. Nor should local ingenuity be used to excuse inadequate services or shift the costs of public provision onto communities. The argument is more demanding of government, not less: planning that ignores situated knowledge tends to misdiagnose urban conditions, while planning that combines professional expertise with distributed urban intelligence can become more accurate, legitimate and durable. UN-Habitat (2017) has noted that the scale of informality, scarce urban land, limited institutional capacity and outdated planning legislation make purely top-down approaches inadequate in many African contexts.

The central proposition of this article is therefore future-oriented. African cities are already generating distributed intelligence, but conventional planning systems are rarely designed to learn from it continuously. The core problem is not formal planning versus informal planning. It is how institutions combine technical expertise, democratic authority and local intelligence without appropriating community knowledge, exposing residents to harm or preserving unsafe and unequal conditions. The future of planning depends on converting episodic consultation into an institutional capacity to listen, validate, integrate, act, report back and adapt.

1.1 THE CLAIM AND ITS BOUNDARIES

Three boundaries are essential to the argument. First, the selected cases reveal recurring mechanisms across a diverse set of cities; they do not claim to represent every African city or a single continental pattern. Second, recognising informal urban intelligence is not an endorsement of every informal practice. Intelligence may coexist with unsafe work, discrimination, environmental harm or unequal power. Third, institutional learning does not

transfer public responsibility to communities. It requires government to use better evidence while remaining accountable for rights, regulation, infrastructure, finance and service delivery.

2 WHAT MAKES LOCAL KNOWLEDGE URBAN INTELLIGENCE?

What makes knowledge intelligent in planning terms is therefore not its informality, but its capacity to guide action.

Informal urban intelligence is the distributed, place-based capacity through which residents and local organisations generate actionable knowledge and coordinate responses outside, alongside and sometimes in negotiation with formal institutions. The term is related to local knowledge and tacit knowledge, but it is not identical to either. Data are recorded observations, such as household counts, route traces, flood points or market locations. Knowledge emerges when people interpret those observations through experience and context. Intelligence exists when data and knowledge are combined to anticipate change, make choices, coordinate action or influence a decision. What makes knowledge intelligent in planning terms is therefore not its informality, but its capacity to guide action.

This intelligence has spatial, social, temporal and institutional dimensions. Spatial intelligence captures micro-geographies that rarely appear in conventional base maps. Social intelligence reveals trust networks, tenancy relations, leadership, care arrangements and livelihood dependencies. Temporal intelligence records seasonal flooding, changing rents, peak travel periods and emerging risk. Institutional intelligence identifies the agencies, landholders, utilities, associations, politicians and intermediaries capable of enabling or blocking change.

Participation and urban intelligence must also be distinguished. Participation is an engagement mechanism: a meeting, hearing, workshop, survey or statutory process through which people enter a decision. Co-production goes further by sharing the work of defining problems and designing responses. Urban intelligence becomes an institutional capability only when planning organisations can retain, test, update and use what is learned across projects and planning cycles. Mukuru is important precisely because community knowledge entered a statutory planning process, although the case also demonstrates how political and institutional constraints can weaken implementation (Ouma, 2023).

3 WHY CONTINUOUS URBAN INTELLIGENCE MATTERS NOW

The need for learning institutions is becoming more urgent. Rapid urban change makes periodic planning data obsolete quickly. Climate risk is experienced through highly local interactions among drainage, buildings, waste, topography and daily movement. Fiscal constraints require public investment to build on systems that already carry people, goods, materials and social support. Digital tools can expand the visibility and circulation of local evidence, while also increasing risks related to surveillance, eviction and commercial extraction. Urban complexity therefore demands feedback loops that are faster, more local and more accountable than a conventional cycle of survey, plan, approval and delayed implementation.

This does not mean that every local practice should be preserved. Informal systems can be unsafe, exclusionary and exploitative. They can reproduce unequal burdens for women, tenants, migrants, people with disabilities and workers with limited protection. Continuous learning matters because it allows institutions to distinguish what should be protected, what should be improved, what should be regulated and what must be replaced, based on evidence of how the city actually functions.

