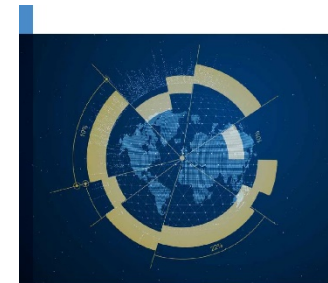# ITU pilot project
Big Data for Measuring the Information Society

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Big Data for Measuring the Information Society

➢ UN agency for telecom/ICT

➢ Measuring the Information Society Reports – big data and IoT data

➢ WTIS – panel debates

➢ Discussion items in EGH and EGTI

➢ Member of UN Global Working Group (GWG) on Big Data for Official Statistics

➢**New: Project on Big Data for Measuring the Information Society (Launched in June 2016)**

■Colombia, Georgia, Kenya, Philippines, Sweden, United Arab Emirates
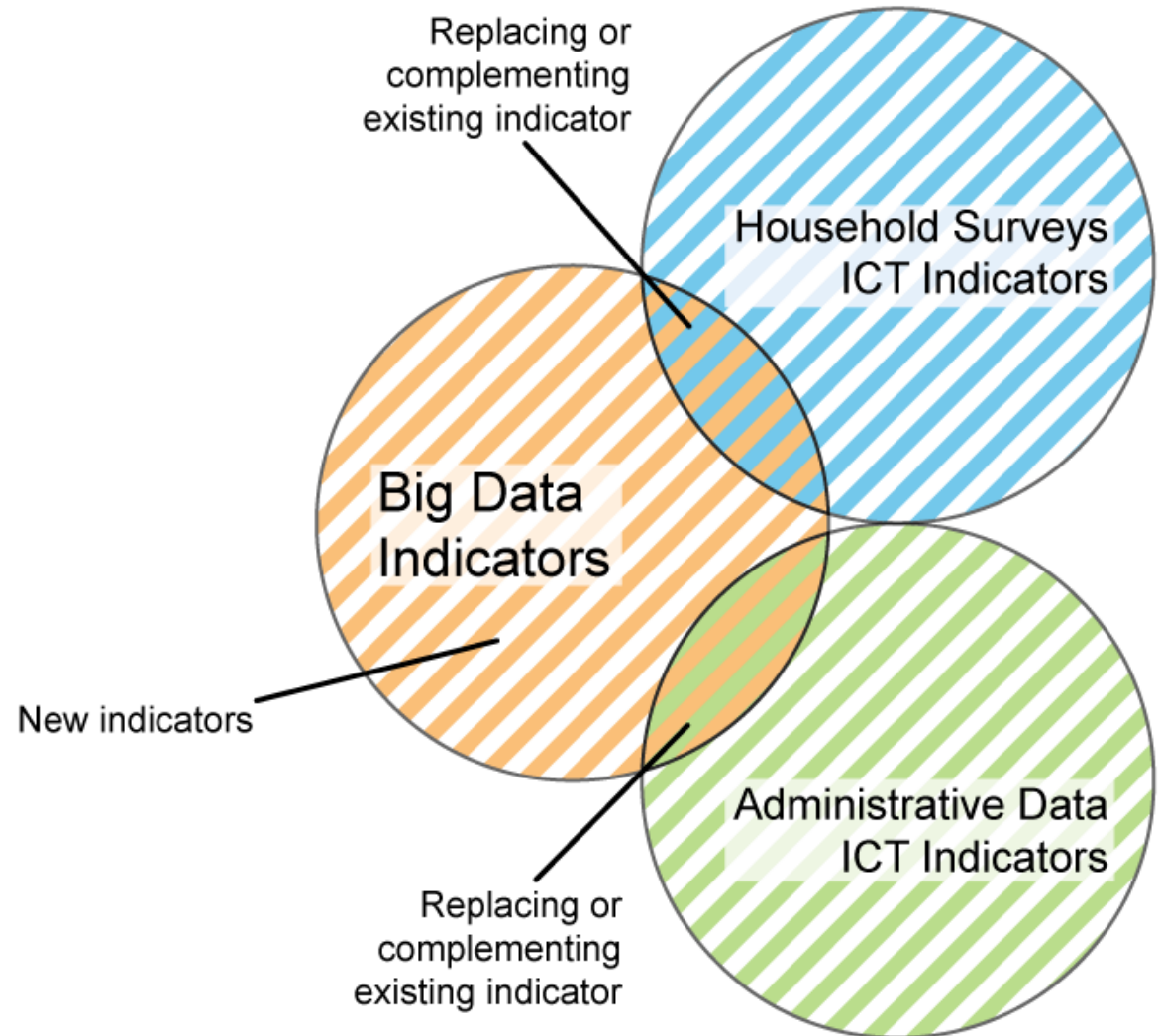
Objectives

