



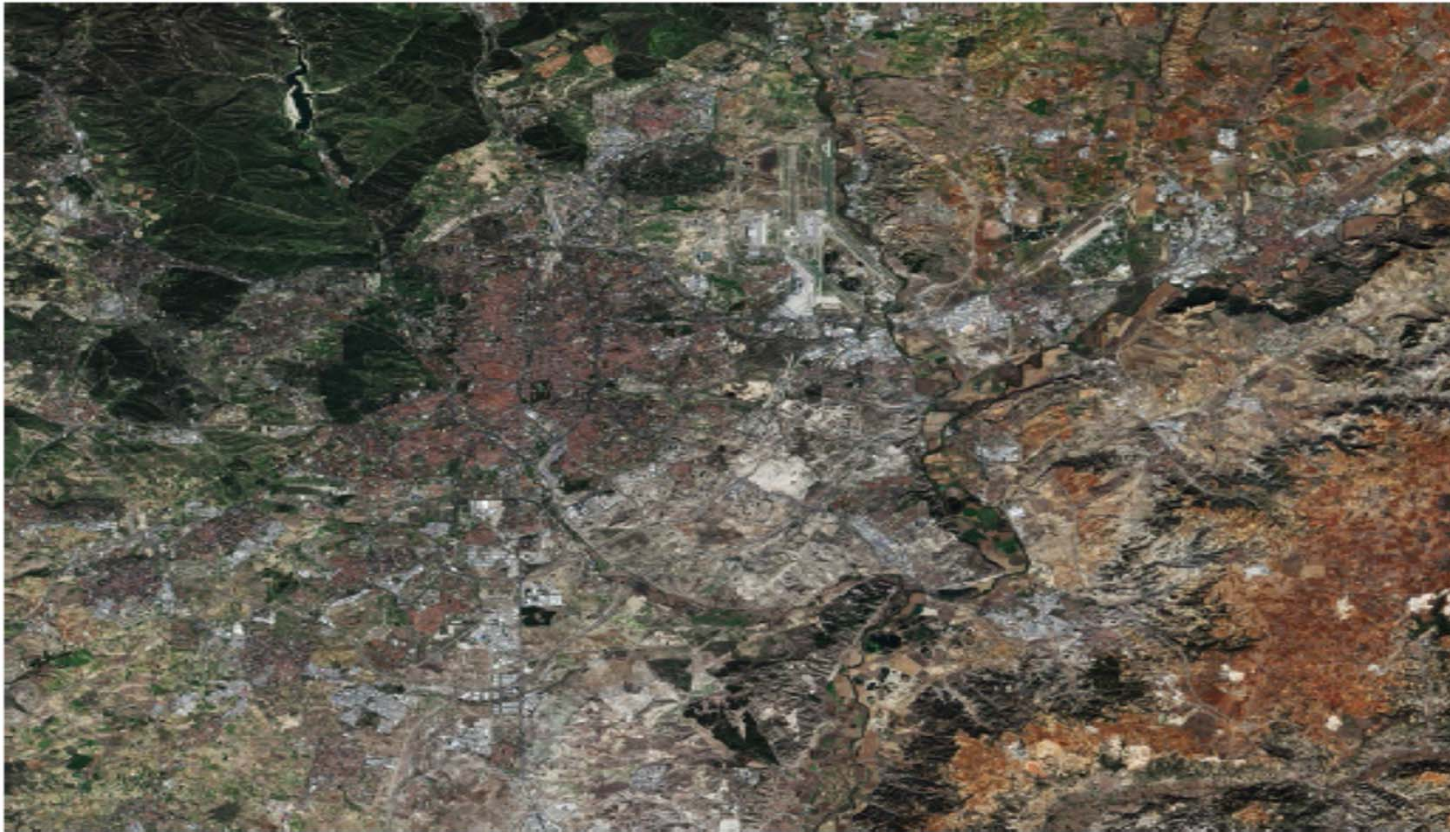
4TH INTERNATIONAL CONFERENCE ON

BIG DATA