4 A SIX-PART FRAMEWORK OF INFORMAL URBAN INTELLIGENCE

Across a diverse set of cities, six mechanisms recur: sensing, mapping, coordinating, designing, financing and negotiating. These are not stages in a rigid sequence, and no case represents an entire continent. They are analytical lenses that help planning institutions recognise how distributed intelligence is produced and how it can inform public action.

TABLE 1 · THE SIX-PART FRAMEWORK

FORM	CORE QUESTION	ILLUSTRATIVE EVIDENCE	INSTITUTIONAL LEARNING REQUIREMENT
01 SENSING	*What is changing, failing or becoming risky?*	Dar es Salaam and Douala flood knowledge; everyday observations of congestion, safety and service failure	Create recurring channels for reporting, verification and updating.
02 MAPPING	*Where are people, assets, routes, risks and relationships?*	Old Fadama enumeration; Makoko resident mapping; Kinshasa open mapping; Accra route language	Accept locally produced evidence and govern ownership, access and maintenance.
03 COORDINATING	*How are access, labour, movement and services organised?*	Cotonou mobility and market networks; Cairo recycling routes; Agbogbloshie material-recovery networks; neighbourhood associations	Engage existing organisations as institutional actors, not implementation obstacles.
04 DESIGNING	*How are spatial arrangements tested and adapted?*	Cape Town reblocking; Tema-Ashaiman mixed-use upgrading; Tunis rehabilitation	Co-design layouts while protecting tenure, livelihoods and public obligations.
05 FINANCING	*Who already pays, invests, maintains and bears risk?*	Household investment, community infrastructure, savings, fares, rents and trader finance	Use public finance to complement and protect community investment, not replace obligations with self-help.
06 NEGOTIATING	*How is authority shared, contested and made workable?*	Mukuru statutory co-planning; Johannesburg transport reform; Dantokpa market governance	Build lawful pathways for bargaining, grievance, arbitration and enforceable commitments.

4.1 SENSING: THE CITY AS A CONTINUOUS OBSERVATION SYSTEM

Residents continually observe flooding, congestion, safety, service failure, rent, demand and environmental change. In Dar es Salaam, co-produced risk knowledge has connected scientific analysis with residents' understanding of flood pathways, vulnerable locations and priorities for action. The resulting maps function best when they remain shared, revisable decision tools rather than final products (Johnson et al., 2022). In Douala, participatory mapping similarly gives flood-risk planning street-level detail about blocked drains, impassable routes, building thresholds and the sequence in which hazards unfold (Global Facility for Disaster Reduction and Recovery, n.d.).

The planning implication is to treat sensing as a continuing public capability. A satellite image or engineering model can identify patterns, while residents can explain when a drain blocks, who is exposed first and which improvised intervention redirects water. Neither source is sufficient alone. Institutions need protocols for combining them, recording uncertainty, triggering responses and updating the evidence after intervention.



Figure 1. Flooding at TAZARA, Dar es Salaam, illustrating the street-level risk conditions that participatory mapping and local observation can document.

Photo: Muddyb Blast Producer, via Wikimedia Commons. Licence: CC BY-SA 4.0.

4.2 MAPPING: TURNING LIVED GEOGRAPHIES INTO SHARED EVIDENCE

Old Fadama demonstrates how counting can become planning power. Community-driven enumerations documented households, structures, livelihoods and service conditions that were largely absent from official records. The data gave residents a shared evidence base for negotiation and challenged the idea that the settlement was empty or unknowable (Farouk & Owusu, 2012). Accra's trotro system offers another form of mapping. Locally understood stop names, landmarks, junctions and destination patterns encode how the public recognises and navigates the city. Trotro service data can provide credible location addressing for Ghana's road network (Dumedah & Eshun, 2020).

