



# Leveraging the Data Ecosystem for Smart, Resilient and Sustainable Cities -Urbanization in Uganda

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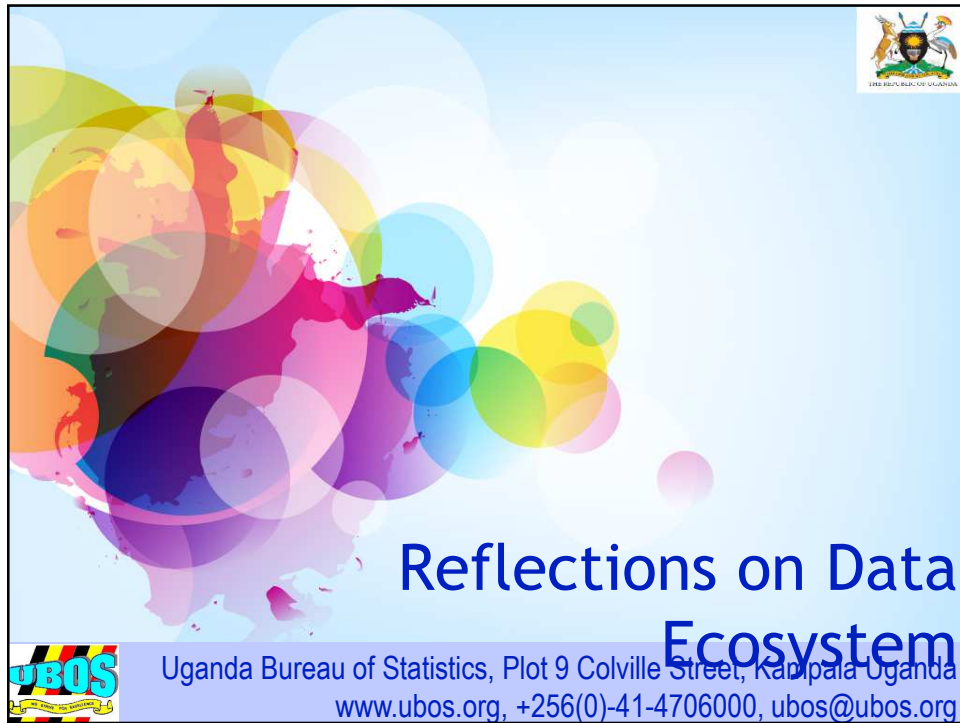


## Content

- Reflections on the Data Ecosystem
- Smart City Intervention Cases in Uganda
- Urbanization in Uganda
- Uganda Development Agenda
- Considerations for Better Urbanization
- Conclusion

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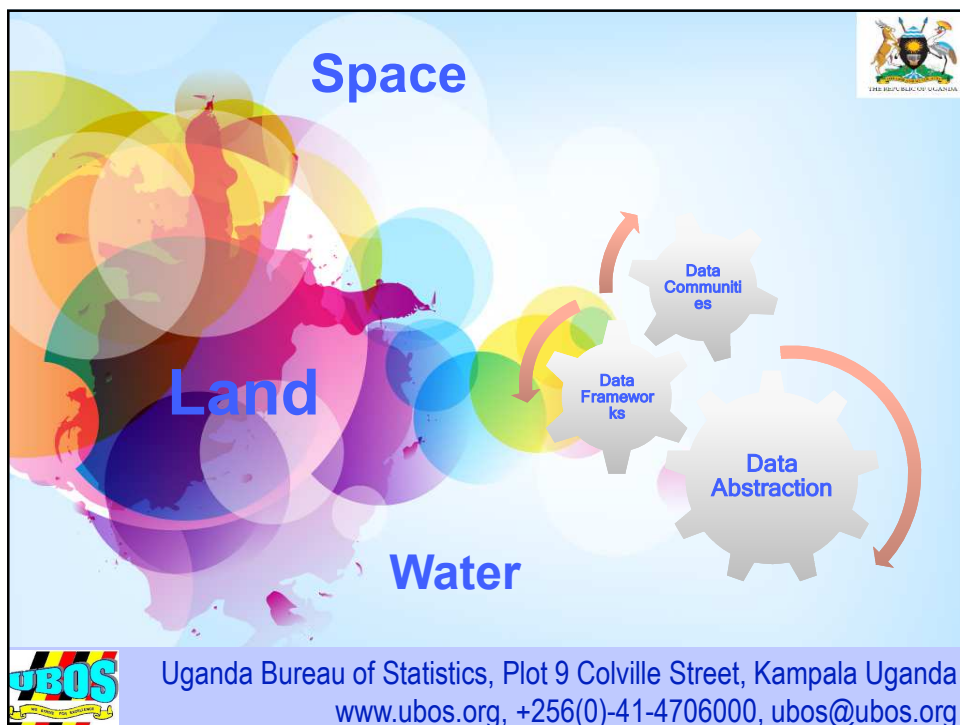




The cover features a stylized map of Uganda in the background, overlaid with a cluster of overlapping, semi-transparent circles in various colors (yellow, orange, red, purple, blue, green). In the top right corner is the coat of arms of Uganda. The title 'Reflections on Data Ecosystem' is written in a large, blue, sans-serif font. At the bottom left is the UBOS logo, and at the bottom right is the contact information for the Uganda Bureau of Statistics.

