

Africa Webinar, 2022

Big Data and Data Science for Official Statistics
with examples in Africa

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UN Committee of Experts on Big Data and data science for official statistics

- Created in March 2014 by the UN Statistical Commission
- Mandated to give direction to the use of Big Data for Official Statistics
- Inter-governmental body with 31 countries and 16 international organizations
- Collaboration of around 500 experts from all stakeholder communities

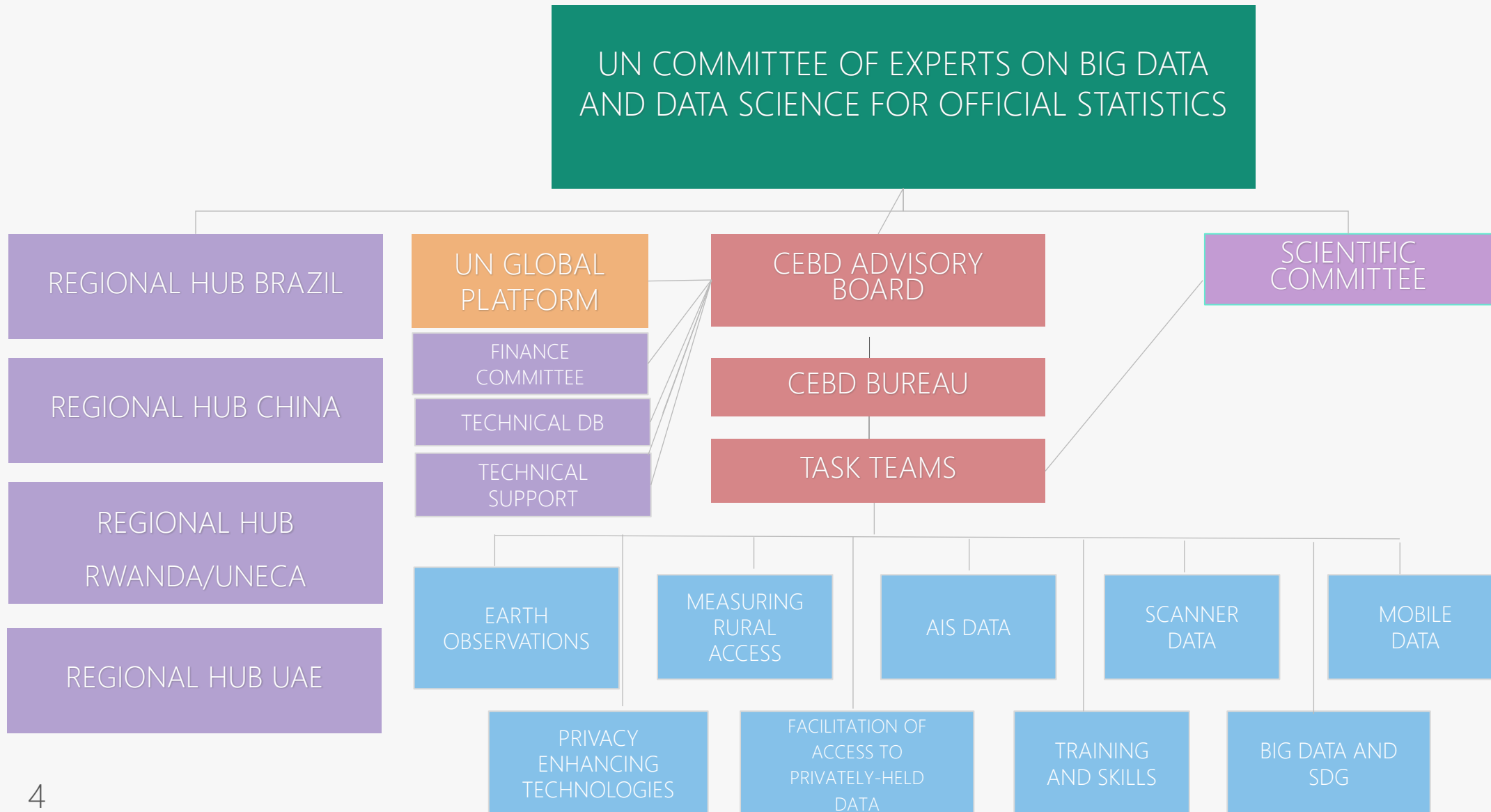


UN Committee of Experts on Big Data and data science for official statistics

- **Chair:** Statistics South Africa
- **Members:**
 - Cameroon
 - Egypt
 - Morocco
 - Rwanda
 - Tanzania