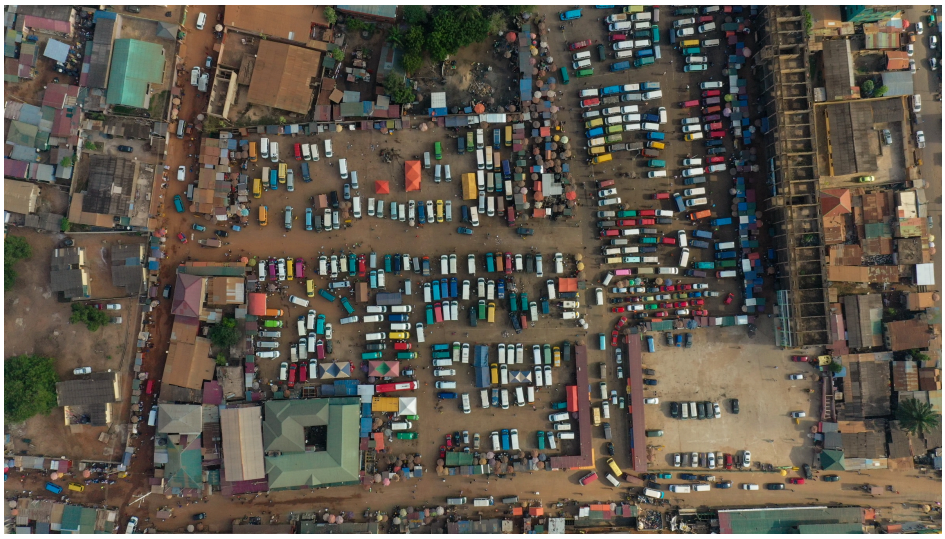


Figure 2. Aerial view of Madina Market and Trotro Station, Accra, showing the spatial order and route concentration of an everyday paratransit interchange.

Photo: Samson Craig McArthur Sik, via Wikimedia Commons. Licence: CC BY-SA 4.0.

These cases show that technology does not create urban intelligence.

In Lagos, Map Makoko transferred mapping authorship by training residents, including women, to document streets, structures, waterways, schools, clinics and community assets (Humanitarian OpenStreetMap Team, 2019). In Kinshasa, locally coordinated open mapping turned missing official data into maintainable public evidence by building local capability to collect and publish information on streets, buildings, drainage, services and exposure (Observatoire Satellital des Forêts d'Afrique Centrale, 2019). These cases show that technology does not create urban intelligence. It can make existing intelligence visible, comparable and actionable, but only if people retain meaningful roles in defining, interpreting, governing and updating the data.



Figure 3. Everyday water-based movement in Makoko, Lagos, illustrating the fine-grained spatial relationships that resident-led mapping seeks to make visible.

Photo: Ayorinde Ogundele, via Wikimedia Commons. Licence: CC BY-SA 4.0.

4.3 COORDINATING: RECOGNISING THE SYSTEMS THAT ALREADY ORGANISE THE CITY

Cotonou's zémidjan motorcycle taxis respond to fine-grained shifts in demand, congestion, weather and street access. Their value lies not only in transport supply, but also in accumulated route knowledge and responsiveness (Agossou, 2004). Dantokpa Market depends on trader organisations, gendered commercial networks, storage, finance, loading arrangements and political relationships. It is an institution in which authority and economic order are continually negotiated, not simply a site occupied by informal trade (Prag, 2010).

Cairo's Zabbaleen communities likewise connect household collection, route knowledge, sorting expertise, buyers and material value in a city-scale circular system. Research has documented both the system's recycling capacity and the damage that can follow when modernisation fails to integrate the people and relationships that created it (Fahmi & Sutton, 2006). The lesson is not to exempt such systems from safety, labour or environmental standards. It is to understand their operating logic before reforming them.



Figure 4. Zémidjan motorcycle-taxi operators in Cotonou, illustrating a responsive mobility network shaped by local demand and route knowledge.

Photo: Mah3110, via Wikimedia Commons. Licence: CC BY-SA 4.0.



Figure 5. Material collection in Manshiyat Nasser, Cairo, illustrating the dense routes, labour and sorting systems associated with the Zabbaleen circular economy.

Photo: Fabian Deter, via Wikimedia Commons. Licence: CC BY-SA 3.0.

