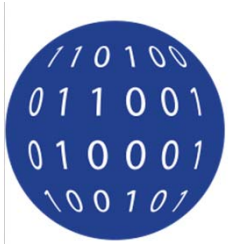

European Commission
Copernicus DIAS
Overview of Data and Information Access Services
Stefano La Terra Bella
European Commission – Space Data for Societal Challenges & Growth
Copernicus Training and Information Session in Paphos, 27 March 2018
Copernicus
Europe's eyes on Earth
Space
Copernicus EU
Copernicus EU
Copernicus EU
www.copernicus.eu

Data Access

WHY DIAS?

COPERNICUS IS THE 3° BIGGEST DATA PROVIDER WORLDWIDE

- **Massive amounts of data**
- **Full, open and free-of-charge**



Over 10 Petabyte/year of new data
with just Sentinels-1, -2 and -3 fully operational (data are downloaded **many times over)**

- Different types of **dissemination** infrastructures
- Member States Collaborative GS
- **New technology** developments
- ICT and EO **cross-fertilisation**
- **Interoperability** with non-EO datasets
- Public programmes as enablers
- Growth and jobs in **downstream** sector

Copernicus Europe's eyes on Earth | European Commission

Data Access

NEW COPERNICUS DATA APPROACH

Dual approach:

1. Strong **Copernicus Distribution Services**
   - Data available for download only → 10 access points
2. Set up several **Data Access and Information Services (DIAS)**

Data Access

WHAT IS ALL ABOUT?

DIAS platforms will provide:

- Easier Access to all Copernicus data and information
- Cloud computing and online processing resources
- Tools and other relevant data
- Allowing Big Data analytics without the need to download the data
- Allowing data fusion with non-EO data and information

DIAS are expected to:

- Boost user uptake
- Stimulate innovation
- Promote the creation of new business models based on EO data & Information

Data Access

WHAT ARE THE MAIN GOALS?

- Give easy, user-friendly access to unprecedented amount of EO data
- Mutualising the costs of common parts of infrastructure
- **Creating an Open environment – non-discriminatory**
- Serving better all types of users, attract additional data and promote interaction between communities (PA, Research, EO/non-EO industry)
- Enabling businesses by lowering barriers and costs to set up EO business
- Building ecosystem of service providers and users facilitating activities by 3rd parties
- Create competition to stimulate innovation and offer choice

Data Access

THE ROADMAP TO DIAS

- 2015/2016 - Discussions at both EC and ESA (Copernicus Committee, IGS Task Force, PB-EO)
- EU Space Strategy Communication and ESA Ministerial Council
- Agreement on common approach by EC, ESA, EUMETSAT and MSs
- Consultation with industry (e.g. Value Chain Workshop in April 2016, Brussels; Workshop on EO exploitation Platforms October 2016, ESRIN)
- December 2016 – Finalisation of functional Requirements
- December 2017 – Signature of ESA DIAS Contracts with service providers
- June 2018 – DIAS Initial Services

Data Access

General requirements for DIAS

- Access to Copernicus data and information virtually collocated with cloud computing resources
- Operational in terms of reliability, robustness, performance
- Complement traditional distribution system
- Promote projects evolution from research to business without changing exploitation environment

Data Access

DIAS services requirements

- Provide Non-discriminatory access and use
- Include processing services, viewing, discovery & download
- Foresee Data fusion (Copernicus data with non-EO data)
- Allow exploitation of big data analytics tools (intelligence rather than bandwidth)
- Provide interoperability features (Data/Services)

Data Access

Data Offer requirements for DIAS

- Provide free, full and open access to the Copernicus data and information
- Ensure accessibility to all data, including Sentinels + Services information
- Provide a significant data offer (Copernicus + third party)

Data Access

DIAS requirements to enable Third party use

- Offer storage and processing under commercial conditions
- Providers/third party may offer additional data, tools and services
- Ensure protection of data and IPR
- Provide development environment solutions for applications building (chaining of services/software/API/etc)
- Allow third parties to offer their front office services on top of DIAS back office
- Trusting third parties to propose innovative services to non-expert users

