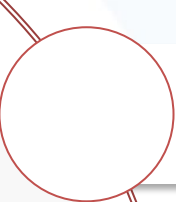


Big Data Pilot Study in Kenya

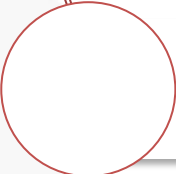
by
Carolyn Kakemu



1. Background



The study focused on innovative ways to utilize big data mainly, mobile phone data as a new data source for ICT statistics



The objective of the project was to demonstrate how big data can be used for ICT measurement – to produce new and existing ICT indicators to enhance data availability, benchmarks and methodologies to measure the information society

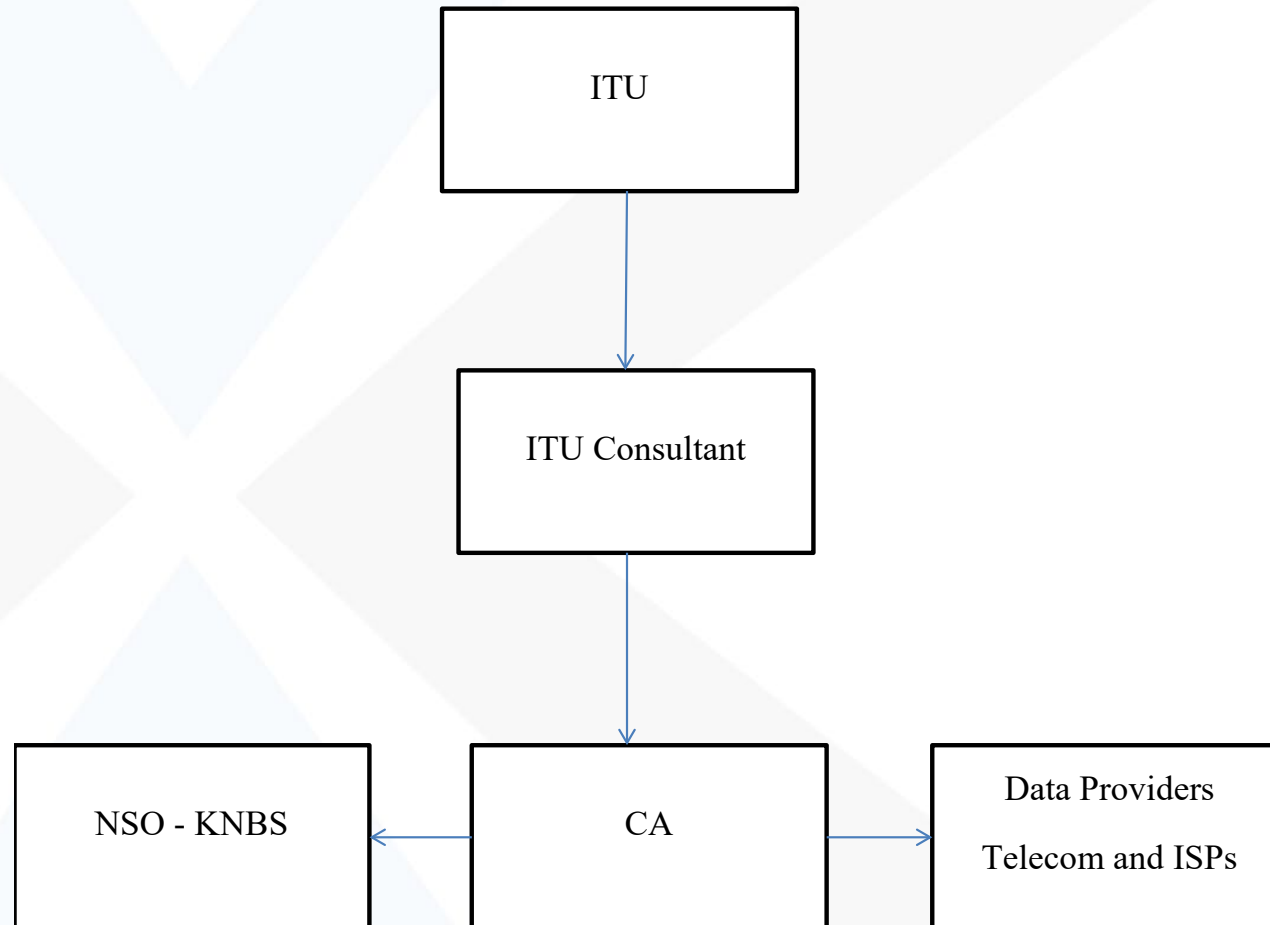


Big Data sources in this case were telecom operators, Internet Service Providers (ISPs) and tourist data from the National Statistical Office (NSO)



Pilot was conducted in six countries including Kenya, UAE, Georgia, Colombia, Korea (Rep.) and the Philippines

2. Mechanism of Coordination



3. Mechanism of Coordination cont....

International Telecommunication Union – ITU

Provided financial and technical support by hiring a consultant

-Telecommunication regulator - CA

- Served as Country coordinator for the project, focal point, administrative, cooperation and address regulatory questions.