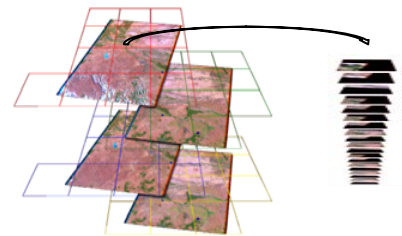
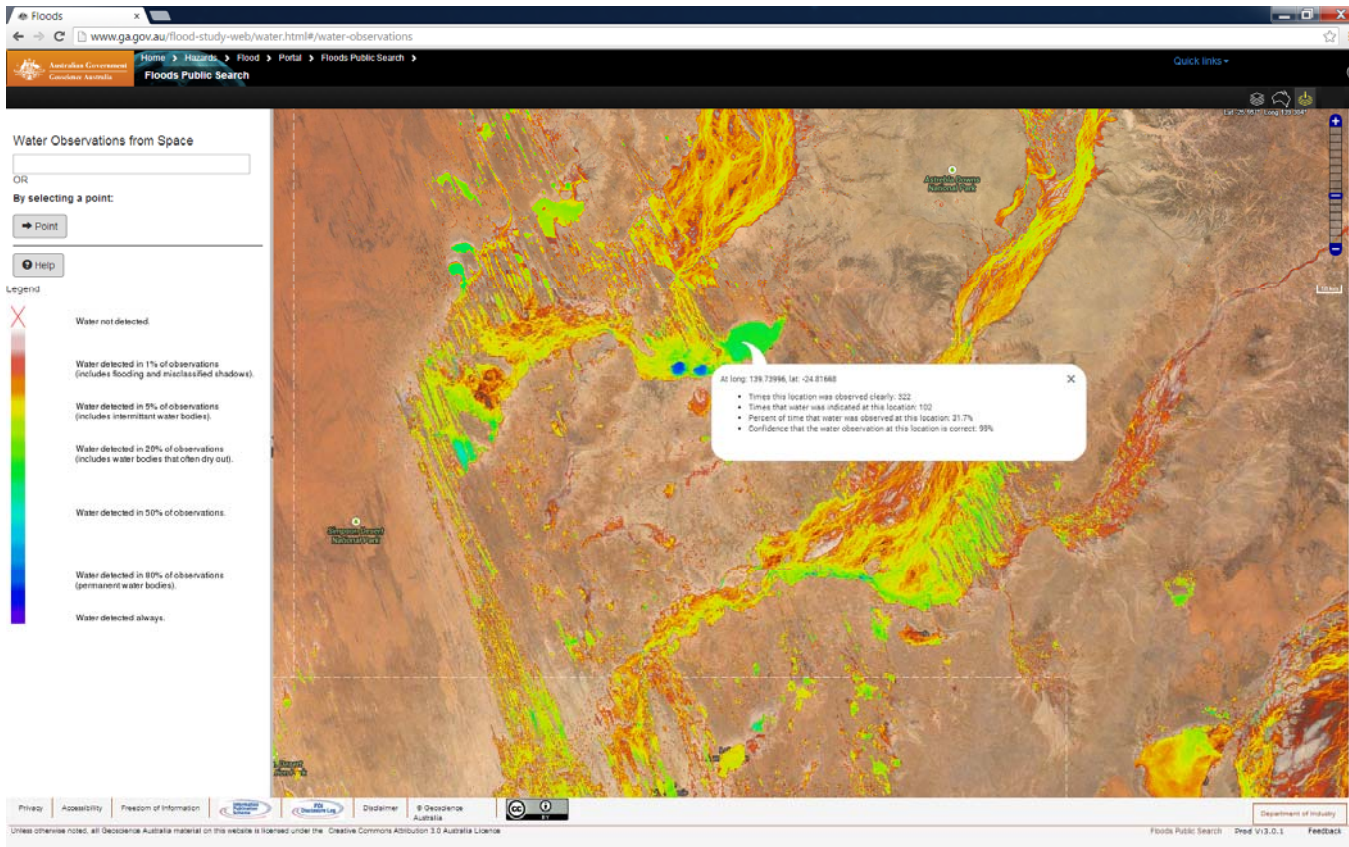
 *for Official Statistics*

