Digital Earth
AFRICA

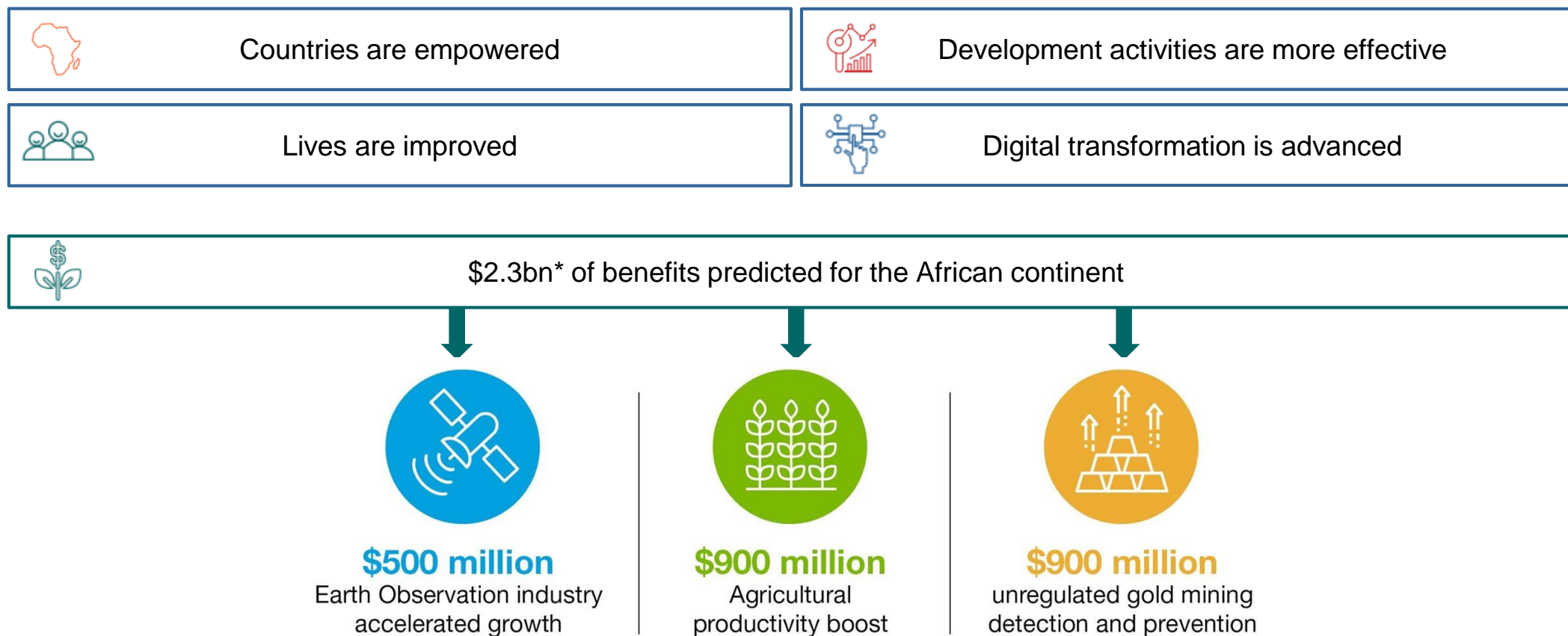# GEO Initiative
Digital Earth Africa

Presentation to the GEO PB

18/05/2021

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Key points

1. DE Africa's implementation plan is well established with several achievements under the belt in the last year and half of its operations

2. Currently transitioning cloud operations to Cape Town – expected to be completed by May 2021

3. Contract negotiations currently in progress to establish a Project Management Office (PMO) in Africa

4. Working on a sustainment plan including approaching potential investors/funders to maintain its operations beyond 2022

5. DE Africa is already making an impact by providing high quality ARD services to GEO community in Africa

The potential of ARD for Africa

Countries are empowered	Development activities are more effective
Lives are improved	Digital transformation is advanced