**Reflections on Data Ecosystem**

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The diagram illustrates the components of the data ecosystem. It features the same stylized map and colored circles as the cover. Three large blue text labels are positioned around the map: 'Space' at the top, 'Land' in the middle, and 'Water' at the bottom. To the right, three interlocking grey gears are shown, connected by red curved arrows indicating a clockwise flow. The gears are labeled 'Data Frameworks', 'Data Communities', and 'Data Abstraction'.

**Space**

**Land**



**Water**

**Data Frameworks**

**Data Communities**

**Data Abstraction**

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# What is the Data Ecosystem?

## 1. Data Community Systems

- International agencies
- National governments
- Private sectors
- Academia
- Civil societies
- Local communities/Citizenry communities
- Development partners

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# What is the Data Ecosystem?

## 2. Data Abstraction Systems

- Statistical
- Geospatial
- Earth observational
- Big data

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# What is the Data Ecosystem?

## 3. Data Framework Systems

- Institutional arrangements
- Laws
- Policies
- Principles
- Technologies
  - Tools
  - Platforms
- International Financing and Cooperation

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# What is Smart?

- Elegant
- Stylish
- Fashionable
- Cultural contextualized
- Intelligent
- Well-informed
- Sophisticated
- High-technology
- Easy and brisk
- Automation
- Self-activation

# •Coo

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# Smart City Intervention Cases

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# Smart City Cases in Uganda

- ( New ) Cleaning Systems ✓
- Integrated Energy Solutions
- Interactive Bus Stops
- Shared Bicycles
- Smart Lighting ✓
- Smart Telecommunications
- Smart Parking ✓
- Recharging Stations

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## Smart City Cases in Uganda

- Emergency Systems
- Geo-localized info
- Urban wind power
- Environmental sensors
- Smarter Waste Collection



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## Smart City Related Programmes

- Development of the Kampala City Climate Change Resilience Strategy (Ecological systems, Climate change Adaptation & Mitigation)
- Kampala City Physical Development Plan Project
- GIS upgrade and Comprehensive Street Naming and Addressing Project
- Kampala City Roads and drainage improvement



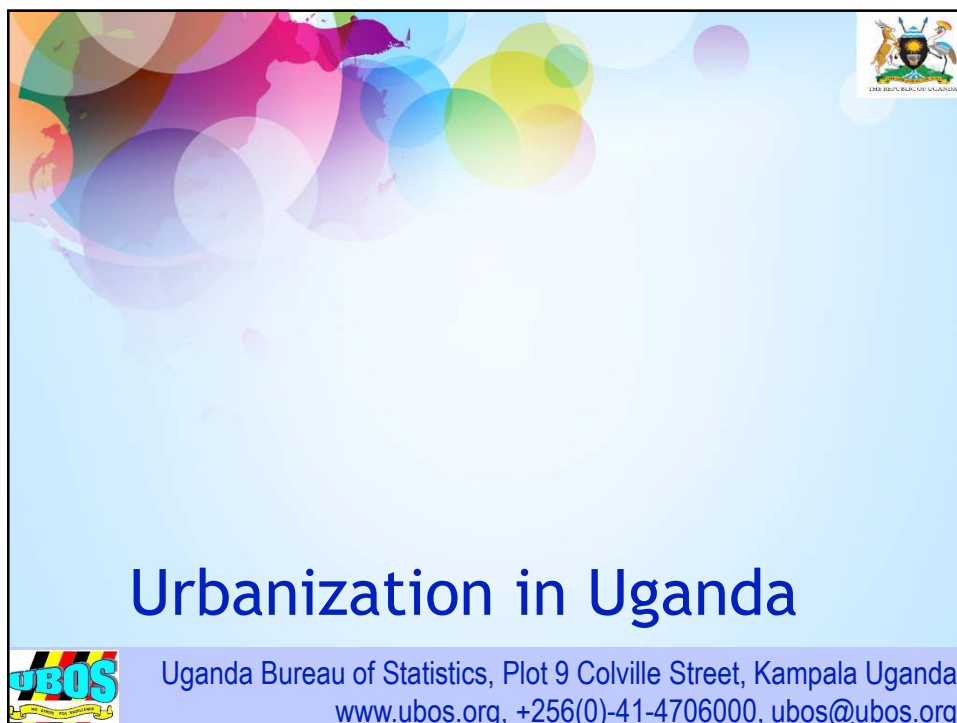
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## Smart City Related Programmes