8-10 NOVEMBER 2017
BOGOTA, COLOMBIA





Land cover over time. Copernicus sentinel data 2015, ESA

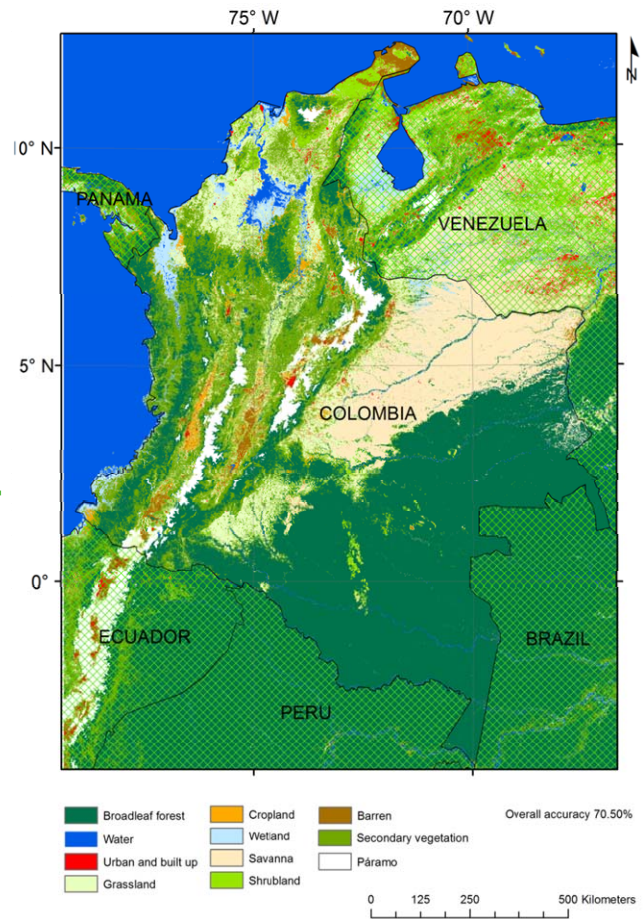


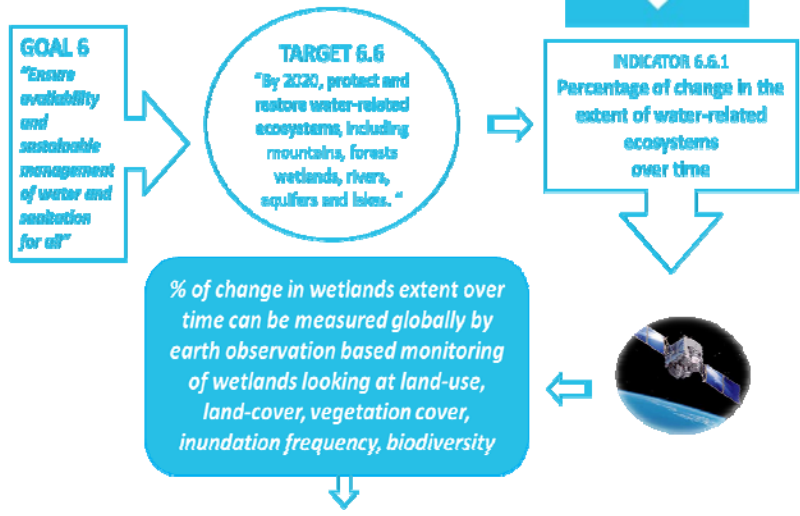
Water observations over Australia based on the Australian Geoscience Data Cube



Land cover map for Colombia using 2011 ± 2 years of MODIS NDVI and surface reflectance MOD13A1 data, filtered for low-quality observations and adding elevation (TS-F-C2-E)