4.4 DESIGNING: FROM CONSULTATION ON LAYOUTS TO SHARED SPATIAL DECISIONS

In Cape Town, participatory geographic information systems have supported settlement reblocking, with residents and technical partners rearranging structures and pathways to improve emergency access, drainage, public space and infrastructure. Residents contribute design intelligence because they understand household relations, movement patterns, safety concerns and the consequences of moving each structure. The approach is strongest when tenure protection and service investment accompany the layout, so participation does not become unpaid preparation for displacement (Musungu, 2014).



Figure 6. Khayelitsha, Cape Town, showing the dense settlement morphology and access conditions that resident-led spatial design and reblocking must navigate.

Photo: Bernard DUPONT, via Wikimedia Commons. Licence: CC BY-SA 2.0.

The Tema-Ashaiman experience reinforces the need to design with the social and economic structure of a settlement. The Amui Djor initiative linked housing, commercial space, land, finance and local institutions through a community-municipal partnership (Danso-Wiredu & Midheme, 2017). In Tunis, the Oukalas rehabilitation programme treated deteriorated historic housing as an inhabited social system rather than only an architectural object, connecting restoration, rehousing and risk reduction (Ministère de l'Équipement et de l'Habitat, n.d.). Across the cases, design becomes more implementable when it works with relationships, livelihoods and daily movement rather than treating them as obstacles to a finished plan.



Figure 7. A residential building in the Medina of Tunis, illustrating the inhabited heritage fabric addressed by incremental rehabilitation.

Photo: Rais67, via Wikimedia Commons. Licence: Public domain.

4.5 FINANCING: SEEING WHO ALREADY PAYS FOR URBAN FUNCTION

Communities already finance significant parts of urban life through household investment, savings groups, fares, rents, trader finance, labour and contributions to local infrastructure. Community-led infrastructure in informal areas of urban Egypt demonstrates how residents organise and finance improvements when conventional delivery fails (Bremer & Bhuiyan, 2014). Tema-Ashaiman similarly shows that housing and upgrading cannot be separated from income, commercial space, land arrangements and the institutions that mobilise savings and maintenance.



Figure 8. Pineapple wholesale activity in Ashaiman, Ghana, illustrating the livelihood and market systems that upgrading finance must recognise and protect.

Photo: Sayhi2kojo, via Wikimedia Commons. Licence: CC BY-SA 4.0.

Recognising this intelligence should not legitimise the withdrawal of public finance. The planning question is how budgets can complement, protect and scale useful community investments while reducing the unequal burden carried by low-income households. Public finance should strengthen systems that work, correct risks and exclusions, and ensure that residents are not charged repeatedly for services that government remains obligated to provide.

In practice, complementarity can take several forms: dedicated upgrading grants, match-funding that does not penalise the poorest households, maintenance budgets for locally managed assets, social protection for workers affected by reform, risk-sharing for cooperatives and procurement routes that allow qualified community organisations to deliver or monitor public work. The financing principle is simple: recognise what communities already invest, protect them from carrying disproportionate risk, and direct public resources toward durable system improvement.

4.6 NEGOTIATING: PLANNING AS THE ORGANISATION OF AUTHORITY

Planning is not only technical analysis. It organises authority, assets, rights, obligations and compensation.

Planning is not only technical analysis. It organises authority, assets, rights, obligations and compensation. Mukuru demonstrates the value of giving participation a legal address through a Special Planning Area process that connected residents, civil-society organisations, technical experts and county institutions across housing, health, mobility, water, sanitation and livelihoods (Ouma, 2023). Comparative work in Nairobi, Addis Ababa and Harare similarly shows that implementation often follows negotiated trajectories rather than a single formal sequence (Cirolia & Berrisford, 2017).

Johannesburg's Rea Vaya reform required negotiation with minibus-taxi operators over routes, compensation, ownership, employment and transition into a regulated system. The case reveals the difficulty of converting a flexible, entrepreneur-led network into a formal transit model while retaining valuable network intelligence (Venter, 2013). Negotiation is therefore not a concession made after a technical plan is complete. It is a core planning capability through which conflicting knowledge, interests and rights are made governable.



Figure 9. A community teach-in in Mukuru, Nairobi, illustrating the collective engagement through which local priorities and claims become visible.