Data Access

DIAS: several users profiles

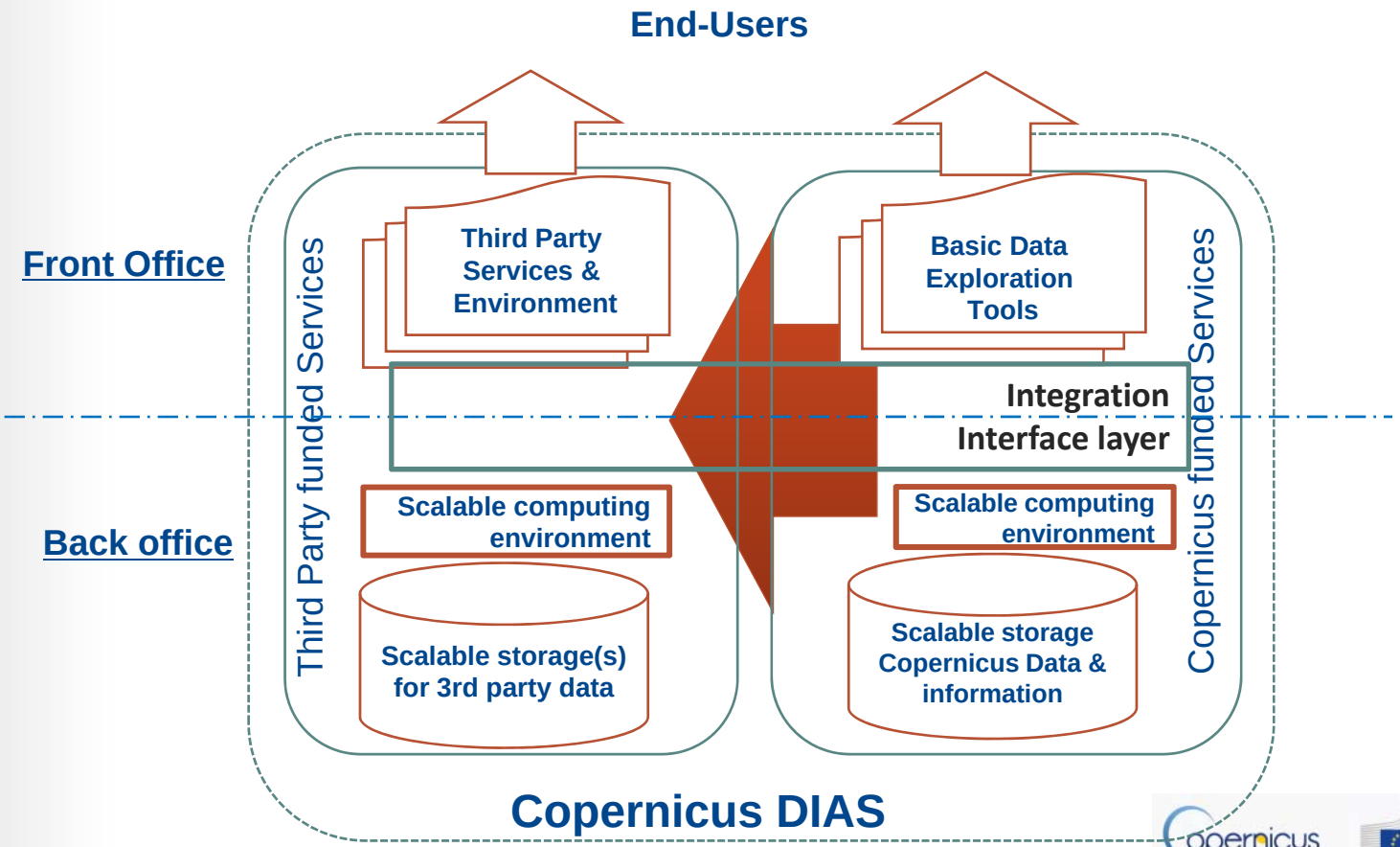
DIAS provider: Ensure availability of Sentinels data and Services information to accommodate third party services and data. Responsible for the provision of the DIAS underlying IT infrastructure and provider of IT resources to third parties.