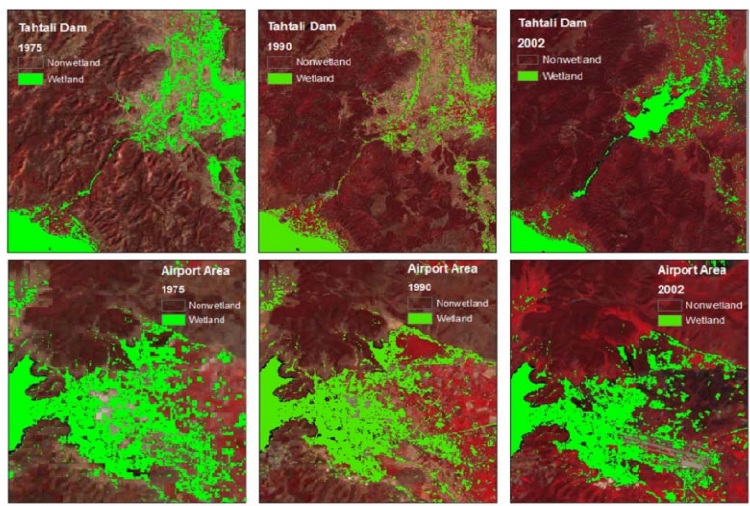
<http://www.mdpi.com/2072-4292/7/12/15833/htm>