Photo: Article 25, via Wikimedia Commons. Licence: CC BY-SA 2.0.

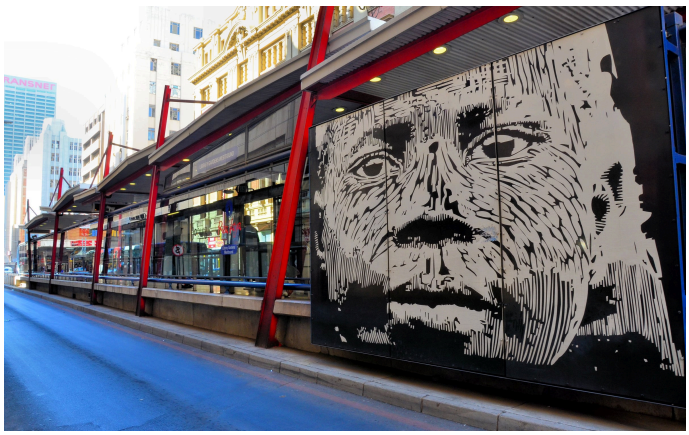


Figure 10. Rea Vaya station infrastructure in Johannesburg, illustrating the formal transit system created through a complex negotiated mobility transition.

Photo: Ossewa, via Wikimedia Commons. Licence: CC BY-SA 4.0.

5 CONTINENTAL EVIDENCE MAP

The evidence below should be read as a set of recurring mechanisms across diverse contexts, not as a claim that the selected cases represent all African cities.

TABLE 2 · CONTINENTAL EVIDENCE MAP

REGION	CITY	DOCUMENTED MECHANISM	PRIMARY FORMS
WEST	**Accra**	Community enumeration and trotro route data and Agbogbloshie material-recovery networks	*Sensing*; *mapping*; *coordinating*; *negotiating*
WEST	**Tema-Ashaiman**	Community-municipal mixed-use upgrading	*Designing*; *financing*; *negotiating*
WEST	**Lagos**	Resident-led digital mapping in Makoko	*Mapping*; *sensing*
WEST	**Cotonou**	Zémidjan mobility and Dantokpa market governance	*Coordinating*; *negotiating*
EAST	**Nairobi**	Mukuru Special Planning Area	*Negotiating*; *designing*; *coordinating*
EAST	**Dar es Salaam**	Co-produced flood-risk knowledge	*Sensing*; *mapping*
NORTH	**Cairo**	Zabbaleen recycling and community-led infrastructure	*Coordinating*; *financing*
NORTH	**Tunis**	Oukalas rehabilitation in the Medina	*Designing*; *negotiating*
CENTRAL	**Kinshasa**	Open community mapping	*Mapping*; *sensing*
CENTRAL	**Douala**	Participatory flood mapping	*Sensing*; *mapping*
SOUTHERN	**Cape Town**	Participatory GIS and settlement reblocking	*Designing*; *mapping*
SOUTHERN	**Johannesburg**	Negotiated BRT and minibus-taxi transition	*Negotiating*; *coordinating*

6 WHY CONVENTIONAL PLANNING SYSTEMS STRUGGLE TO LEARN

The recurring gap is not simply a lack of participation. It is an institutional design problem. Conventional planning systems often collect information without creating the routines, authority and incentives required to learn from it. Six barriers are especially important:

- **Static evidence.** Official datasets and base maps are often updated less frequently than neighbourhood conditions change.
- **Periodic planning cycles.** Knowledge is gathered for a plan or project and then loses institutional visibility between formal review points.
- **Sectoral silos.** Housing, transport, drainage, public health, livelihoods and land are administered separately even when residents experience them as one system.
- **Rigid categories.** Regulations can classify settlements, workers or services as compliant or non-compliant without first understanding how they function or what transition would be workable.
- **Weak feedback loops.** Communities provide information but do not receive decisions, timelines, reasons, implementation data or evidence of what changed.
- **Output-focused incentives.** Institutions may count plans, workshops, maps and projects rather than whether they reduced risk, protected livelihoods, improved services or increased trust.