- Complement existing indicators (granularity, disaggregation)
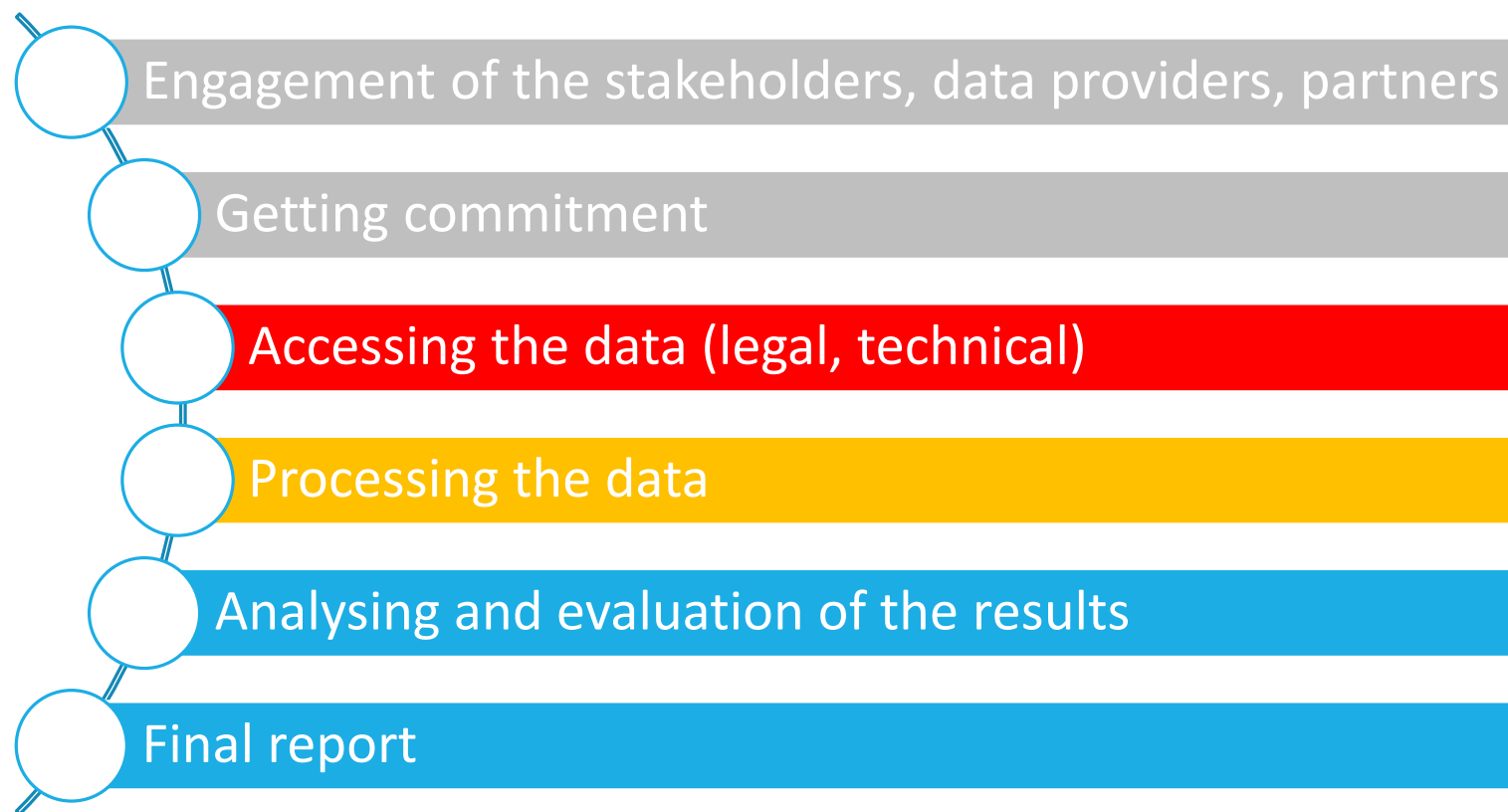
- New indicators