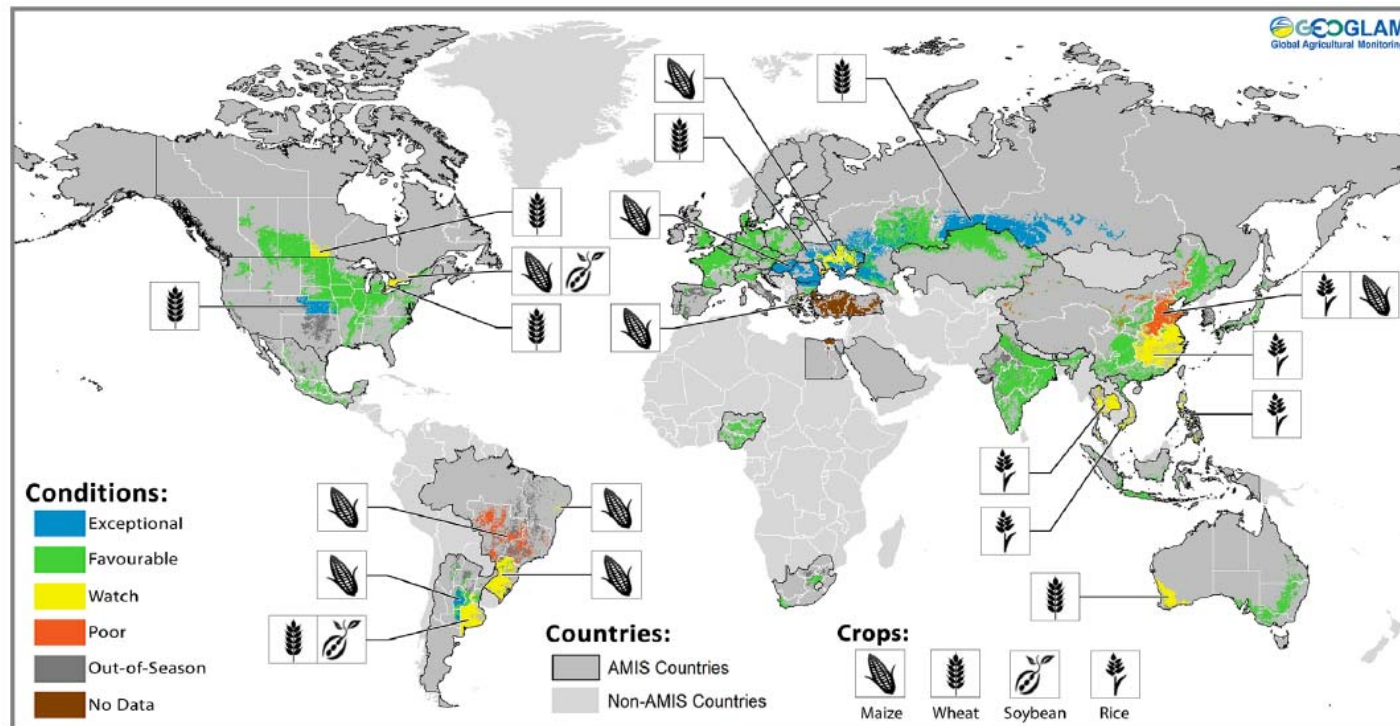




Multi-temporal Wetland Identification and Delineation products (Landsat 1975, 1990, and 2002) for exemplary sites between Izmir and Bodrum (upper part: region around Tahtali Dam; lower part: Bodrum airport area).

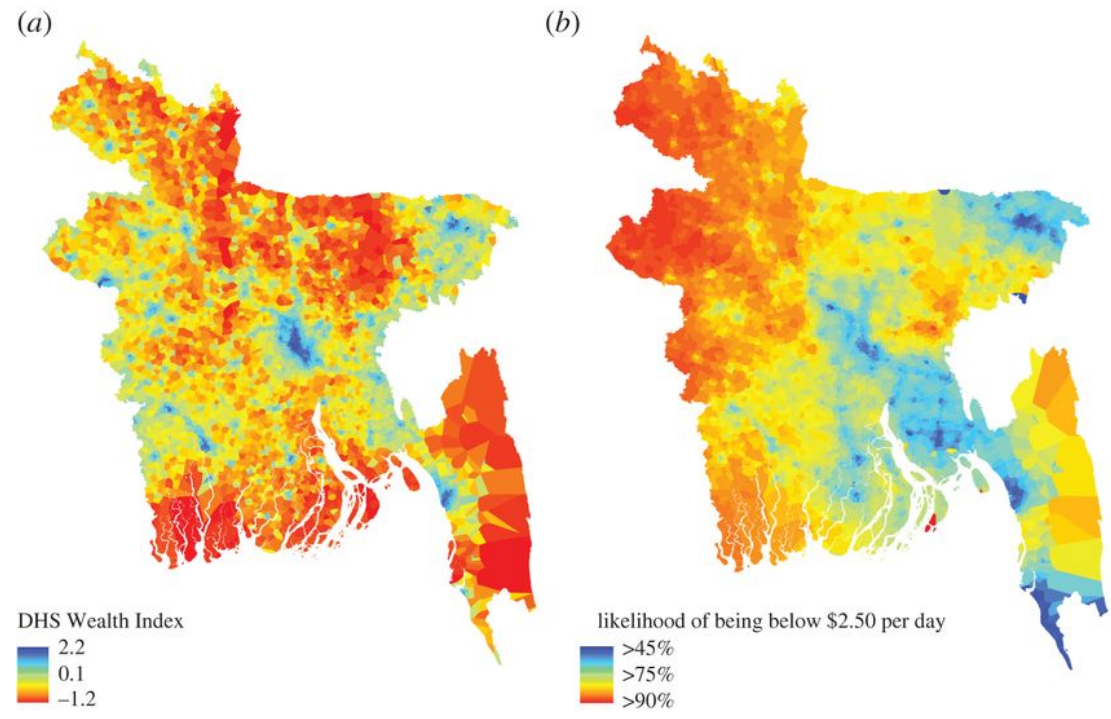
<http://www.earthzine.org/wp-content/uploads/2011/12/figure-3.jpg>





GeoGLAM Crop Monitoring.

EO in Service of the 2030 Agenda for Sustainable Development. Anderson *et al.* 2017



Combining EO and mobile phone data to obtain poverty estimates. Steele *et al.* 2017



Combining EO, Virtual Reality and drones



	Population distribution	Cities and infrastructure mapping	Elevation and topography	Land cover and use mapping	Oceanographic observations	Hydrological and water quality observations	Atmospheric and air quality monitoring	Biodiversity and ecosystem observations	Agricultural monitoring	Hazards, disasters and environmental impact monitoring
1 No poverty										
2 Zero hunger										
3 Good health and well-being										
4 Quality education										
5 Gender equality										
6 Clean water and sanitation										
7 Affordable and clean energy										
8 Decent work and economic growth										
9 Industry, innovation and infrastructure										
10 Reduced inequalities										
11 Sustainable cities and communities										
12 Responsible consumption and production										
13 Climate action										
14 Life below water										
15 Life on land										
16 Peace, justice and strong institutions										
17 Partnerships for the goals										