- Establish the Metropolitan Physical Planning Authority
- Development of the Kampala City Climate Change Resilience Strategy (Ecological systems, Climate change Adaptation & Mitigation)
- Implement the Integrated Urban Transport Master Plan for the Greater Kampala Metropolitan Area


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## Urbanization in Uganda

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## Characterization of Urban Areas ...




- Has lowest urbanization rates in the most of the East African countries of Kenya, and Tanzania.
- Urbanization can be traced to the 1890s when the European footprint started to be felt, that defined Uganda's spatial and urban development pattern
- With the building of the Kenya-Uganda railway, economic and administrative centres were established
- Colonial policy regarded towns as centres of non-African settlement and shaped legislation and administration




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## Characterization of Urban Areas ..

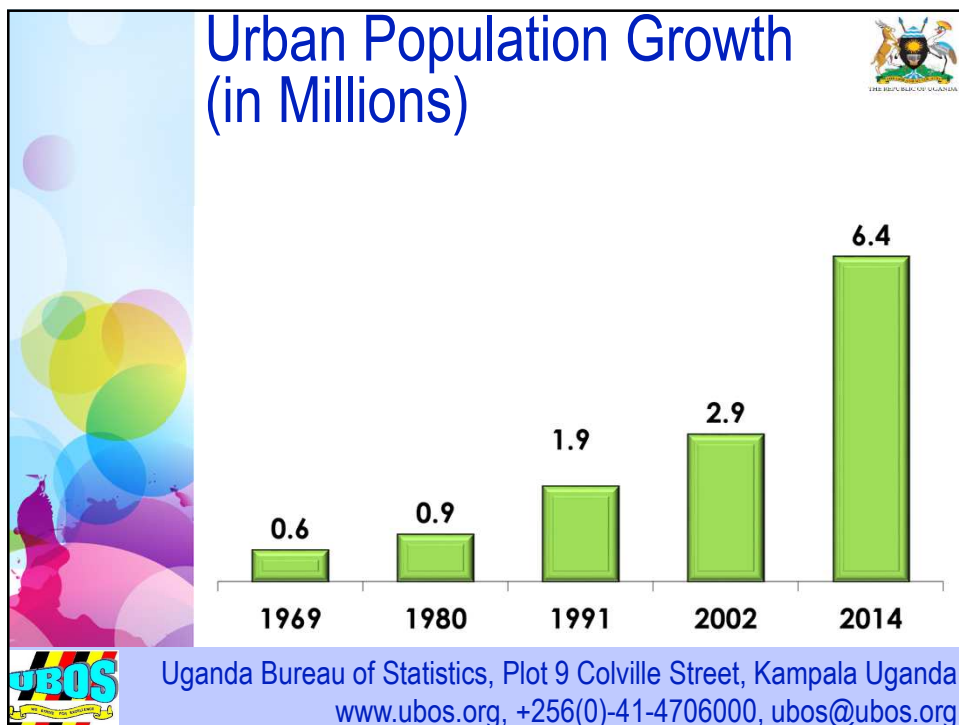
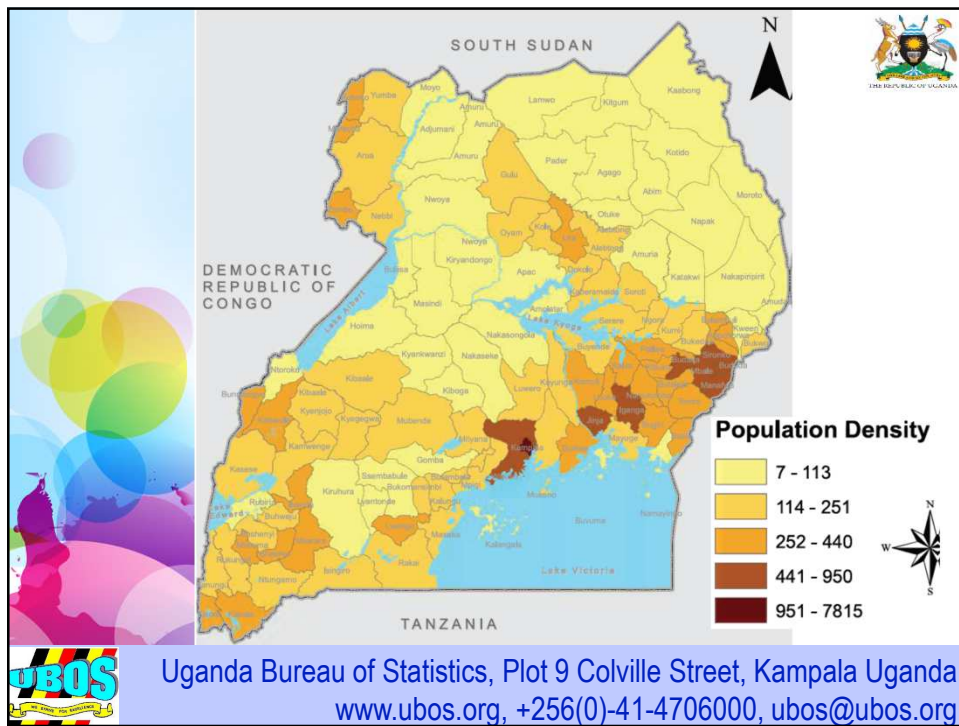


