Government of Uganda and ITU joint project on "Technical assistance and training to Uganda on National ICT development strategy"

Leveraging Mobile Phone Big Data for Information Society Statistics: Successes, Challenges, and Future Direction (Part II) UGANDA's CASE

Albert Kihangire
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Outline

- ❖ Introduction to Project

- ❖ Methodology

- ❖ Use Cases

- ❖ Successes

- ❖ Challenges

- ❖ Way Forward

Introduction

❖ Big Data Landscape Assessment conducted

❖ Project on Technical Assistance and Training to Uganda on National ICT Development Strategy

❖ **Objectives**:-Policy Recommendations, -Capacity Building, -Test Pilots

❖ The project is implemented by ITU, with the GOU, through the Ministry of ICT and National Guidance (MoICT) as the Lead agency. The South-South Cooperation Assistance Fund (SSCAF) through the Ministry of Industry and Information Technology (MIIT) of the People's Republic of China is funding the project.

Alignment with National Strategies

Digital Uganda Vision 2040

Digital Transformation Roadmap

National Data Strategy

Big Data Utilization Strategy

THE REPUBLIC OF UGANDA
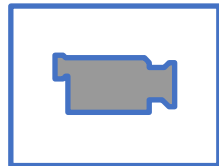MINISTRY OF ICT & National Guidance

Methodology

MDAs assessed and selected private sector entities included

Stakeholder Scoping Tool and KII guide (28 MDAs, 2 Dev't Partners, 5 Educ. Institutions, 3 Telcos (MNOs) and 3 Banks, 2 Data Centers)