$2.3bn* of benefits predicted for the African continent

$500 million
Earth Observation industry
accelerated growth

$900 million
Agricultural
productivity boost

$900 million
unregulated gold mining
detection and prevention

Our network

Fatou Mar
OSS

Andre Nonguierma
UNECA

Amadou Sall
CSE

Omar Seidu
Ghana National Statistics
Service

Edward Boamah
Digital Earth Africa

Dr. Kenneth Mubea
Digital Earth Africa

David Ongo
RCMRD

DE Africa Staff

Sena Admiou
AFRIGIST
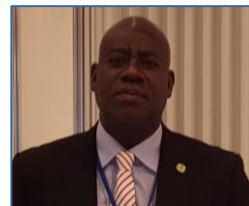
Bako Mamane
AGHRYMET

Philip Thigo
Thunderbird School of
Global Management

Stephen Chacha
dLabs, Tanzania

**Digital Earth Africa
Implementing Partners**

**Project Management Office
(PMO) – to be announced
soon**

Sandiso Sibisi
COOi Studios

Andiswa Mlisa
South Africa National Space Agency

Solofo Rakotondraompiana
University of Antananarivo

Digital Earth
AFRICA

Our partners

DE Africa Platforms
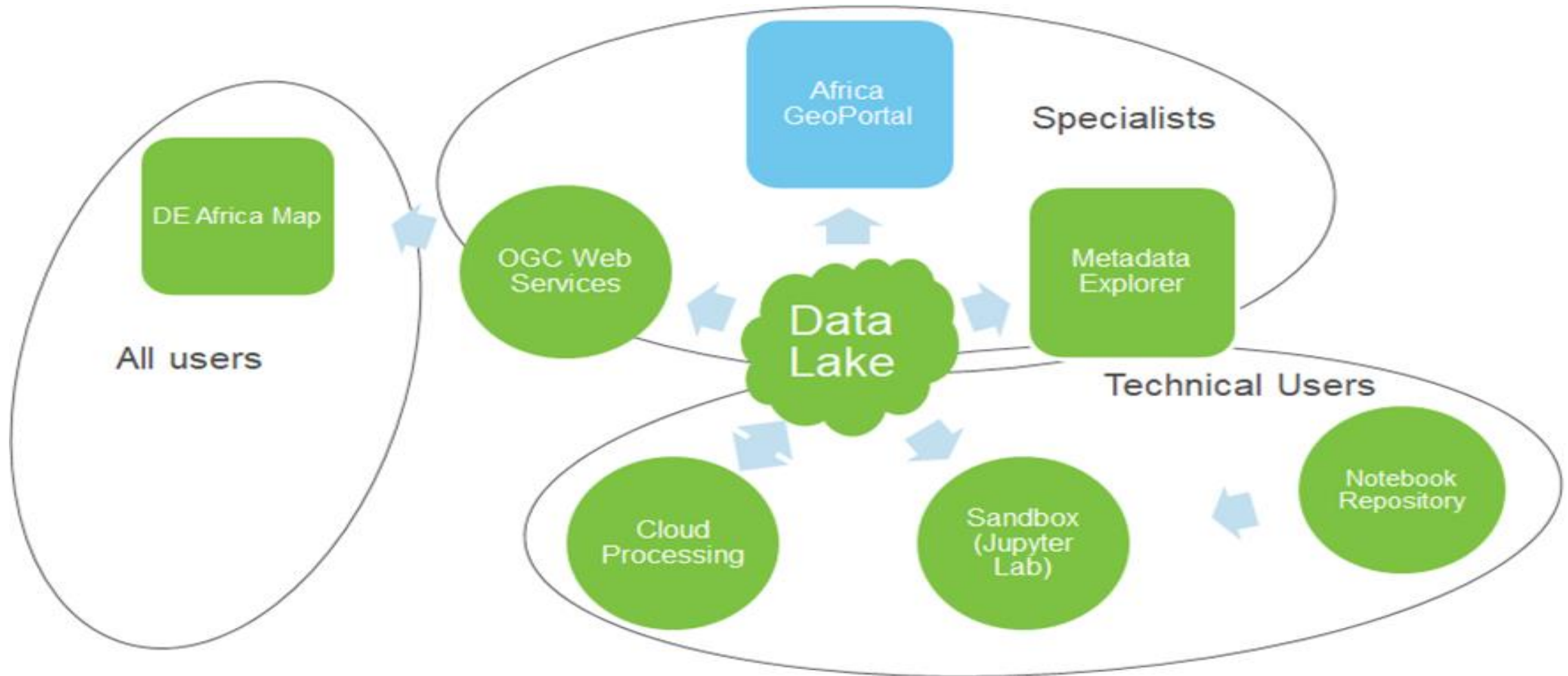
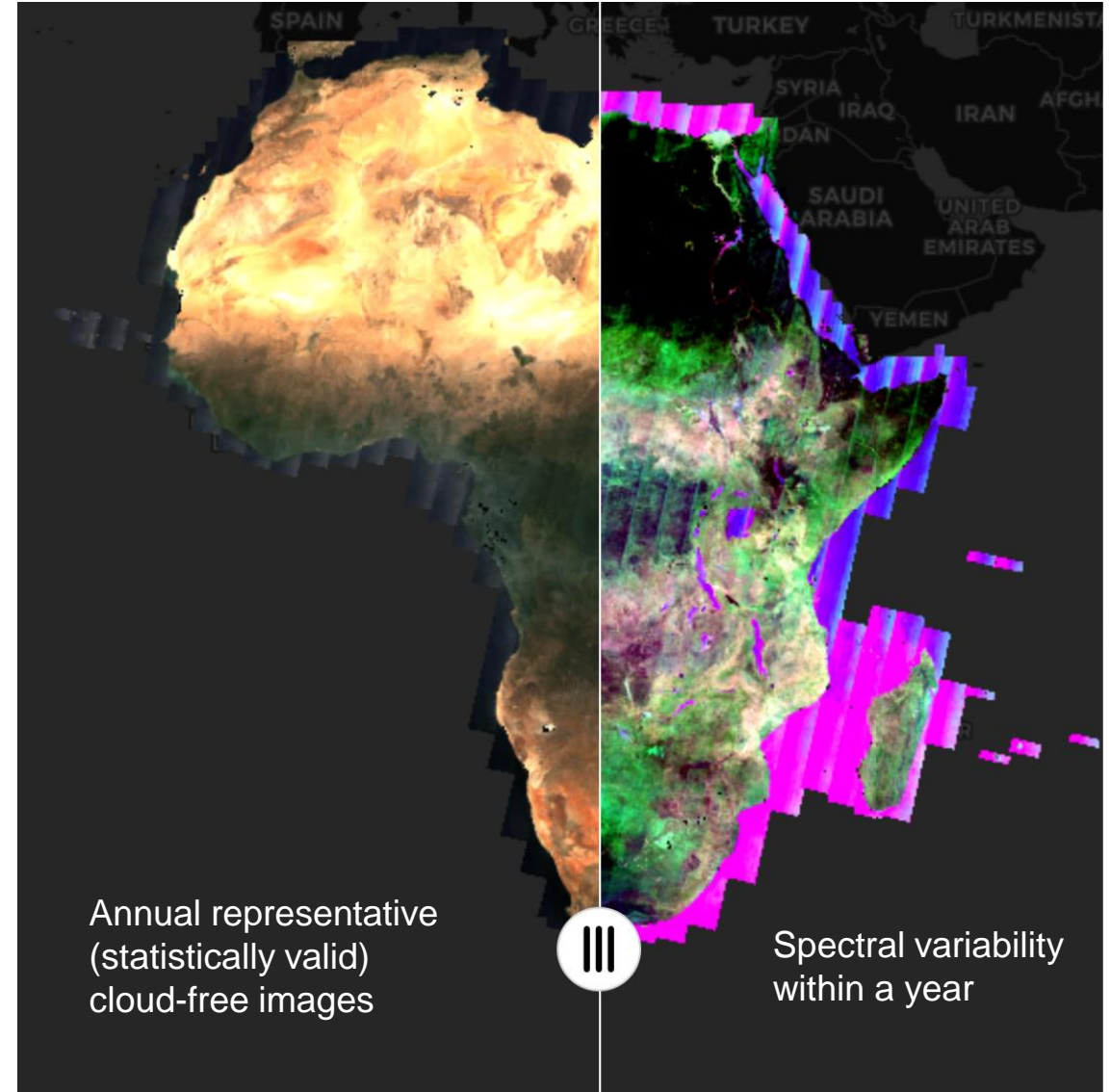# Sentinel-2 (10m) Annual GEOMAD

Digital Earth AFRICA

Just released!