SDGs and EO data: satellite data used in a varied range of applications (GEO document)

UN Satellite Imagery and Geo-Spatial Task Team



Handbook

- Introduction to the use of earth observations data for official statistics
- Types of sources available
- Examples of using satellite imagery to measure the SDGs
- Methodologies for producing statistics from EO data
- Summaries of results of four pilot projects produced by the UN Task Team to investigate the feasibility of using satellite imagery data for official statistics
- Guidelines for National Statistical Offices when considering whether to implement EO data sources into their statistical production process

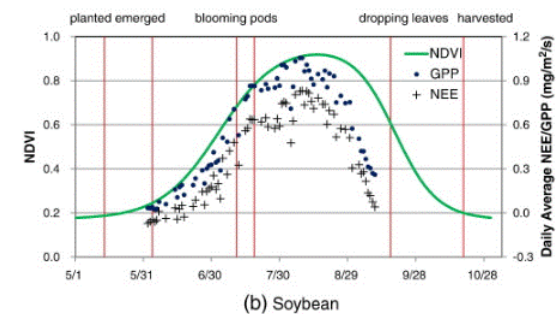
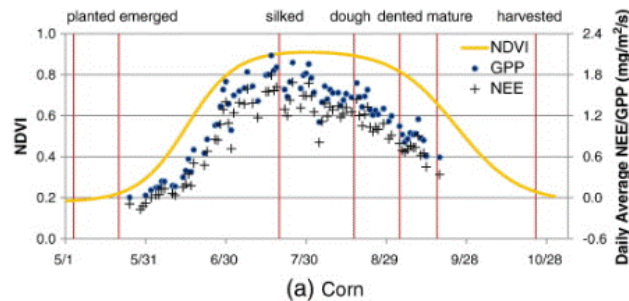


TT Handbook: Case Studies



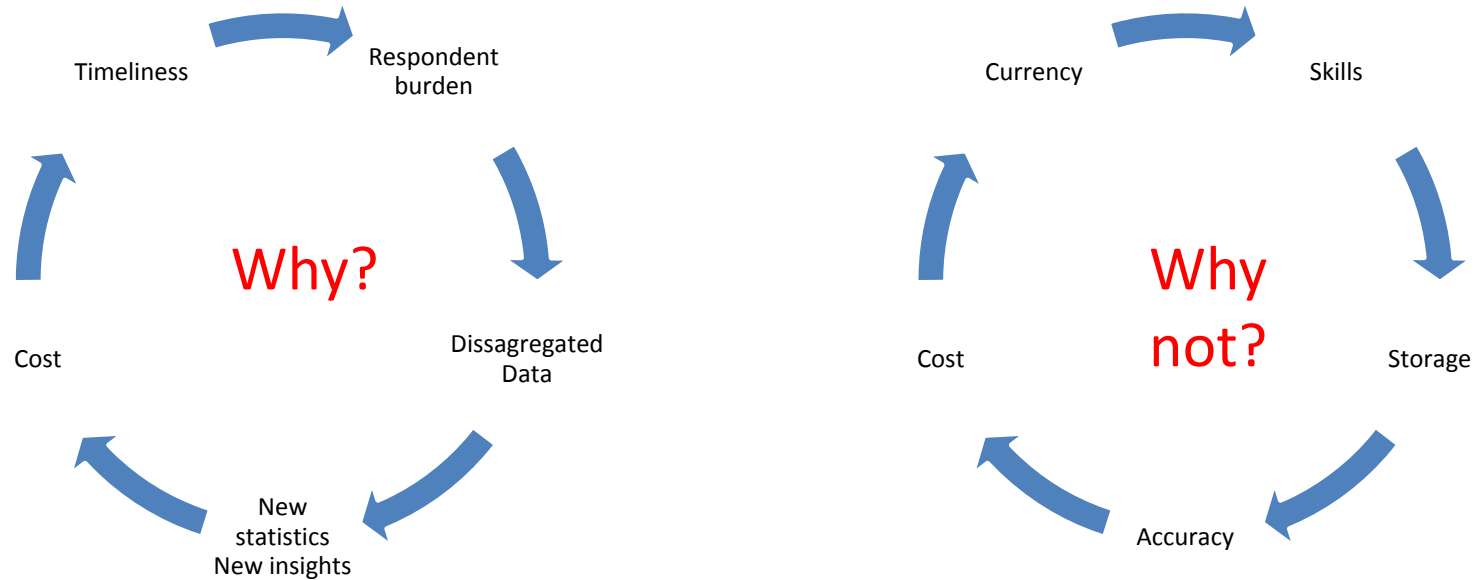
1. Identify reliable and accurate statistical methods for estimating quantities of interest;
2. Suggest approaches for collecting representative training and validation data of sufficient quality;
3. Research, develop and implement assessment methods for the proposed models including measures of accuracy and goodness of fit;
4. Establish strategies to reuse and adapt algorithms across topics and to build implementations for large volumes of data.