Contextualized UN BD Maturity Matrix Tool

Contextualized UN BD Competency Assessment Tool

Methodology

Summary of the Assessment Levels

Stakeholder Analysis

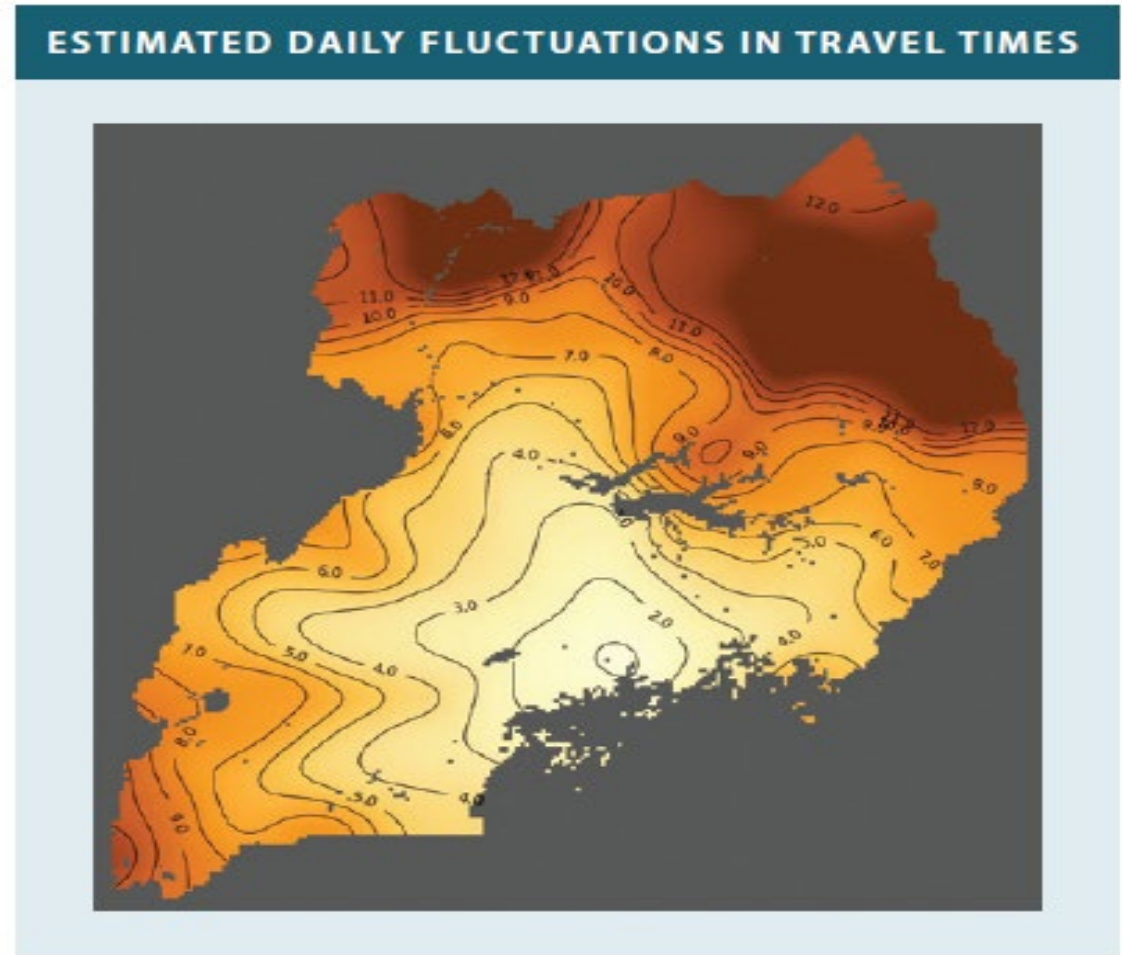**Baseline Assessment**

Training Needs Assessment

Implementation Strategy and Framework
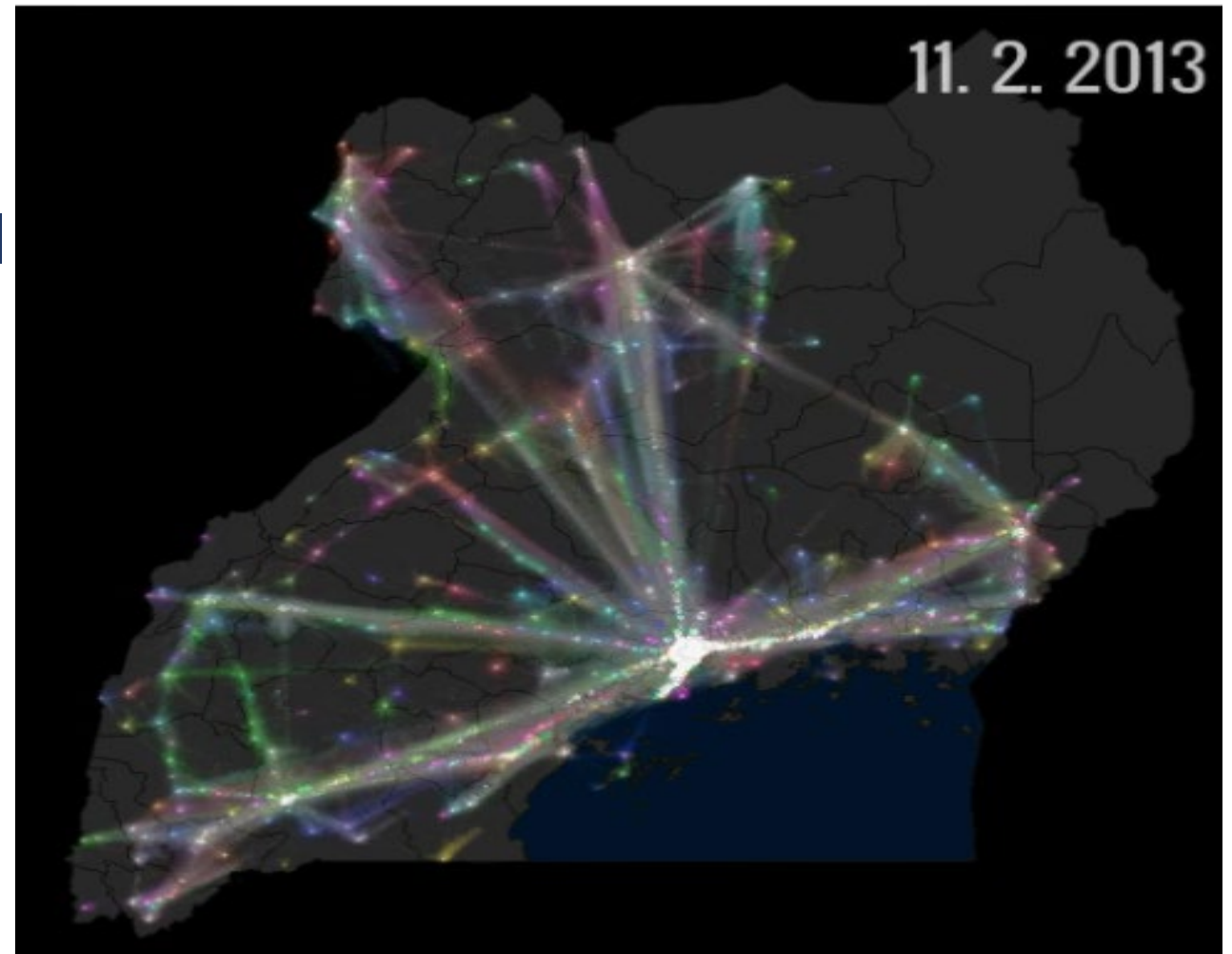
Provide Recommendations

