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| **Regional Preparatory Meeting for WTDC-17 for Arab Region (RPM-ARAB)** | P:\SUP\Logos\Post-150th Anniv\ITU-logo-UNblue.jpg |
| **Khartoum, Sudan, 30 January – 1 February 2017** |  |
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|  | **Document** **RPM-ARB17/26-E** |
|  | **16 January 2017** |
|  | **Original: English** |
| Republic of the Sudan |
| INITIATIVE FOR THE COUNTRIES OF arab region“Big Data for Development - Monitoring of key development indicators through data” |
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**Priority area**

Regional Initiatives

**Summary**

This document contains a proposal from the Republic of Sudan for a subregional initiative for the Arab countries, entitled “Big Data For Development - Monitoring Of Key Development Indicators Through Data”.

**Expected results**

N/A

**Referenece**

N/A

1. **Introduction**

In most Arab countries, there are multiple challenges in acquiring frequent and adequate data to measure effective implementation of development goals resulting in data gaps to periodically measure development progress. To fill such data gaps, there is capitalised on alternative big data sources such as mobile phone call records to measure socio economic variables as a proxy for development indicators. In 2015, UN Statistical Commission has leveraged the use of big data for sustainable development goals (SDG) monitoring, by identifying and encouraging the use of big data sources (such as mobile phone, social media data and satellite imagery) to complement official statistics.

In Arab region, mobile phone market penetration rate in 2016 is estimated to be around 109.9 which generate a huge stock of call details records that could potentially reveal socio economic patterns in the country. Referring to this facts, the initiative aims to establish a regional lab as a centric ecosystem in order to analyze this mobile phone call data reserve, test its potential to measure development indicators on a regular basis, and build capacity of regional institutions to handle big data for regular measurement of key development indicators thereby fulfilling data gaps in monitoring development progress in a regional base.

1. Purpose

In most countries, there are multiple challenges in acquiring frequent and adequate data to assess situation changes and measure effective implementation of development goals. Household surveys and censuses are usually expensive, time consuming, demanding elaborate processes and resources for data collection and analysis which result in data gaps to frequently measure overall and geographically disaggregated development progress. At the same time, instability in many parts of the region hinders the accessibility of data collection via conventional methods; in the meantime, these parts are in urgent need for development assistance.

New systems and technologies in telecommunication with its vast outreach & coverage are increasingly generating large volumes of user data in a variety of formats at extremely fast rate. It is common in the private sector to use this stock of big data to inform business progress and strategic decisions. Development sector is following this successful trend of using big data to complement official statistics and inform planning decisions. Electricity consumption, social media, media reports, purchase transactions, cellular phone use are examples of big data sources being explored to identify potential application in measuring as a proxy ,key economic& social variables in real time and at highly disaggregated levels. Proven studies and practices demonstrate that big data such as mobile phone call records has high predictive confidence to monitor socio economic variables as a proxy SDGS measure ( recommendation Y-3600 ).Additionally, UN Statistical Commission under Economic and Social Council’s (ECOSOC) Forty -sixth session report[[1]](#footnote-1) links big data and the sustainable development goals(SDG),which identifies and encourages the use of big data sources (mobile phone, social media data and satellite imagery) for official statistics.

In Arab region, mobile phone market penetration rate in 2016 is estimated to be around109.9. Telecom operators automatically record phone activities such as calls and SMS within their network. This digital record represents a significant source of data due to its staggering volume, which is timely updated. In light of the challenges in measuring statistics, analysis of mobile phone call data has substantial potential to reveal socio economic patterns .Based on this; big data project of a regional central lab is highly demanded.

To capitalize on this window of opportunity, it is crucial to confirm the predictive capability of mobile phone usage data for the region’s key development indicators. The project that allows analysis of this data reserve, verification of its potential using standard statistics, formulation of a mathematical model and methods, establishes regional capacity to regularly derive proxy measurements of indicators based on a standardised method is hence fundamental to use it as an alternative but complementary evidence that could inform adjustments to ongoing development programmes and interventions. The purpose of the project is to determine the potential of mobile phone usage as big data to inform development planning and progress monitoring by three undertakings:

* Analyze and verify the prospects of mobile phone usage data to measure and monitor development indicators through formulation of standardised model and method.
* Strengthen the capacities of key regional stakeholders to implement the model, analyse big data for measuring key development indicators.
* Sensitize and raise big data awareness of relevant stakeholders for upscaling on its usage to monitor socio economic variables for regional planning.

The results of such undertaking could generate regional proxy indicator measurements in shorter time intervals, at lower cost, from a large sample; leading to a step-change in real-time steering of development programmes. From the innovation lens, this will be the first endeavour for the Arab region to use big data source and approach in tracking its development progress that will potentially inform development policy and decision making. Measurements of key indicators generated on a shorter interval will have significant contribution in regional SDG monitoring, assessing and enhancing decision mechanism.

1. **Expected Output**

The overall objective of this project is to utilize the mobile phone usage as big data source and the extent to which it provides reliable data for the regions development monitoring. Through the pilot, strengthen capacity of regional counterparts to regularly monitor progress of key development indicators through the analysis of mobile phone usage as big data source to fill development indicator data gaps.

The expected output of the project shall be:

* Key development indicator proxies developed, measured and published on a central regional basis.
* Establishment of a long-term regional capacity to measure selected development indicators in a shorter time intervals thereby strengthening regular monitoring of SDGs.
* Increased awareness of big data as an alternative (complementary) and low cost source to measure development indicators.

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1. <http://unstats.un.org/unsd/statcom/doc15/2015-4-BigData-E.pdf> [↑](#footnote-ref-1)