These conditions explain why valuable community evidence can be collected repeatedly without changing the institution that receives it. A planning system learns only when new information can alter diagnosis, priorities, design, budgets, regulation and implementation, and when the consequences of those changes are measured and fed into the next decision.

7 FROM PARTICIPATION TO CONTINUOUS INSTITUTIONAL LEARNING

Participation is indispensable, but it is not the end point. A learning institution needs a repeatable operating loop that connects engagement to public authority:

- **Listen and detect.** Maintain recurring channels through which residents, workers and local organisations can identify changes, risks, assets and system failures.
- **Validate and combine.** Test community-generated evidence through transparent methods and combine it with technical, legal, financial and environmental analysis.
- **Integrate and decide.** Specify the plan, regulation, service standard, procurement decision or budget that the evidence can influence.
- **Act and protect.** Implement with safeguards for tenure, livelihoods, privacy, accessibility and fair representation.
- **Return and explain.** Provide communities with accessible maps, decisions, timelines and reasons, including an account of what could not be adopted.
- **Measure and adapt.** Track outcomes and trust, update the evidence and revise the intervention when conditions or consequences change.

This loop converts local intelligence from a one-off input into a continuing institutional resource. It also makes professional knowledge more accountable because technical recommendations must respond to evidence from implementation, not only to assumptions made at the beginning of a project.

7.1 THE INSTITUTIONAL LEARNING TEST

A planning process should not be described as learning-oriented unless it can answer six practical questions:

SOURCE.
Whose observations and experience shaped the diagnosis, and which groups remain missing?

AUTHORITY.
Which institution has the power and duty to act on the intelligence?

DECISION.
Which plan, regulation, design, service standard, procurement or budget changed because of the evidence?

PROTECTION.
What safeguards prevent displacement, surveillance, retaliation, exclusion or loss of livelihood?

RETURN.
How will communities receive the evidence, decision, reasons, timetable and implementation record?

ADAPTATION.
What outcome will be monitored, when will the institution review it and who can trigger revision?

8 WHOSE INTELLIGENCE COUNTS? EQUITY, OWNERSHIP AND DATA JUSTICE

Community knowledge cannot automatically be assumed to be representative or equitable.

Community knowledge cannot automatically be assumed to be representative or equitable. Local gatekeepers may exclude women, tenants, informal workers, young people, migrants, minority groups and people with disabilities. Planning institutions therefore need explicit rules for representation, disclosure, grievance and accountability. They should document who participated, whose evidence was accepted, whose interests may be harmed and how disagreements were resolved.

The same principle applies to community-generated data. Settlement maps and household information can support service provision, but they can also facilitate eviction, policing, land speculation or commercial extraction. The critical questions are: who owns the data, who controls access, who validates it, who may reuse it and who benefits from the decisions it enables? Technology should make urban intelligence visible and actionable without separating it from the people who generated it. Consent, purpose limitation, privacy, stewardship and accessible return of results are therefore planning issues, not merely technical safeguards.

9 FROM SITE UPGRADING TO SYSTEM UPGRADING

The strongest cross-cutting lesson is that planning should upgrade systems, not only sites. A housing project can fail if it disconnects livelihoods, transport, tenancy and social support. A mobility reform can fail if it removes route knowledge, organisational capacity and incomes without creating a workable transition. A recycling contract can reduce circular value if it displaces collectors and sorting networks. A flood intervention can shift risk if it ignores the paths, drains and maintenance practices through which water moves. UN-Habitat (2018) similarly identifies the informal economy as a key component of participatory settlement upgrading, confirming that livelihoods must be treated as part of urban planning rather than as an obstacle to it.

"The strongest cross-cutting lesson is that planning should upgrade systems, not only sites."

9.1 AGBOGBLOSHIE: LEARNING BEFORE INTERVENING

Agbogbloshie offers a necessary caution against treating the removal of a visible site as the transformation of an urban system. For many years, its scrap economy connected collectors, repairers, dismantlers, traders and material buyers through practical knowledge of recovery, sorting, pricing and movement across Accra. These networks supported livelihoods and recovered usable materials, even as unsafe processing practices created serious environmental and occupational risks for workers and surrounding communities (Grant, Oteng-Ababio, & Shin, 2024).