Organization of Committee



9 Task Teams with 500+ experts

**Earth Observations
for agriculture
statistics**

**AIS data for Maritime
Transport and Trade
statistics**

Big Data and SDGs

**Mobile Phone Data
for Tourism and
Population statistics**

**Scanner data and
webscraping for price
statistics**

**Rural Access to All
Season Roads**

**Capacity
Development, Skills
and Competencies**

**Access to privately-
held data**

**Privacy Enhancing
Technologies**

9 Task Teams with 500+ experts

**Earth Observations
for agriculture
statistics**

- Senegal
- Uganda
- Lesotho

**Mobile Phone Data
for Displacement
statistics**

- Ghana (Covid-19)
- Gambia (Covid-19)
- Zimbabwe
- DRC (Volcano eruption)

9 Task Teams with 500+ experts

**Scanner data and
webscraping for price
statistics**

- Mauritius – estimation of price statistics with use of scanner data and webscraping

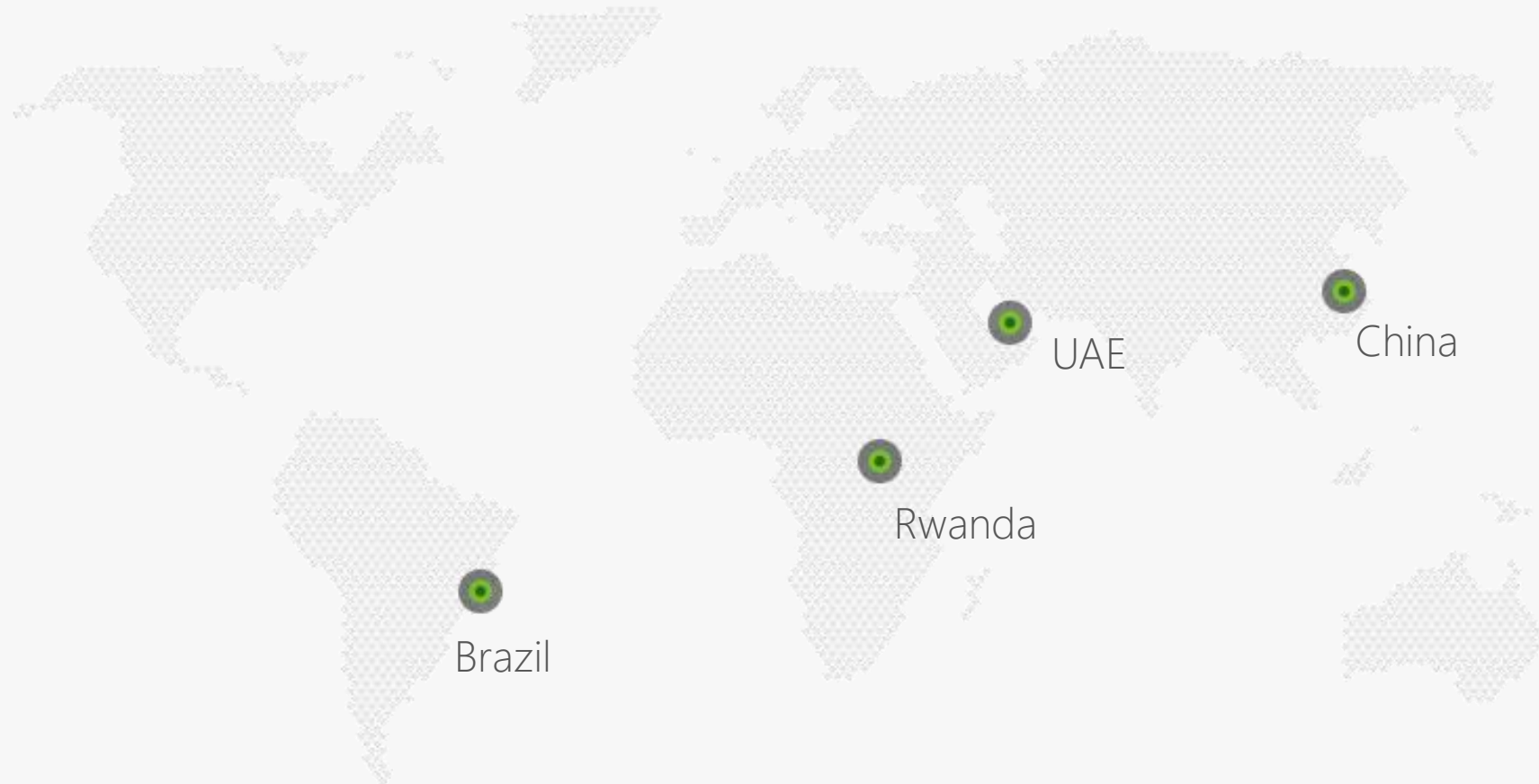
**Rural Access to All
Season Roads**

- Kenya
- Ethiopia
- Malawi
- Tanzania

International Conferences on Big Data and Data Science for Official Statistics

- 2014 Beijing, China
- 2015 Abu Dhabi, UAE
- 2016 Dublin, Ireland
- 2017 Bogota, Colombia
- **2019 Kigali, Rwanda**
- 2020 Virtual / Korea Republic
- **2022 Yogyakarta, Indonesia, 7-11 Nov 2022**

Regional Hubs for Big Data expand the capacity development possibilities



Regional Hub for Big Data in Africa in Support of the United Nations Global Platform

🌐 Kigali, Rwanda



Collaboration

In addition to the United Nations and UNECA, NISR is collaborating with local universities and both public and private institutions in Rwanda.



Privacy

Rwanda is in the process of putting in place its Data Protection Law that will improve the accessing, sharing, analysis and use of big data without breaching the privacy of individuals

Training in Big Data and Data Science for official statistics



**Big Data Training
Curriculum**



E-Learning Courses



**Big Data Maturity
Matrix**



**Training of data
scientist in academic
centers**



**Big Data
Competency
Framework**



Mentorship





UN Global Platform

Purpose: Global collaboration on Data innovation

Provides:

- Access to Data
- Access to Technology services
- Access to Expertise
- OPPORTUNITIES: UNGP makes use of Big Data possible for small offices