Stakeholders

PILOT COUNTRY

- Telecommunication Regulator / ICT ministry

- National Statistics Office

- Telecommunication Service Providers (MNOs, ISPs)

- Data Protection Authority

- Two data scientists and project coordinator to assist pilot countries

June 2016 – November 2017

Engagement of the stakeholders, data providers, partners

Getting commitment

Accessing the data (legal, technical)

Processing the data

Analysing and evaluation of the results

Final report

Big data indicators

BD01: Percentage of the Land Area Covered by Mobile-Cellular Network, by Technology

BD02: Percentage of the Population Covered by a Mobile-Cellular Network, by Technology

BD03: Usage of Mobile-Cellular Networks for non-IP Related Activities, by Technology

BD04: Usage of Mobile-Cellular Networks for Internet Access, by Technology

BD05: Number of Subscriptions with Access to Technology

BD06: Active Mobile Voice and Broadband Subscriptions, by Contract Type

BD07: Average Number of Active Mobile Subscriptions per Day, by Contract Type

BD08: Active Mobile Devices

BD09: IMEI Conversion Rate

BD10: Fixed Domestic Broadband Traffic, by Speed, Contract Type

BD11: Mobile Domestic Broadband Traffic, by Contract Type, Technology

BD12: Mobile International Broadband Traffic, by Contract Type

BD13: Inbound Roaming Subscriptions per Foreign Tourist
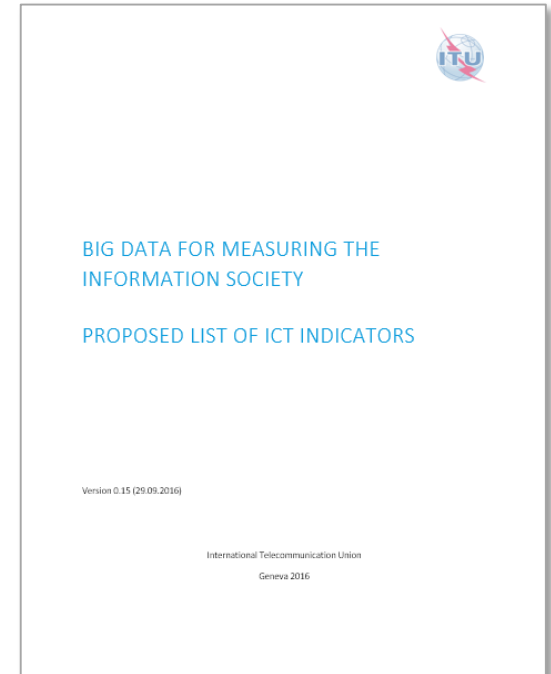
BD14: Fixed Broadband Subscriptions, by Technology

BD15: Fixed Broadband Subscriptions, by Speed

BD16+: Proposed New Indicators from Pilot Countries

Methodology document

✓ Includes:
- Name of the indicators
- Data source description
- Processing methodology
- Expected results example
- Disaggregation
- The purpose and value of the indicator

➤ Complemented and amended during the project

BIG DATA FOR MEASURING THE INFORMATION SOCIETY

PROPOSED LIST OF ICT INDICATORS

Version 0.15 (29.09.2016)