Figure 11. **Workers at Agbogbloshie, Accra, in 2011, illustrating the labour, material flows and livelihoods embedded in the pre-clearance scrap economy.**

Photo: Marlenenapoli, via Wikimedia Commons. Date: 23 March 2011. Licence: CC0 1.0.

The lesson is not to romanticise hazardous informal recycling, nor to accept conditions that compromise health, dignity or environmental safety. It is to recognise that effective reform begins with an accurate understanding of the system that already exists. The clearance of the Agbogbloshie scrapyard in July 2021 demonstrated the limits of interventions that remove a site without establishing a credible pathway for safer work, material recovery, worker protection and negotiated transition. Research following the demolition indicates that informal recycling activities persisted or were displaced to other locations, reinforcing the distinction between site clearance and system transformation (Sarpong, Müller-Mahn, & Osei, 2025).



Figure 12. **Electronic components at Agbogbloshie in 2019, documenting the material conditions that made safer infrastructure, environmental safeguards and worker protection essential.**

Photo: Muntaka Chasant, via Wikimedia Commons. Date: 14 January 2019. Licence: CC BY-SA 4.0.

For planning institutions, the implication is clear. A just transition in urban recycling requires continuous engagement with workers, investment in safer processing infrastructure, environmental safeguards, recognition of legitimate livelihoods and mechanisms through which affected communities can shape implementation. Agbogbloshie therefore reinforces the article's central proposition: planning becomes more effective when institutions learn from distributed urban intelligence while acting decisively to reduce harm and uphold public responsibility.

System upgrading begins by identifying what already makes a neighbourhood or service function, what creates harm, and which relationships must change. It then combines regulation, infrastructure, finance, social protection and institutional reform. The objective is not to formalise everything in its existing form or to replace it wholesale. It is to improve performance, rights, safety and accountability while retaining intelligence that would be costly or impossible to recreate from outside.

10 A CONTINENTAL OPERATING MODEL FOR PLANNING INSTITUTIONS

African cities do not need to choose between professional expertise and local knowledge. They need an operating model that makes both forms of knowledge visible and mutually accountable. The following commitments translate the evidence into institutional practice:

- **Recognise local evidence.** Accept verified community maps, enumerations, route data, hazard observations and market information within official diagnostic and investment processes.
- **Create a statutory and budgetary pathway.** State which plan, service standard, regulation, procurement decision or capital budget the evidence can influence.
- **Protect people and govern data.** Define consent, privacy, access, ownership, reuse and grievance rules before sensitive evidence is published or shared.
- **Upgrade systems.** Improve the mobility, livelihood, recycling, drainage, housing and social networks that make neighbourhoods function.
- **Represent internal diversity.** Prevent local gatekeepers from filtering out groups whose experience, labour or risk is less visible.
- **Pay for local expertise.** Budget for community researchers, facilitators, translators, mapping teams, childcare, accessibility, data maintenance and resident-led monitoring.
- **Return intelligence and decisions.** Give residents accessible evidence, timelines, reasons and a record of what changed because of their contribution.
- **Measure outcomes and institutional learning.** Judge success through safer routes, reduced risk, protected livelihoods, improved services, stronger tenure, fairer decisions and the institution's ability to adapt.

This is more than a checklist for participation. It is a new operating model in which planning institutions maintain ongoing relationships with the sources of urban intelligence, connect evidence to authority and budgets, act with safeguards, and learn from results.

10.1 THE MINIMUM INSTITUTIONAL ARCHITECTURE

Continuous learning requires an institutional home. Cities may organise it differently, but a minimum architecture contains six connected functions:

A PERMANENT URBAN INTELLIGENCE FUNCTION.
A team or cross-agency network responsible for receiving, validating, maintaining and circulating community-generated evidence.

A STATUTORY GATEWAY.
A defined route through which verified evidence enters plans, permits, service standards, investment programmes and regulatory review.

A DATA STEWARDSHIP PROTOCOL.
Clear rules for consent, ownership, access, security, validation, retention, reuse and community benefit.

