The Metropolitan Governance in Africa

JOHANNESBURG CASE STUDIES:
Sustainability, resilience and urban intelligence at the metropolitan scale
Johannesburg

Population: 5.87 million
Youth (18-35): 37%
Projection: by 2026 extra 1 million in CoJ
Stats SA (2020) Mid-year Estimates 2020

Number of households: 1.93 million
Stats SA (2020) GHS Metros 2019

City of opportunity | City of contrasts

• Young (135 years old) and sprawling.

• Sprang up with the discovery of gold and economic opportunities attracts people today.

• Country’s economic centre; financial & technological hub and poverty, inequality and unemployment
Governance

Recent elections, November 2021
18 parties represented in City council

Coalition arrangements

Opportunity: deliberation, negotiation, democratic representation

Challenges: Instability, change, time consuming
Resilience, Sustainability & Liveability

CoJ development paradigm identifies four key, inter-related drivers:

- **Resilience**: Ability to recover quickly or adjust easily. Endurance
- **Sustainability**: Balance, equilibrium; Natural carrying capacity
- **Liveability**: Well-being; Good life; Worthwhile

**ECONOMIC GROWTH**
- **Outcome 3**
  - Outputs 3.1
  - Outputs 3.2
  - Outputs 3.3

**HUMAN & SOCIAL**
- **Outcome 1**
  - Outputs 1.1
  - Outputs 1.2
  - Outputs 1.3

**ENVIRONMENT & SERVICES**
- **Outcome 2**
  - Outputs 1.1
  - Outputs 1.2
  - Outputs 1.3

**GOVERNANCE**
- **Outcome 4**
  - Outputs 4.1
  - Outputs 4.2
  - Outputs 4.3
Developing Smart City Strategy
Partnerships Tech hubs

Catalytic projects
1. Joburg Connected: Broadband
2. 4IR skills development programme: access to social services and support packages
3. Smart citizen: online platforms, cultural content
4. Safe Joburg: Sensors, cameras, IOT, cyber security
5. Innovation pipeline: testing pilot projects
6. Unified data & information portal
7. Green, resilient & sustainable Joburg: Infrastructure and climate change
8. Digital Joburg & smart governance: 24/7 digital city government
9. Smart nodes & economies
10. Smart mobility: info, payment, GHG emissions

Digital divide, high cost of data
Data organisation, storage and management
Outdated systems (internal)
Practices and Policies

Zenzele, e-Joburg’s digital billing and accounts platform

Rea Vaya, Bus Rapid Transit

Digitised spatial planning, nodal development and modeling
Practices and Policies

IIOC, Integrated Intelligence Operations Centre

Sustainable Energy Strategy “New Energy Mix”
- Solar PV
- Embedded storage
Waste-to-energy projects

Stormwater Management
- WUDS SUDS
- Reduce flooding
- Updated Stormwater Guidelines
Opinions on stumbling blocks

“More work still needs to be done but this will depend on the availability of resources to implement”

“Some projects were initiated over a decade ago, there is limited reporting on scaled-up performance though”

“Systems ... are basic and rudimentary and are mainly reactive” / “System is manual and paper based”

“Unfortunately it is not working as it should be ... we are not the data owners but merely serve a facilitator function”
A Critical perspective
Flagship projects,
Many first of their kind in the country

Challenges:
Moving to full scale functionality and implementation
• **Rollout** – lag in projects operating at the scale of the city
• **Output limited** – 20% MW still dependent on Eskom
• **Long timelines**

Governance obstacles
• Inertia of government bureaucracy
• Manual administration & internal processes Siloed data organization and management
• Political will and /or political change
• Political misalignment at different levels of government
• Legal system lagging behind
• Financial challenges, budgeting, prioritization
What is the right functional scale?

**Smart City**
Scale: Institution
Scale: Metropolitan area access
Parity, Prioritising and (un)intended Impact

**Sustainable services**
Scale: City / Metropolitan level,
Output v cost; Cross-subsidization, Revenue
Scale: City v National level

**Resilience**
Scale: Communities, Institution
Geographic / socio-economic targeting,
Prioritising
Scale: Broader than City. GCR
Cross-boundary, Redundancy
Closing thoughts

Prioritising
Balancing
Multi-scalar
Partnerships & Technical expertise
Enabling environment
Government needs to adapt
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