International Telecommunication Union
Geneva 2016

|	Colombia	Georgia	Kenya	Philippines	Sweden	UAE
BD01	-	-	+	-	-	-
BD02	-	+	+	-	-	-
BD03	+	+	+	+	-	+
BD04	+	+	-	+	-	+
BD05	+	+	+	+	-	+
BD06	+	+	-	+	-	+
BD07	+	+	+	+	-	-
BD08	-	+	+	+	-	+
BD09	-	+	+	+	-	+
BD10	-	-	-	-	-	-
BD11	+	+	+	+	-	+
BD12	-	+	-	-	-	+
BD13	+	+	+	+	-	-
BD14	-	+	-	-	-	+
BD15	-	+	-	-	-	+
BD16	++++	+	-	-	-	+
TOTAL	11	14	9	9	0	11

Key issues faced

1. Access to data - administrative and legal procedures

2. Participation of all data providers (MNOs, ISPs)

3. Resources
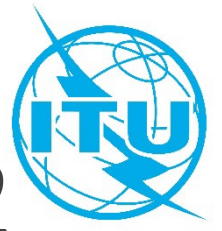   ➤ Human (data scientists)
   ➤ Infrastructure

Data processing model - option 1

Indicators calculated by data providers, then aggregated to resulting indicators:
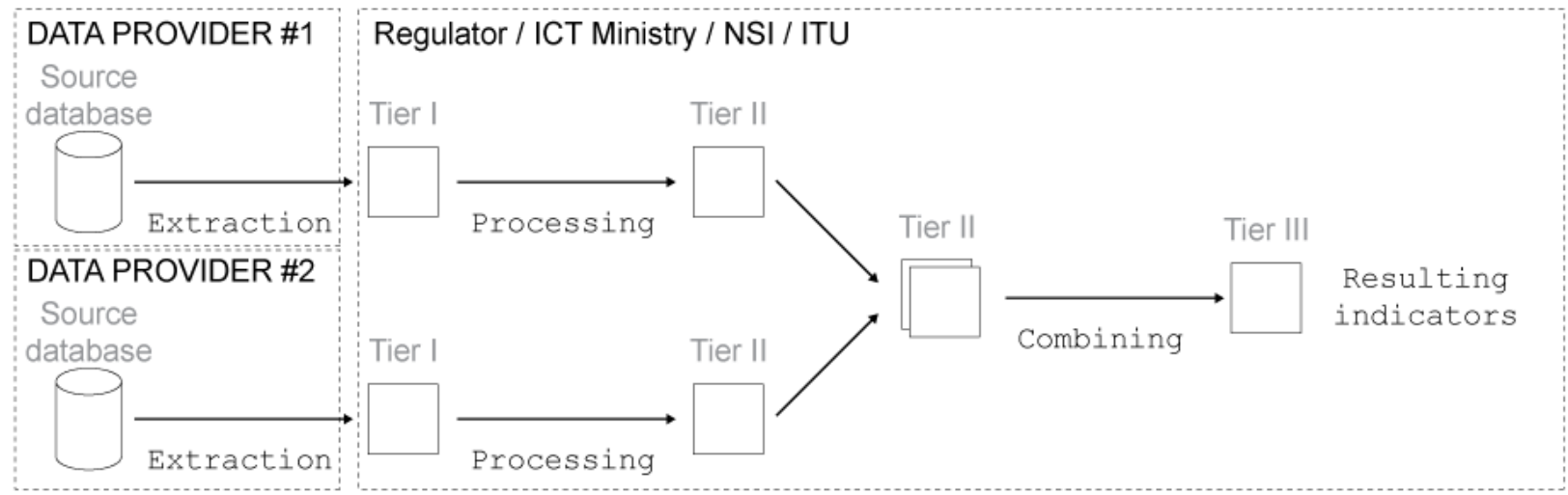
◦ Kenya