Available through OGC Web Service and from the DE Africa Map

Provides cloud free composites for the entire continent, scientifically robust for information extraction

Saves significant amount of pre-processing time for end users

GEO Initiative - PB meeting, 18 May 2021

Annual representative (statistically valid) cloud-free images
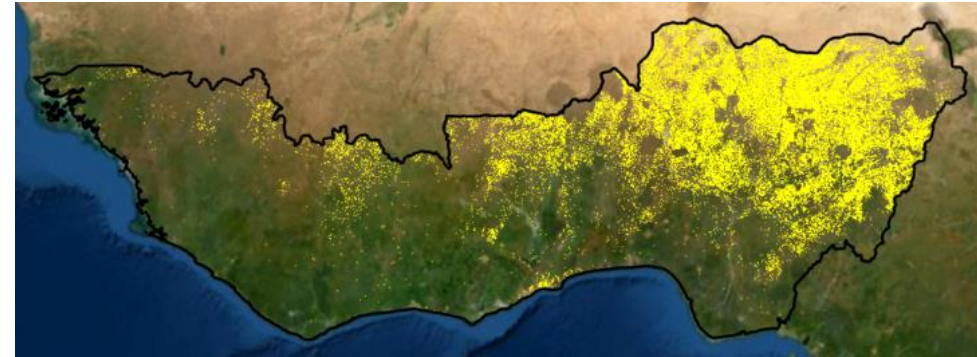
Spectral variability within a year
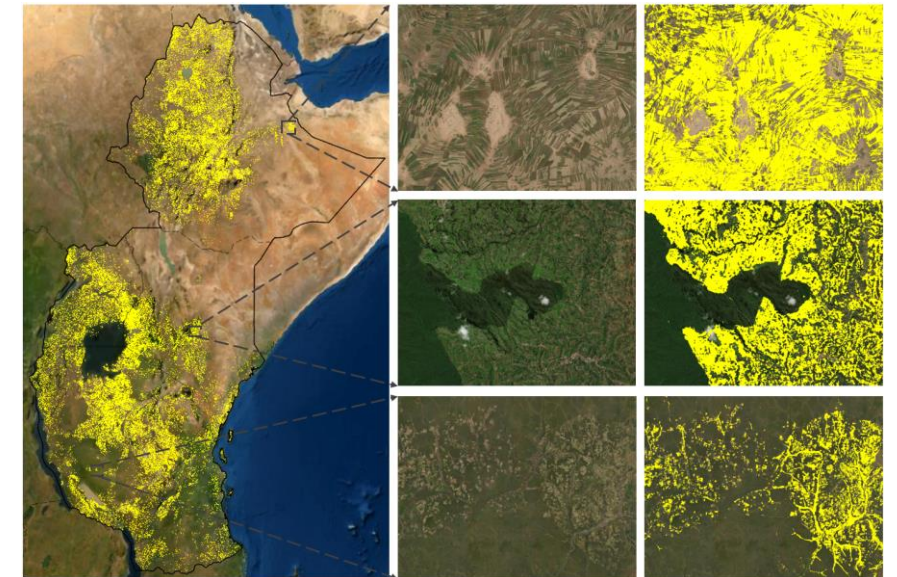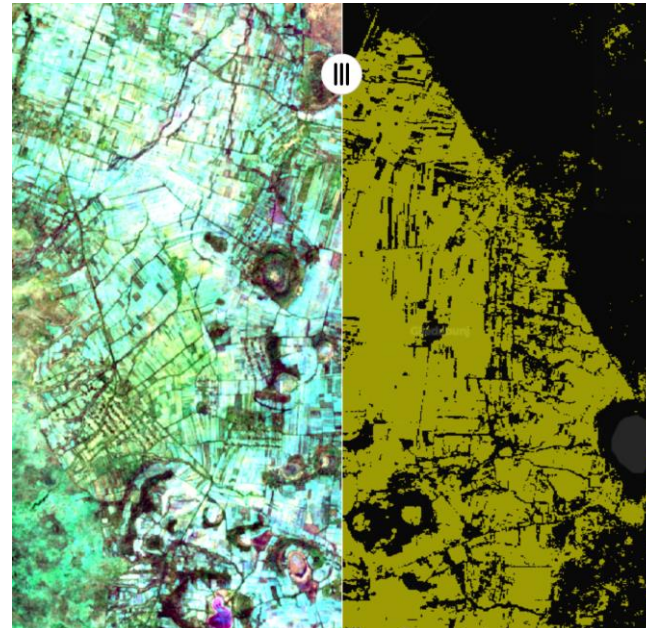
Crop Mask