AN INCLUSION AND GRIEVANCE MECHANISM.
Representation standards, accessible participation, disclosure of conflicts and an independent route for challenging exclusion or harm.

A DEDICATED BUDGET LINE.
Resources for local expertise, data maintenance, facilitation, accessibility, monitoring, public communication and corrective action.

A LEARNING REVIEW.
A recurring cross-sector review that compares intended and actual outcomes, publishes findings and authorises adaptation.

10.2 AN INDICATIVE IMPLEMENTATION PATHWAY

The operating model can be introduced progressively. The timings below are indicative and should be adapted to local law, capacity and planning cycles.

PHASE 1: DIAGNOSE AND GOVERN.	Map existing intelligence sources, identify excluded groups, select priority systems, establish data safeguards and assign institutional responsibility.
PHASE 2: PILOT AND CONNECT.	Test the learning loop in one or two live planning decisions, connect evidence to a statutory instrument and budget, and publish the first feedback record.
PHASE 3: INSTITUTIONALISE AND SCALE.	Embed the functions in job descriptions, inter-agency procedures, procurement, capital planning, monitoring frameworks and professional training.
PHASE 4: REVIEW AND RENEW.	Evaluate outcomes and distributional effects, correct safeguards or incentives that failed, and update the operating model with communities and implementing agencies.

11 THE PLANNER AS INSTITUTIONAL DESIGNER

A learning-oriented planning model changes the professional role of the planner. Technical competence remains essential, but it is exercised through a broader institutional mandate:

LISTENER.
Identifies knowledge, risk and capability already present.

TRANSLATOR.
Connects lived experience with spatial, technical, legal and financial tools.

CONVENOR.
Brings institutions and knowledge holders into a workable decision process.

ARBITRATOR.
Makes conflicts, exclusions and trade-offs visible and supports fair resolution.

GUARANTOR.
Ensures that participation creates public obligations, protections and accountable implementation.

INSTITUTIONAL DESIGNER.
Builds the routines, feedback loops, data rules and decision pathways through which learning continues.

This formulation is more transformative than asking planners simply to consult communities more often. It asks the profession to design institutions capable of remembering, revising and responding.

12 AFRICA AS A LABORATORY OF DISTRIBUTED URBAN INTELLIGENCE

The global relevance of these cases lies precisely in their African specificity. The continent should not be presented merely as a context of informality waiting to converge on planning models developed elsewhere. Its cities reveal, with unusual clarity, how mobility, markets, housing, recycling, risk management and public authority are assembled through distributed networks. They therefore offer a laboratory for understanding a challenge that increasingly affects cities everywhere: how formal institutions can govern complex urban systems whose most current knowledge is dispersed across many actors.

"How can public authority remain responsible while becoming more capable of learning from the people and systems that continuously produce the city?"

The lesson is not that other regions should import African practices without context. It is that planning everywhere can learn from the institutional question made visible by these cities. How can public authority remain responsible while becoming more capable of learning from the people and systems that continuously produce the city?

13 CONCLUSION: THE FUTURE OF PLANNING IS PLANNING THAT CAN LEARN

From Accra's enumerations and trotro routes and Agbogbloshie's material-recovery networks to Makoko's resident-generated maps; from Cotonou's mobility and market networks to Mukuru's statutory co-planning; from Dar es Salaam's flood knowledge to Cairo's circular economy; from Tunis's inhabited heritage to the open maps of Kinshasa and Douala; and from Cape Town's reblocking to Johannesburg's negotiated transport reform, a common proposition emerges. African cities generate intelligence continuously through the people, organisations and systems that sense, map, coordinate, design, finance and negotiate urban life.

The public task is not to withdraw and admire this capacity. It is to build institutions capable of learning from it while protecting rights, correcting inequality and meeting public obligations. A city that plans itself is not a city abandoned to self-help. It is a city in which distributed intelligence and professional expertise are connected through law, budgets, safeguards, feedback and accountable implementation. The future of urban planning is not less planning. It is planning that can learn.

"The future of urban planning is not less planning. It is planning that can learn."

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