◦ Philippines

◦ UAE
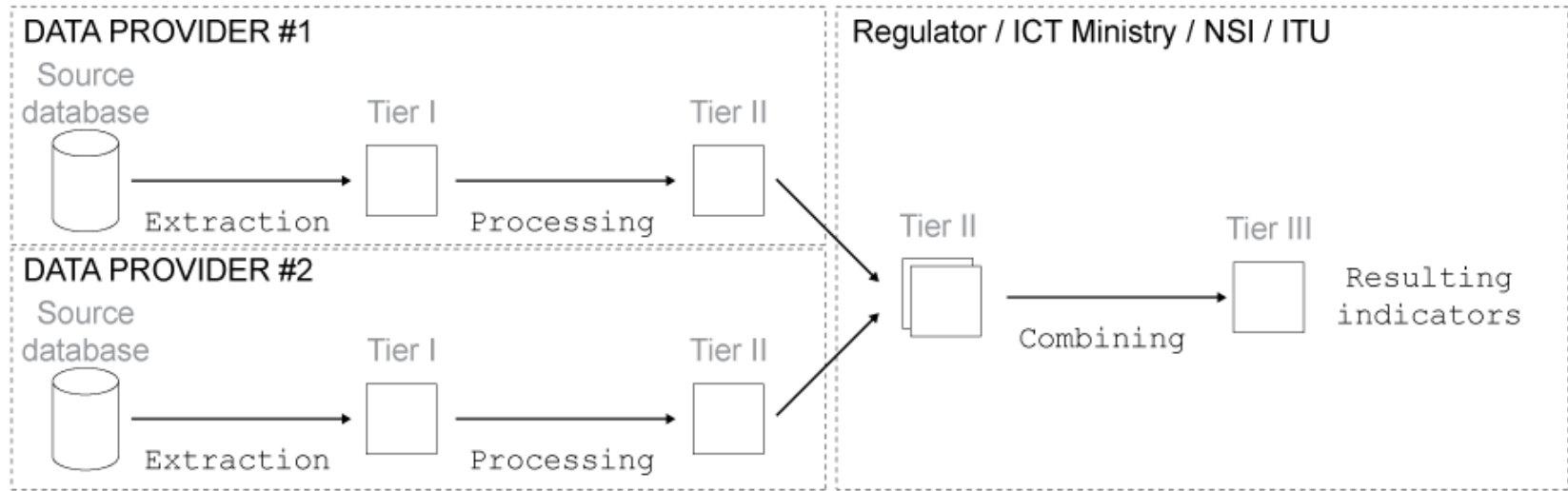
Data processing model - option 2

Raw data extracted by data providers, indicators calculated by TRA/NSO/ITU:
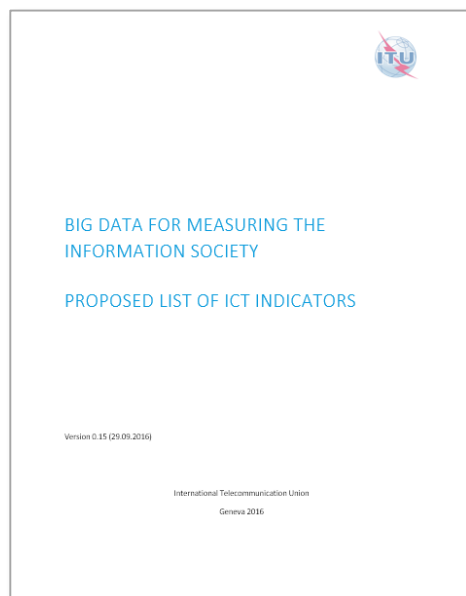
◦ Georgia

◦ Colombia

◦ Sweden

Deliverables

✓Presentation of the results in WTIS-17 – November 2017

✓Methodology document – December 2017

✓ Country reports – December 2017

✓ Final project report – summarizing the experiences gained from the pilot countries and results – upcoming

http://www.itu.int/en/ITU-D/Statistics/Pages/bigdata/default.aspx

Lessons Learned (for Phase II)

1. Prepare all administrative and legal procedures to access the data before the project starts
   - Agreed processing model for calculation (by data providers or by TRA/NSO)
   - Agreed method for data transfer

2. Standard, clear and unambiguous methodology:
   - detailed data source description (input data)
   - calculation methodology
   - example algorithms for calculation

3. Infrastructure and human resources (data scientist) for data processing should be in place

4. Coordination with all stakeholders (access to data, validation of results, analyses)

Thank you!