Crop/non-crop map

Supervised classification using:

- Training data
- Semiannual GeoMAD
- Rainfall
- Slope

Under development for other regions.

GeoMAD | Crop mask

Western crop mask - first run

Eastern crop mask - prototype

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Water Observations from Space

Map surface water dynamics for the continent

- 30 m resolution
- (soon to be) 1980s to now
- validated across Africa

Summary for an area in Senegal from 2013 to 2019. Colours indicate the percentage of times water was detected (Red = rarely water, green = often water, blue = always water).
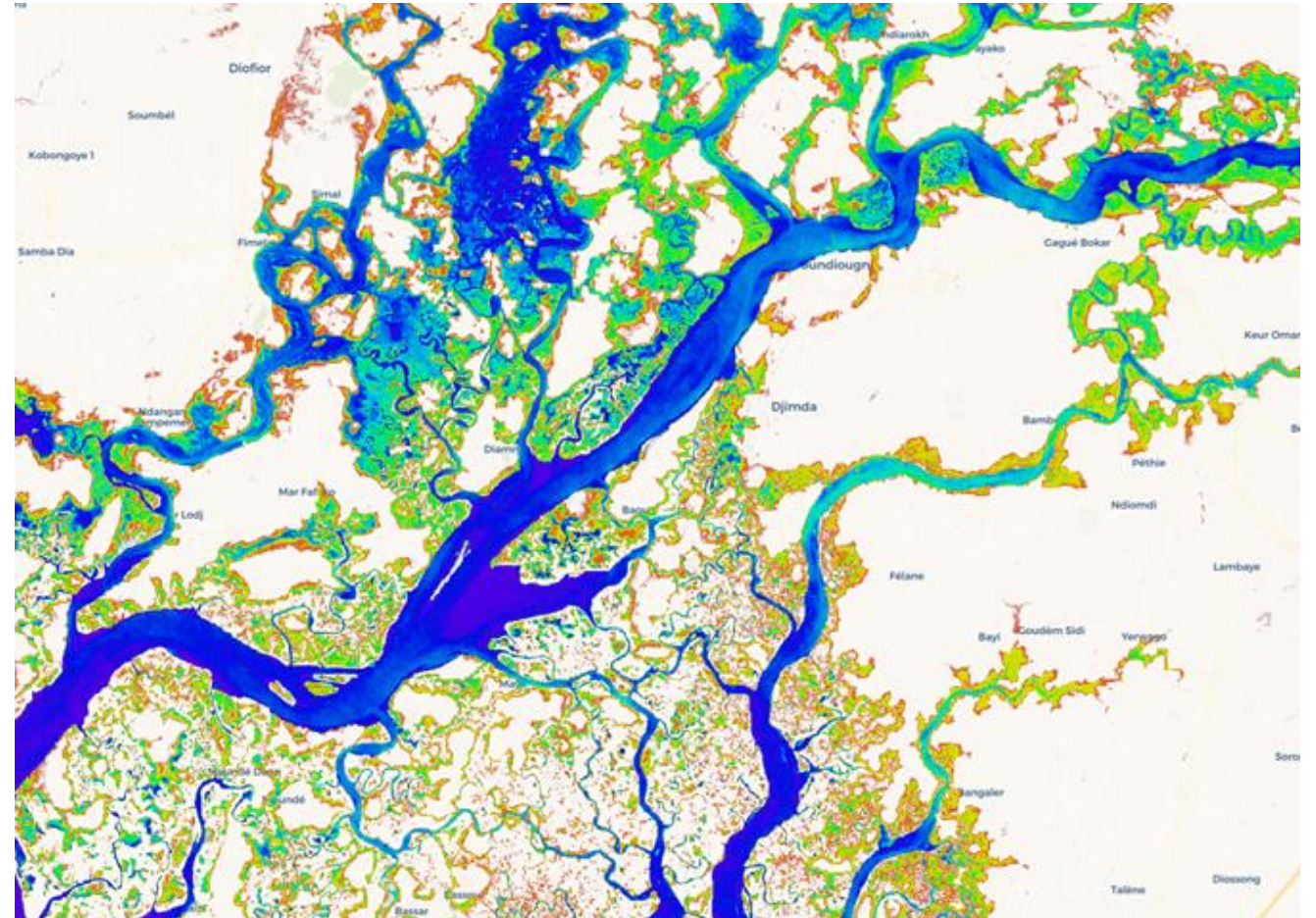
Growing user community