Third-parties: Service providers who autonomously negotiate with DIAS provider(s) for infrastructure and services to be deployed in terms of storage, processing or service support for their own developments and operations.

End user: Any user accessing a front-office service supported by the DIAS framework.

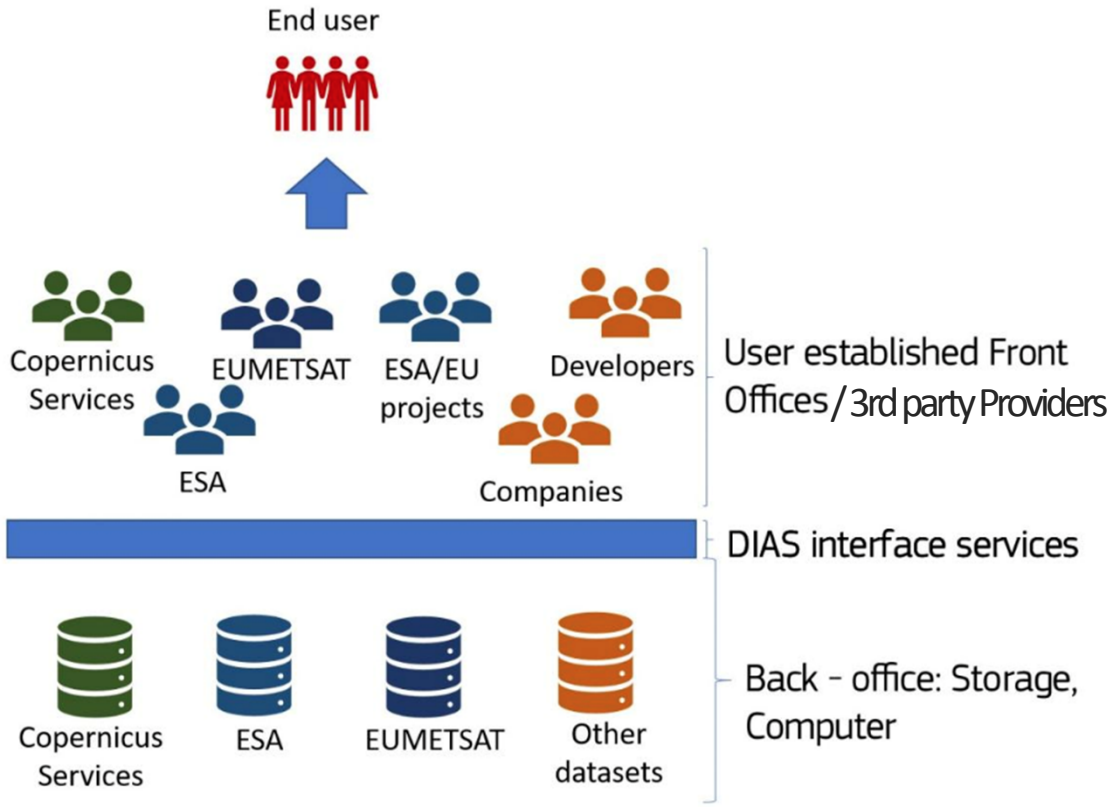
DIAS Concept 1/2

Data Access



Data Access

DIAS Concept 2/2



Data Access

DIAS: different approaches and implementation

Several DIAS provided to the user in a first time to enhance the competition:

- **ESA (outsourcing)**
  - 4 contracts signed on 14 December 2017
  - 6 months phase-in → Start of Operations late June 2018
  - 6 months ramp-up phase → July - December 2018

- **EUMETSAT (partnership)**
  - Deployment Readiness Review took place in January 2018
  - Start of opertations of V0 by late June 2018
  - V1 release in early 2019

DIAS Launch event on 21 June 2018 + demo from service providers

Data Access

Outsourcing of 4 different industrial services (4 tenders selected):

