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Prioritization of barriers to developing and sustaining Smart Cities and Communities in Africa Helen C Nakiguli (Uganda Communications Commission – UCC)









Status Quo

Africa is the world's most rapidly urbanization continent,

- Over 40% of the total population reside in cites (with mainly the young age)- especially in the Sub-Saharan.
- The development of infrastructure and industries has not kept pace with the growth in urban population (colonial set up)

Urbanization presents challenges

- Infrastructure and service shortage (75% have no access to safe drinking water)
- Mushrooming of slums (60% live in slums)
- Pollution (poor sewage systems, weak waste)
- Poverty, crime, unemployment, etc.

People are generally not very rich in Africa



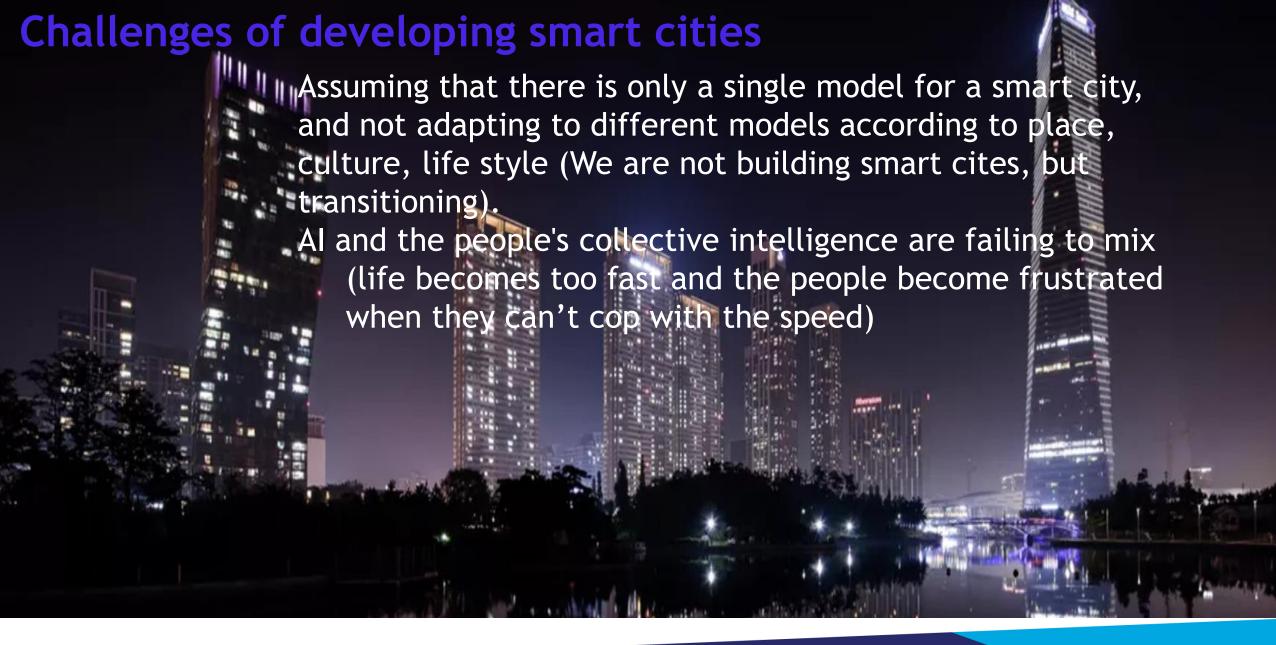
Transition to smart cities

The smart city concept may have different meanings in different individuals, cultures, societies, countries, regions etc.

 Urbanization, too much activity (traffic jam, night life, pollution, replacement of farmland wit tall buildings etc), Technology driven activities, Order, etc.

Some countries (or urban governments) are embracing the compelling environmental, technological, financial and social aspects towards smart city development.

Others are waiting onto the political decisions, laws and policies aid/support, maintaining the BAU.





Barriers to developing smart cities and communities Social and economical

Decision Makers

(facing unforeseen challenges)



- Capacity (when they don't know block progress)
- Perceptions (existing governance still aligned to old set up)
- No relatable policies/laws on smart cities
- Administrative bottlenecks (corruption)
- Concerns of privacy protection in the data regime

Cost of transitioning

- Government priorities
- Corruption
- Multiculturalism, religion
- Illiteracy
- Perception and myths
- Affordability (poverty in general)
- Connectivity (access to electricity (45%), internet, interruptions, etc)
- Inequalities gender divide right from homes



Environmental

- Increasing urbanization has compromised environmental quality
- Ageing infrastructure (pipe leakage, high energy use, etc)
- Climate change due to urban sprawldeforestation, encroaching on wetlands



Prioritizing the barriers

SMART CITIES





Environment





Adequate decision making

Perceptions have to change Policies frameworks and strategies

Service priority (ICT, energy, to be top among budget allocation in gov'ts, physical infrastructure)

Affordable access and availability to broadband for all,

Even better infrastructure development- renewable energy sources (Africa is gifted), addressing the basic need

Sustainability of the informal ecosystem (should sit and plan with them)

Connectivity and Data



Cleaner

Environment

Solving challenges of people, society and communities

Interconnecting distinct sectors







Coordinated package of essential infrastructure and services needed



Improving basic literacy levels Empower the informal (make them part of the transition process) Build on existing infrastructure; building blocks are already available - technological, physical, social Bring the technology to the people

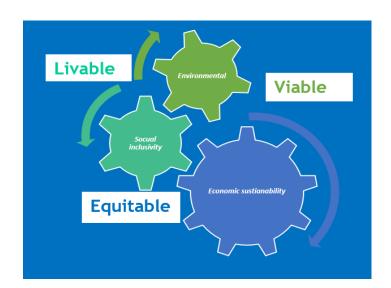
Create more cities - reduce urbanization

Environmental

Balance of environmental impact of a smart city Vs those of non smart city (resource and energy efficiency) Subsidies for adoption of greener ICT solutions Increase the enabling effects of ICTs; efficiency, substitution, support systemic effects

The future will be determined by our attitudes or else it is a lost cause

- The decision makers are priority in the discussions of the transition to smart cities, because we can't start or move forwards until they have changed their perceptions about the role of ICTs in transforming the communities.
- Community engagement is key to efforts of transitioning to a smart city.
- The needs and challenges are different from one city to another. So, the solutions will vary as well, but technology will undoubtedly play a key role.
- Sustainability has to be core of the discussions as well.



Inputs: Policies, awareness, infrastructure, colloborations, the will