Popular weekly live sessions
> 15 people on average per session
max number 26 people
10+ countries represented. 31st
occurrence last week.

Online training success
114 awardees
↑**150%** since end Dec 2020
11 active trainees now

Our stakeholder community is growing
> 1400 stakeholders from over 50
countries
↑**40%** since end Dec 2020

Rapid increase in sandbox usage: 700 registered users ↑**130%** since end Dec 2020
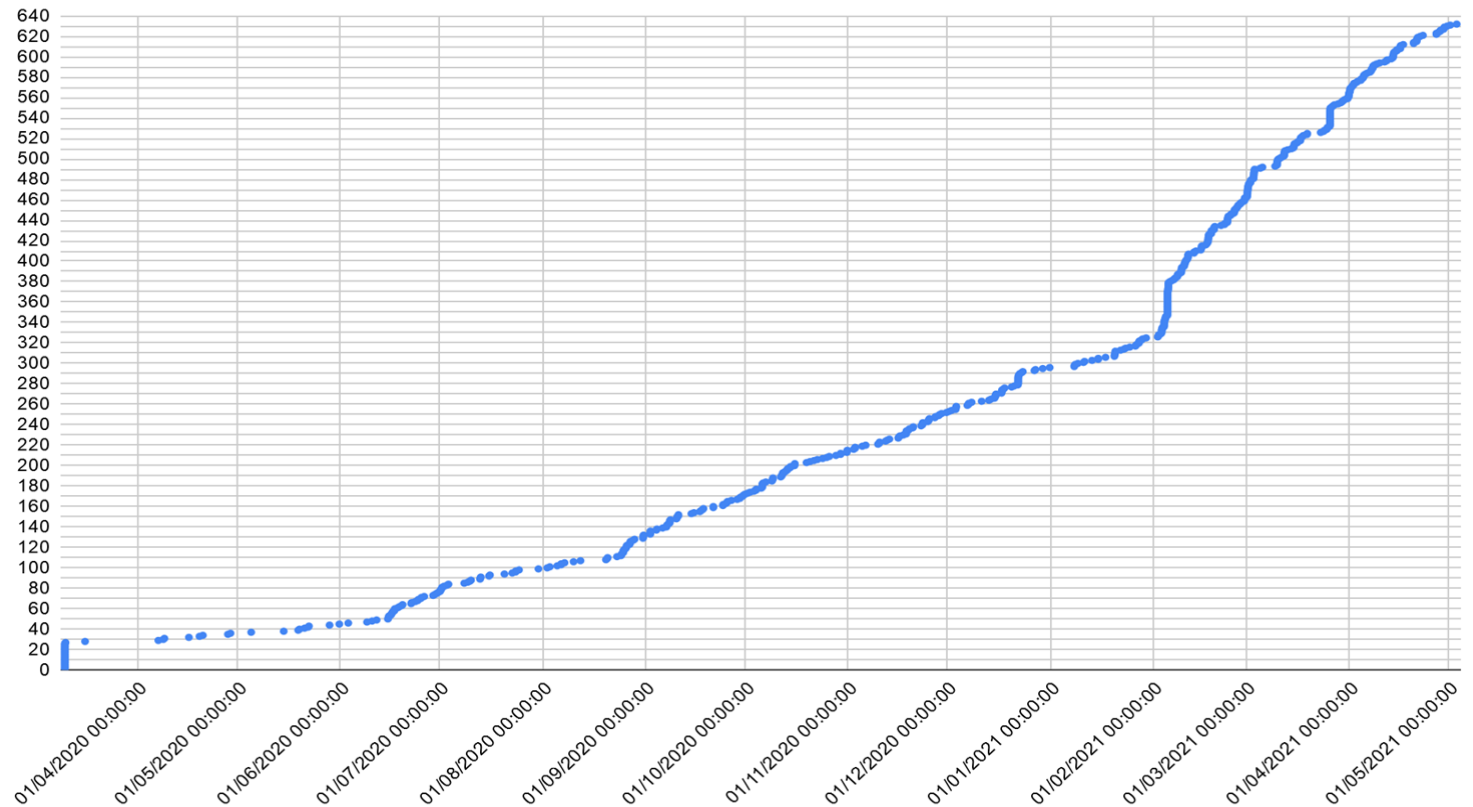
Our Operating Principles