Piloted use cases

- **UN Global Pulse in 2018 piloted with UBOS.**
- ❖ Dynamic image showing estimated daily fluctuations in travel times from Kampala to the rest of the country. (Mobility)

- ❖ CDR data from telecom companies / MNOs used for this

ESTIMATED DAILY FLUCTUATIONS IN TRAVEL TIMES

Use cases

❖ Population mobility matrix, generated from billions of call details records (CDR) for the movement of people in and out of Kampala

❖ UBOS could not access data and sustain scaling up the pilot to complement the existing mobility statistics
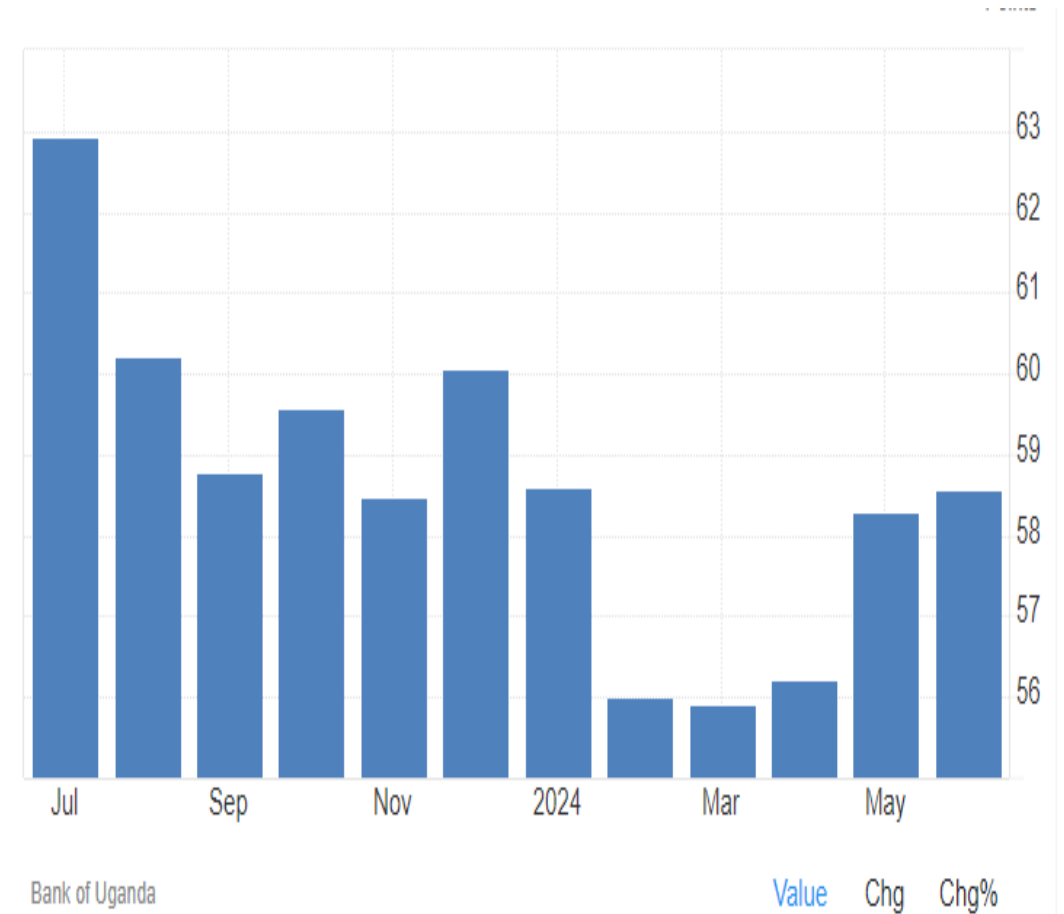
Use cases