National Statistical Office - KNBS

- Provided any necessary existing reference data (geographic administrative units, population statistics, tourist statistics etc.)
- Quality assessment of the methodology used and resulting indicators

Telecom operators & Internet service providers – data providers

- Provided data and resources for the project

4. Importance of Big Data in Kenya



Mobile network big data may be used for ex-post evaluation, real-time measurement, and future predictions and planning in areas such as health, agriculture, education etc

Leveraging on such data to complement official statistics will enable the government and development agencies to make informed decisions, policies and interventions

Big data can measure the uptake of different ICT services and applications, intensity and frequency of use and the geographic location of ICT users: urban vs rural

Big data can provide new insights into measurement of information society in Kenya.

5. Overview of Implementation Plan

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Process-
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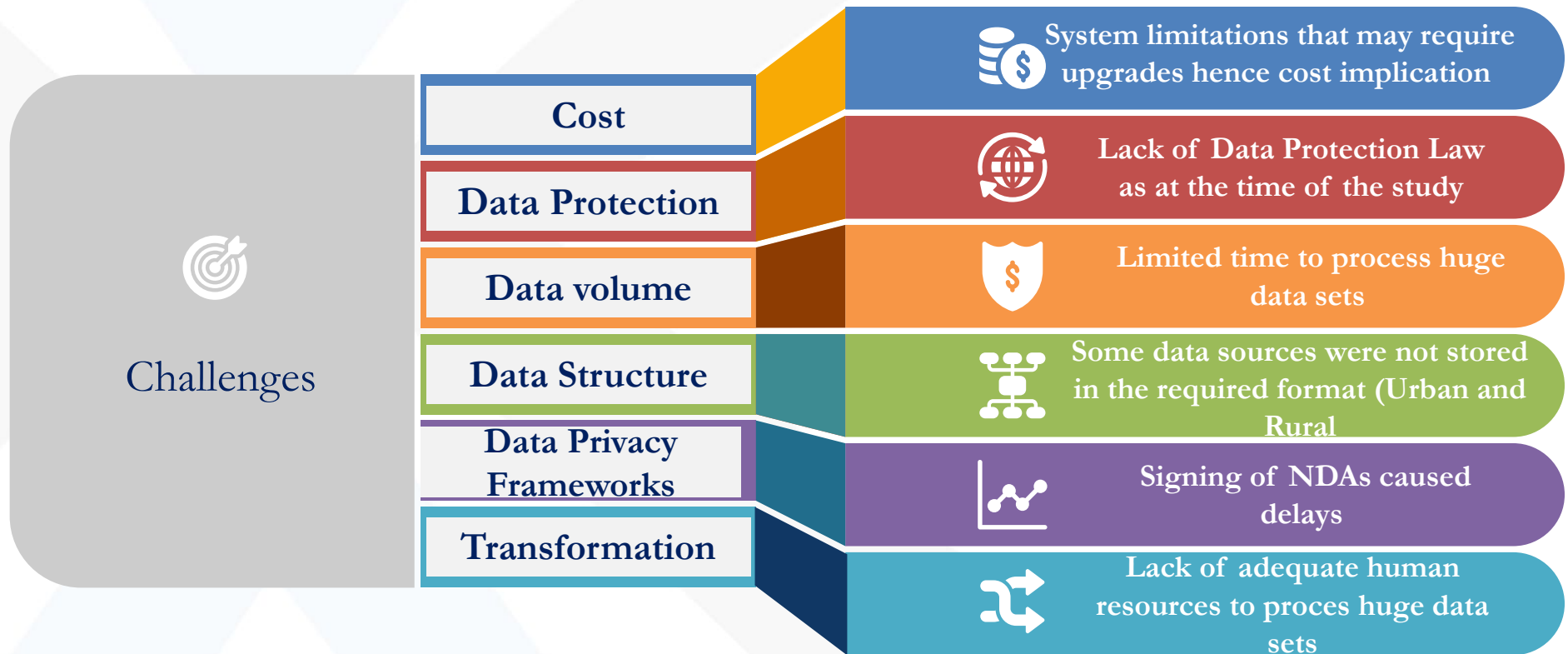
6. Big Data Indicators