Data

Global data

AIS Vessel tracking data
Satellite imagery data

Synthetic data

Mobile phone data
Smart surveys

Data as a Service

Trade data
Shipping register data
Port activity
Global group registers

Technology services

Cloud Services

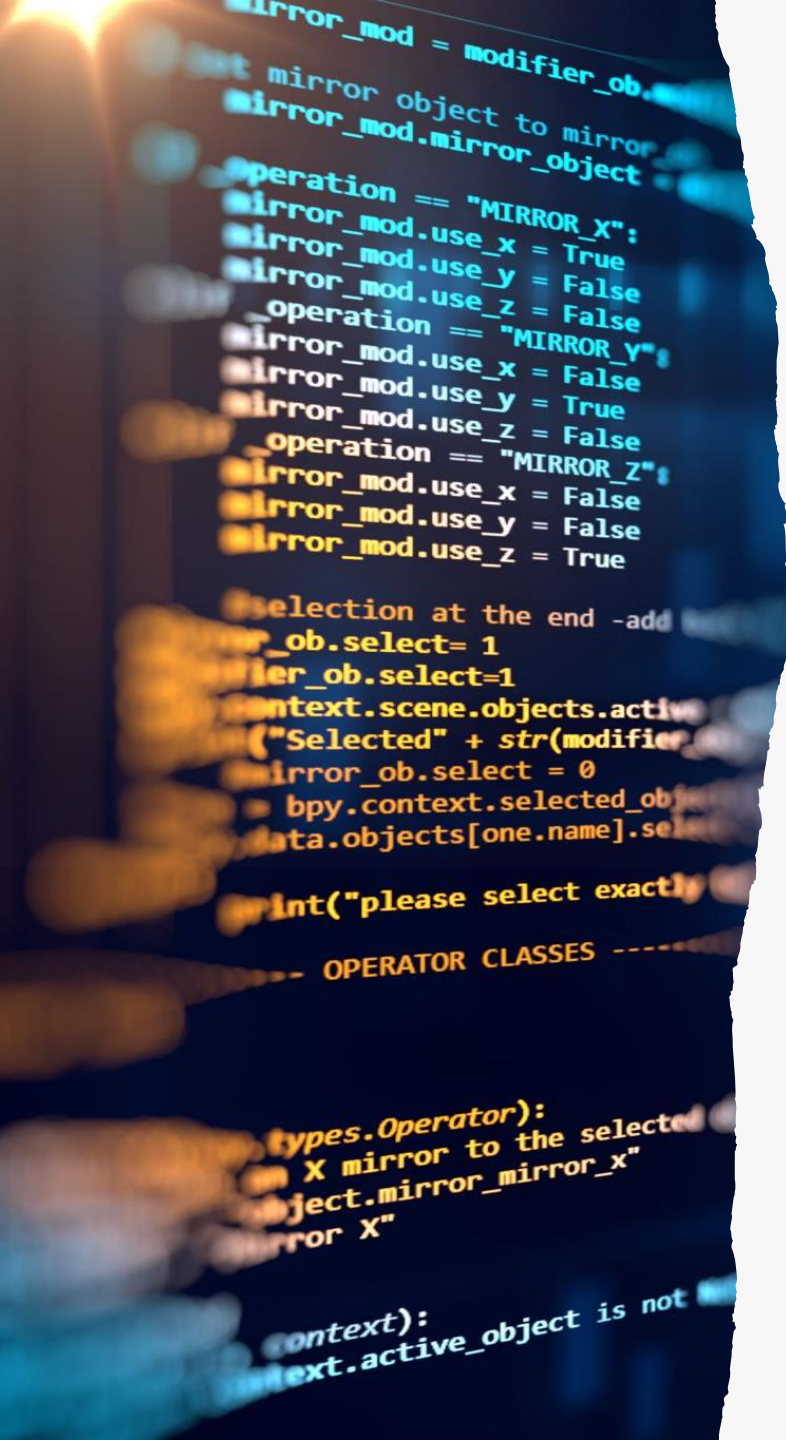
AWS
Google Cloud Platform
MS Azure
Alibaba

Supports Services

Cloudflare
Okta
Data Mechanics
Zoho
Geckoboard
Hotjar
Google suite
Zendesk

Developer Services

Jupyter Notebook
R, Python
Algorithmia



Expertise

Data engineers

Cloud experts of NSO

IT experts of NSO

AWS support

Data scientists

AIS experts

Flowminder

Positium

Open Mined

University of Tokyo

Bocconi University

University of Oslo

Statisticians

Statistics Canada

Statistics Netherlands

ONS, UK

BPS Indonesia

UN Statistics Division

ISTAT

Statistics South Africa

Statistics Poland

World Bank

Statistics Denmark

NBS China

FCSC UAE

NISR Rwanda

IBGE Brazil

Projects

Projects

Port activity
Maritime emissions
PET lab
ARIES for SEEA
Sen2Agri
SDG finance
Social responsibility

Technology stack

.STAT
Semantic web
AWS Cloud formation
Kubernetes

Statistical Domains

Transport / Trade
Prices, CPI
Tourism
Migration
Population dynamics
Information society
Displacement
Climate Change
Environment
Agriculture
SDG indicators
Privacy protection