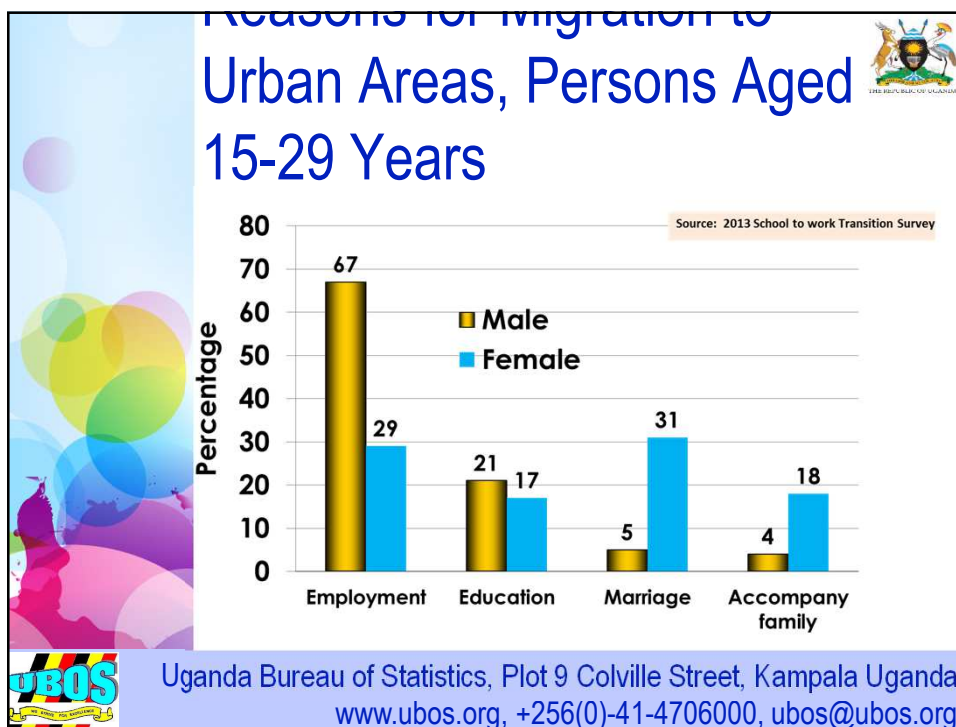
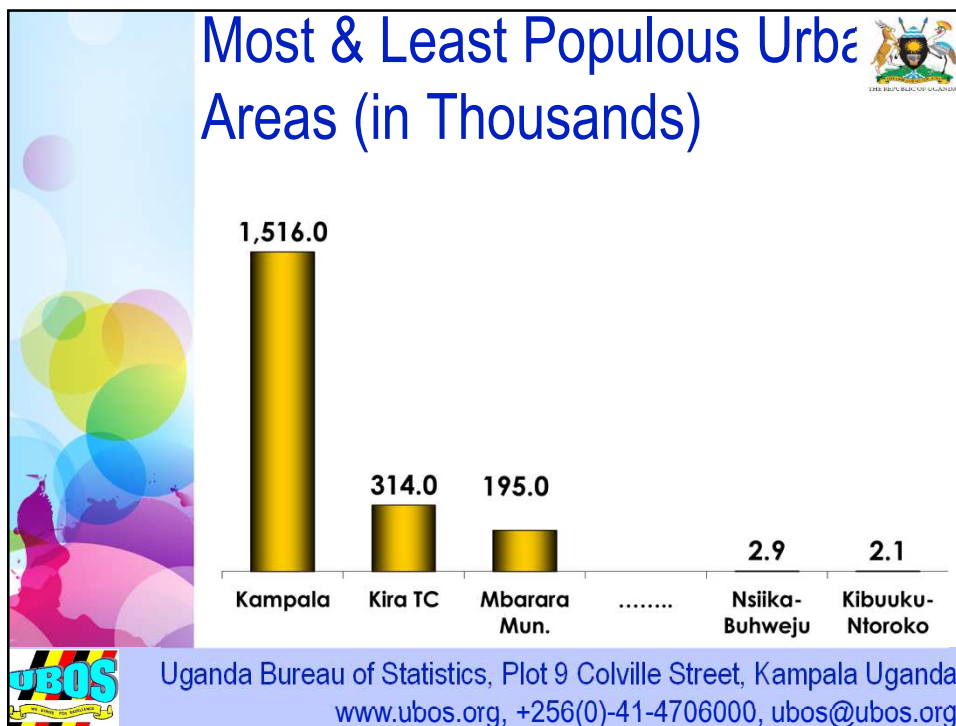
- 2002 & 2014 Censuses defined urban areas to include only the gazetted Urban Centres (City, Municipalities, Town Councils and Town Boards).
- Recent 2014 Census enumerated a total of 197 Urban Centres namely:
  - 1 City
  - 22 Municipalities
  - 174 Town Councils