- **BD 01.** Percentage of the Land Area Covered by Mobile-Cellular Network, by Technology
- **BD 02.** Percentage of the Population Covered by a Mobile-Cellular Network, by Technology
- **BD 03.** Usage of Mobile-Cellular Networks for non-IP Related Activities, by Technology
- **BD 04.** Usage of Mobile-Cellular Networks for Internet Access, by Technology
- **BD 05.** Number of Subscriptions with Access to Technology
- **BD 06.** Active Mobile Voice and Broadband Subscriptions, by Contract Type
- **BD 07.** Average Number of Active Mobile Subscriptions per Day, by Contract Type
- **BD 08.** Active Mobile Devices
- **BD 09.** IMEI Conversion Rate
- **BD 10.** Fixed Domestic Broadband Traffic, by Speed, Contract Type
- **BD 11.** Mobile Domestic Broadband Traffic, by Speed, Contract Type, Technology
- **BD 12.** Mobile International Broadband Traffic, by Contract Type
- **BD 13.** Inbound Roaming Subscriptions per Foreign Tourist
- **BD 14.** Fixed Broadband Subscriptions, by Technology
- **BD 15.** Fixed Broadband Subscriptions, by Speed
- **BD 16+** Proposed New Indicators from Pilot Countries that had not been foreseen by ITU

7. Analyzed Indicators

- **BD 01.** Percentage of the Land Area Covered by Mobile-Cellular Network, by Technology
- **BD 02.** Percentage of the Population Covered by a Mobile-Cellular Network, by Technology
- **BD 03.** Usage of Mobile-Cellular Networks for non-IP Related Activities, by Technology
- **BD 05.** Number of Subscriptions with Access to Technology
- **BD 07.** Average Number of Active Mobile Subscriptions per Day, by Contract Type
- **BD 08.** Active Mobile Devices
- **BD 09.** IMEI Conversion Rate
- **BD 11.** Mobile Domestic Broadband Traffic, by Speed, Contract Type, Technology
- **BD 13.** Inbound Roaming Subscriptions per Foreign Tourist

8. Challenges



9. Way Forward

- ❖ Enactment of Data Protection Law
- ❖ Capacity building on Big Data analytics
- ❖ Regulator to invest in Big Data storage and processing resources
- ❖ Update Big Data Study in line with the recommendations of the 2016 Pilot Study

THANK YOU