❖ Public perceptions and opinions on social media platforms were analyzed together with UNDP

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Use cases

❖ Pilot to complement Bank of Uganda's Business Confidence Index through tracking perceptions of social media platforms of the business community also explored.

❖ Data access and HR capacity hindered it's scalability.

Use cases

❖ Ministry of Health using mTrac the SMS illness surveillance system set up by the Ministry of Health developed with support from UNICEF and USAID.

❖ Planning to expound it to exploit more BD capabilities

Information Society Statistics

❖ Information Society Indicators still being tracked using traditional methods. National IT Survey 2022 and After Access Africa 2022 surveys, conducted by NITA-U and Research ICT Africa (RIA) respectively.

❖ Global System for Mobile Communications Association (GSMA) training UCC relevant staff on Big Data Analytics

❖ UBOS willing to be supported to harness MPD to compile Information Society Statistics

MPD Use case stake-holders

(Possible) Pilot sponsors
- ITU
- UN Global Pulse
- Enabel

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Pilot beneficiaries
- MoICT
- UBOS
- UCC
- Telecommunication Service Providers (MNOs, ISPs)
- Personal Data Protection Office (PDPO)

Successes and Opportunities

❖ Big Data Utilization Strategy (BDUS) is in place. National Data Strategy is being developed.

❖ Development partners like UN Global Pulse and Enabel are willing to support more pilot projects.

❖ Global System for Mobile Communications Association (GSMA) training relevant UCC staff on Big Data Analytics

❖ UBOS has hired Data Scientist and is building a fully-fledged Data Science Laboratory.

Challenges

❖ Limited strategic guidance as BDUS lacks an Implementation Framework.

❖ Data access from the MNOs is the main challenge

❖ Limited legal framework not well understood and enforced.

❖ Data Security Concerns

❖ Human resource capacity

Challenges

❖ Methodological challenges. Some Statisticians are not convinced about BD application for statistical purposes due to its non-traditional methods

Recommendations

❖ Review of and incentivize enforcement of legislation related to (big) data management, to enhance data access and sharing. PDPO to promote reviews and awareness of the Data Protection and Privacy Act 2016 especially

❖ Privacy – strengthen the privacy laws of the country. "Drum up" and implement data anonymization.

❖ Building the Big Data Infrastructure: Plans to start small and consolidate all data systems. Make use of NITA-U datacenter

❖ Continue exploring proposed use cases and test them with MDAs as a "buy-in" and "awareness" approach

❖ Build the capacity of ICT and Statistical cadres in practical BD packages in tandem with the use cases. Explore placing Data Scientists at selected Mir until recruitment ban is lifted

Thank You!!!