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## Other Pull Factors for Urbanization



- Improved infrastructure (roads, electricity, improved water) in the urban areas. For instance highway road construction leads to migration to such areas along the road
- Political/Civil insecurity led to increased urbanization in certain areas Lira, Gulu for the war in northern Uganda, Bwaise, Kawempe, for the war in the Luwero Triangle



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## Observable Implications of Urban Growth



- High growth:
  - Increases opportunities for markets and service consumption
  - Mismatch of resources which compromise public service delivery in health, education, etc.
  - Increased pressure on infrastructure like roads, energy, etc..
  - Increased social challenges like high





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# Uganda Development Agenda

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# Uganda Vision 2040

- “A Transformed Ugandan Society from a Peasant to a Modern and Prosperous Country within 30 years”
- Implemented by National Planning Authority, through National Development Plan II, 2015/16 – 2019/20 “Strengthening Uganda’s Competitiveness for Sustainable Wealth

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# National Planning Authority

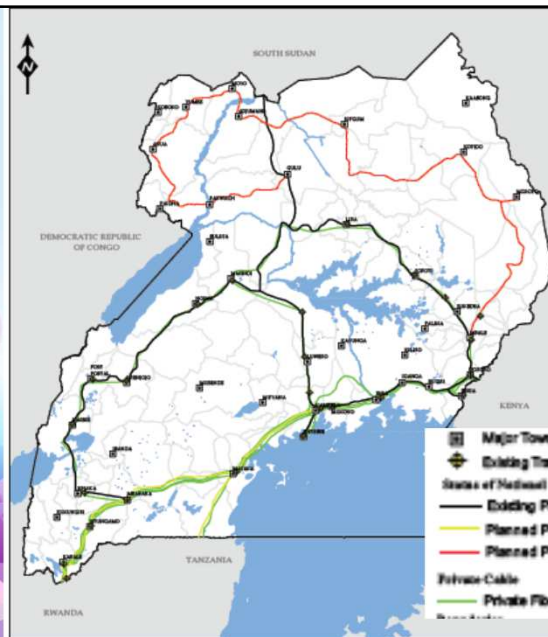


- Take leadership in monitoring and evaluation of implementation of medium term and long term National Development goals and Plans.
- Report on the outcome and impact results of the Plan.
- Coordinate NDPII M&E forums at all levels.
- Establish and maintain an integrated M&E system based on the NDPII results framework
- Ensure that the budget outcomes and outputs are aligned to the NDPII.