- Australia
- Colombia
- Canada
- USA
- South Korea
- Others



Gao et al. 2017

Value Proposition for Official Statistics



Addressing the “why not”



Takeup

THE GLOBAL GOALS For Sustainable Development



Collaboration

Training

Trust

Academic & Research Community Support



Takeup

- How-to
- Innovation

Training

- Capability
- Students

THE GLOBAL GOALS For Sustainable Development



Collaboration

- Networks
- Secondments

Trust

- Credibility
- Review

International Research Engagements



**Australian Research Council Centre of Excellence
Mathematical & Statistical Frontiers:
Big Data, Big Models, New Insights**

Advisory Committee

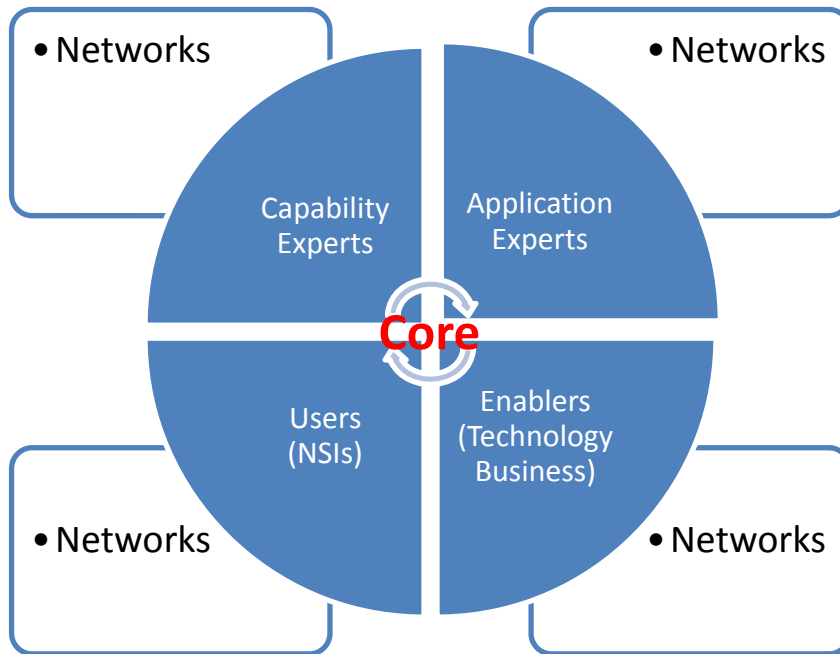


Applications

Capabilities

	EO	Phone	Scanner	Other
Providers				
Processors				
Analysts				
Users				

Advisory Committee



THE GLOBAL GOALS For Sustainable Development



THE UNITED NATIONS GLOBAL
WORKING GROUP ON BIG DATA



#UNBIGDATA2017