Digital Earth AFRICA

Open and Free Data

- Interoperability
- Privacy and Integrity

Operational Service

- Continental-scale
- Sustainable
- Domain expertise

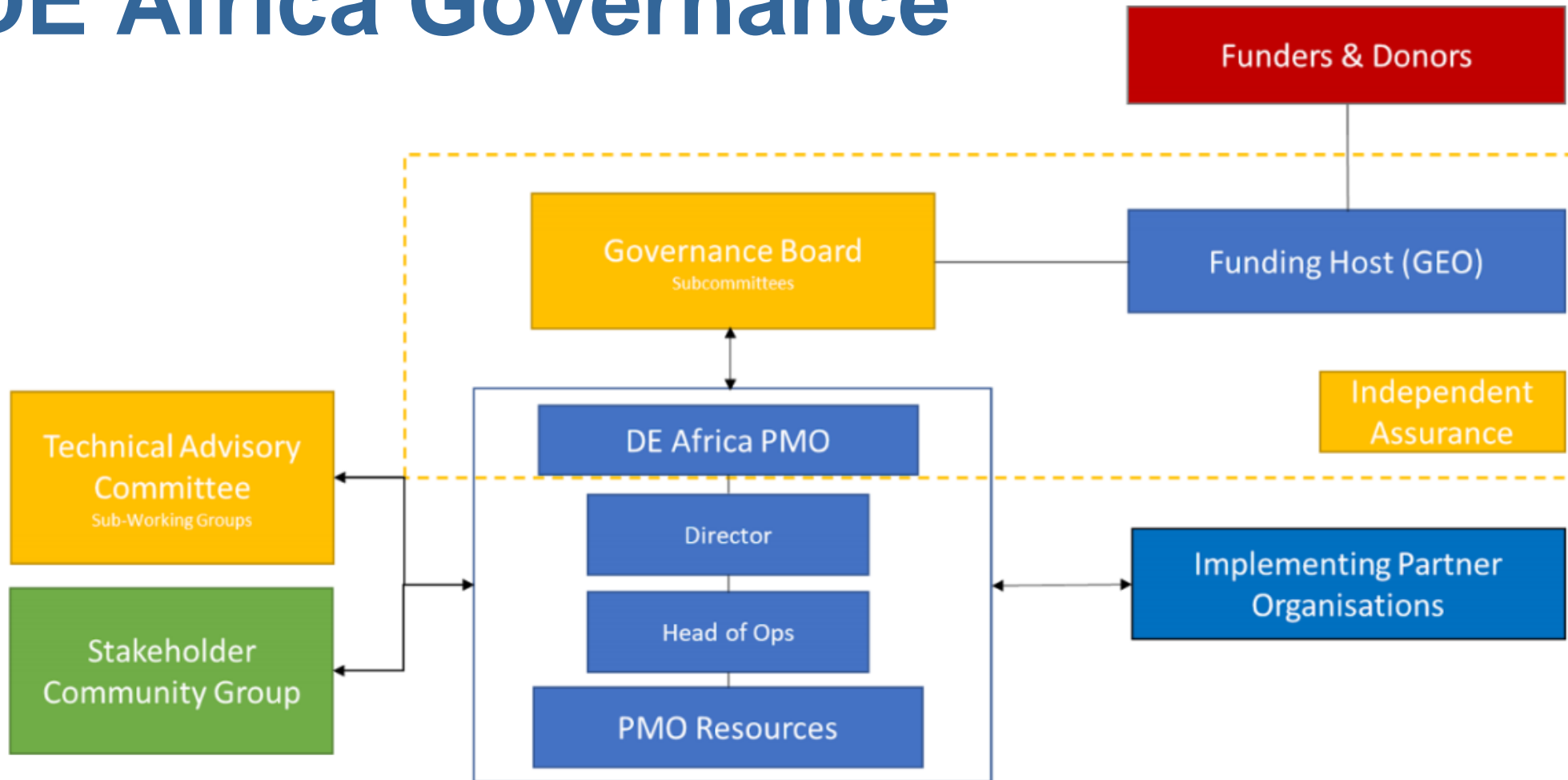**Accountability and transparency**

- Responsive to African priorities
- Agile, nimble and actions oriented

Diversity and inclusion

- Multi-sector perspectives