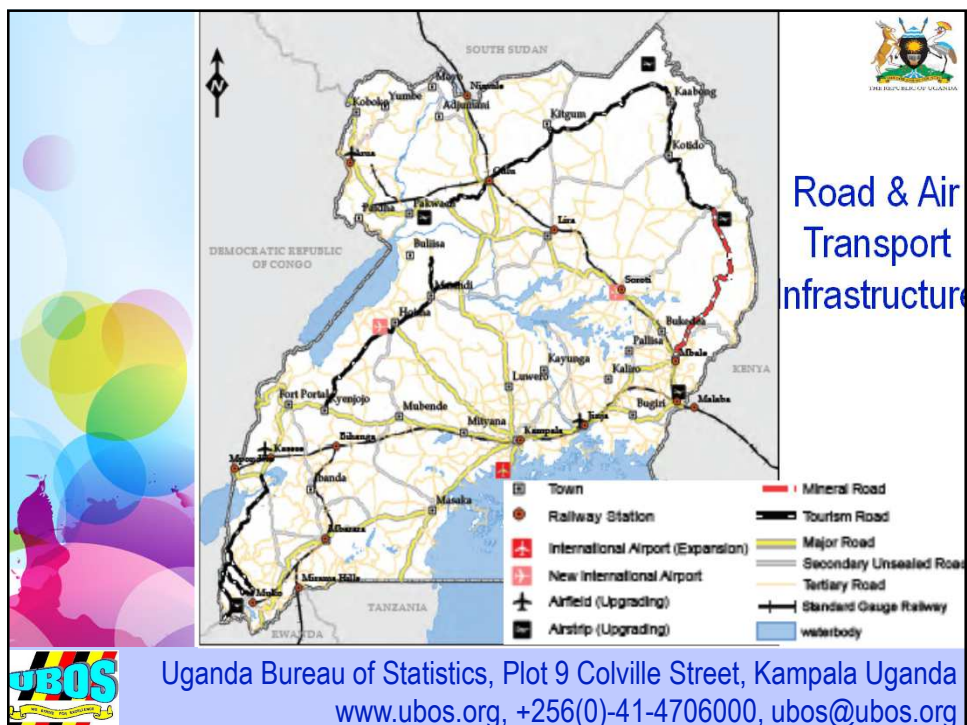
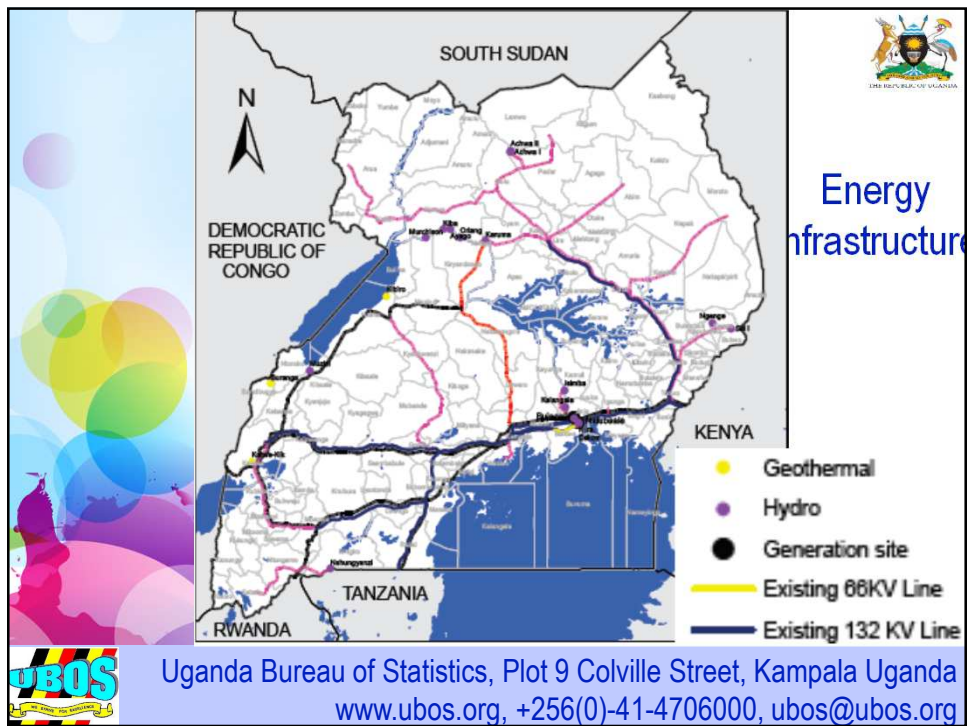
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## ICT Infrastructure

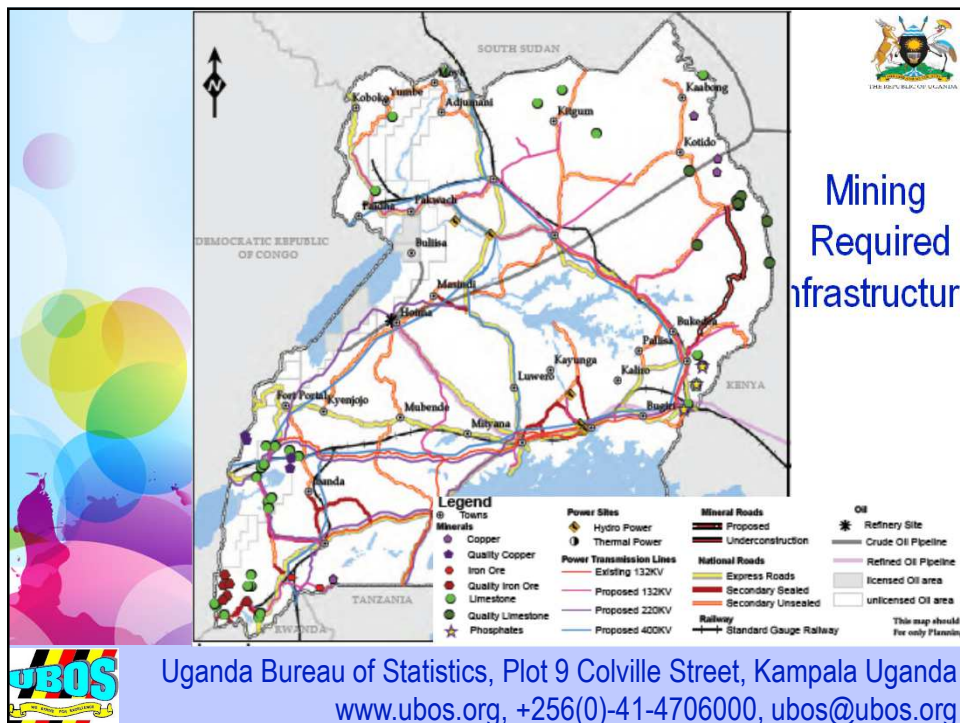
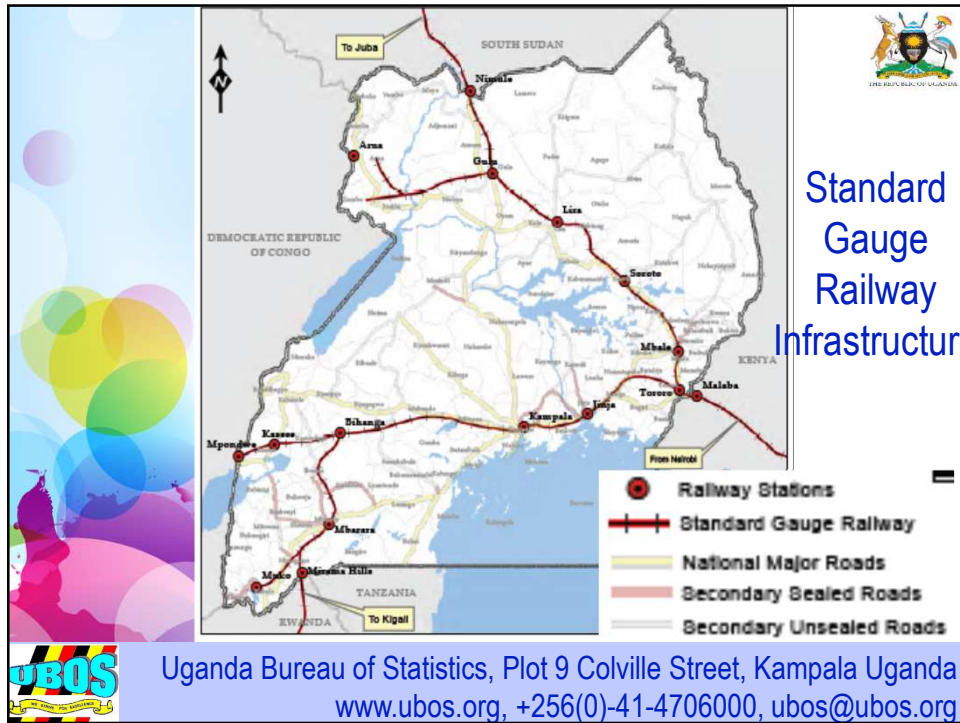