- Span data communities
- Foster collaboration

DE Africa Governance
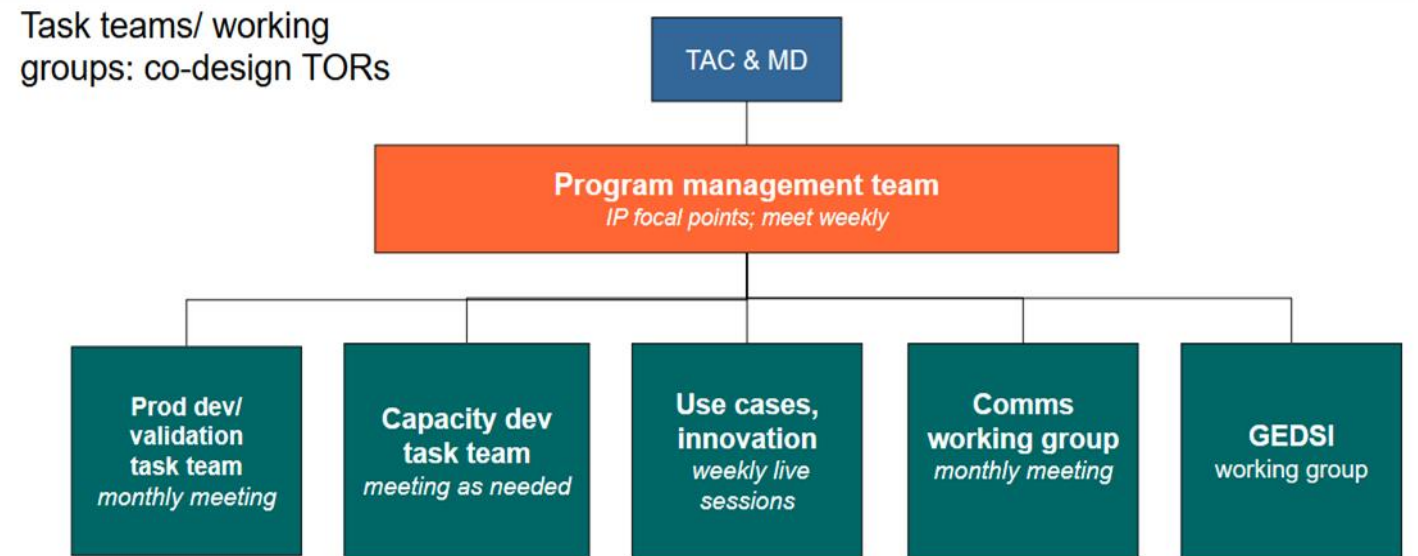
Program delivery through partnerships

Partnership agreements:

- AGRHYMET, Niger
- AFRIGIST, Nigeria
- CSE, Senegal
- OSS, Tunisia
- RCMRD, Kenya

MOUs

- Rwanda Space Agency
- UNECA

Future partners

Thank you for your attention!

Questions?