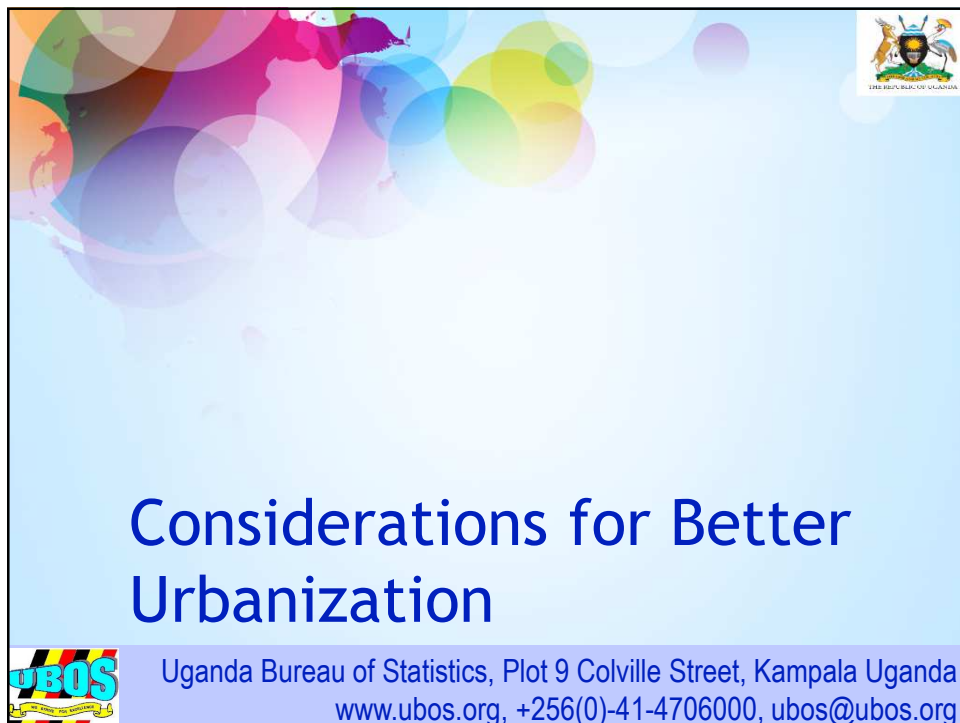
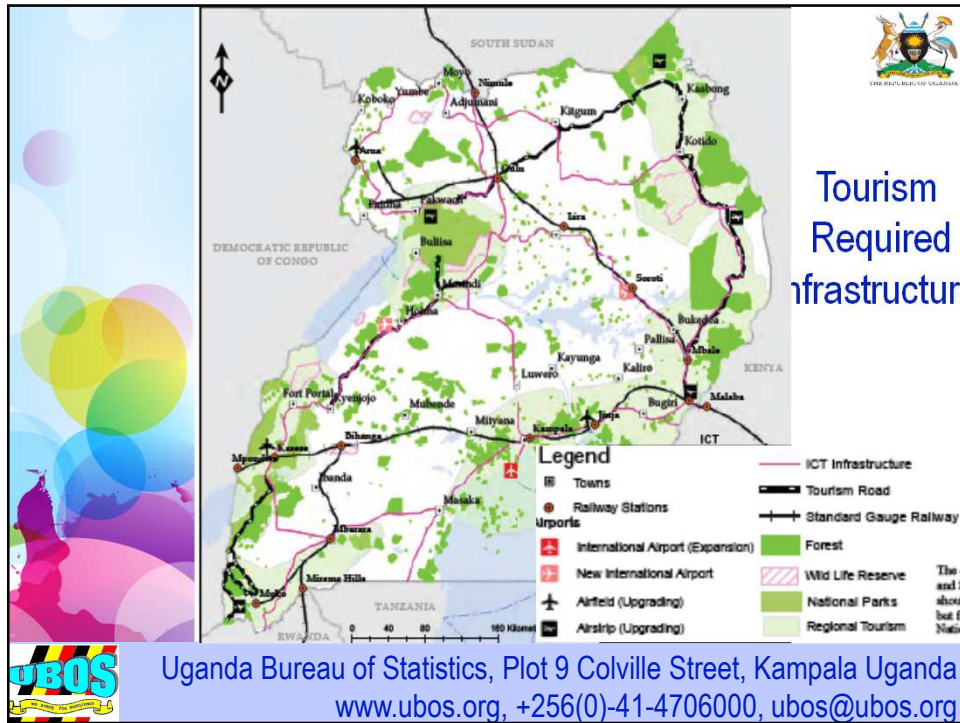
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## Strategic Pathways for Better Urbanization

- Long term planning is essential and enforcement of plans.
- Interventions that allow allocation of resources for infrastructural and service delivery development to cater for higher day population in urban areas.
- Provide conducive environment for investments, job creation, business, skills development etc.
- Develop and implement a multi sectoral

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## Strategic Pathways for Better Urbanization ...

- Develop social infrastructure to forestall or prevent social challenges such as prostitution, drug abuse and others.
- Need to refine the definition of how urban areas gazetted, and have a transition period from a Pre-Urban to Urban and the need to meet some standards to become urban.
- Develop, review, support and enforce implementation of physical development

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## Strategic Pathways for Better Urbanization ...



- Strengthening the attractiveness of secondary and smaller cities through enhanced services will attract populations to these smaller settlements.



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## Conclusion

### Africa Data Revolution

“Let us advocate for a profound shift in the way that data is harnessed to impact on development decision-making, with particular emphasis on building a culture of usage”



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