- **DIAS Data Offer:**
  - Mandatory data collections (Sentinels and Copernicus Services Data and Information)
  - Any complementary data foreseen to be available through DIAS on Tenderer's initiative at any moment of the contract
- **DIAS Commercial Offer:**
  - Clear cost scheme and conditions for the access to DIAS ICT resources (as for any cloud provider: storage, bandwidth, etc.)
  - Service Level Agreement proposed to DIAS users
- **Calendar**:
  - 2017: Phase-in
  - From June 2018 : Services operations
  - All Copernicus data and information available after 1 year from phase in

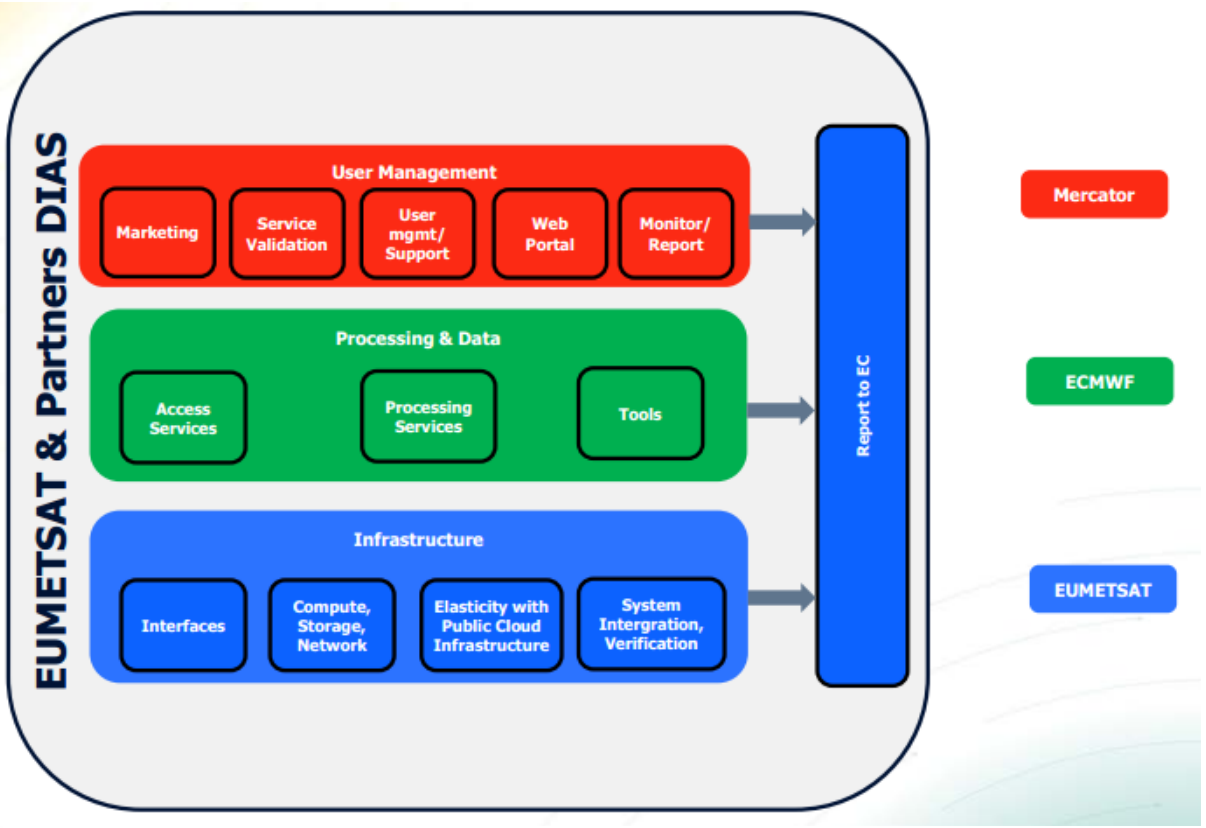
Data Access

The 4 ESA consortia

SERCO + OVH - CREOTECH + CLOUDFERRO - ATOS INTEGRATION + T-SYSTEM - AIRBUS DS + ORANGE

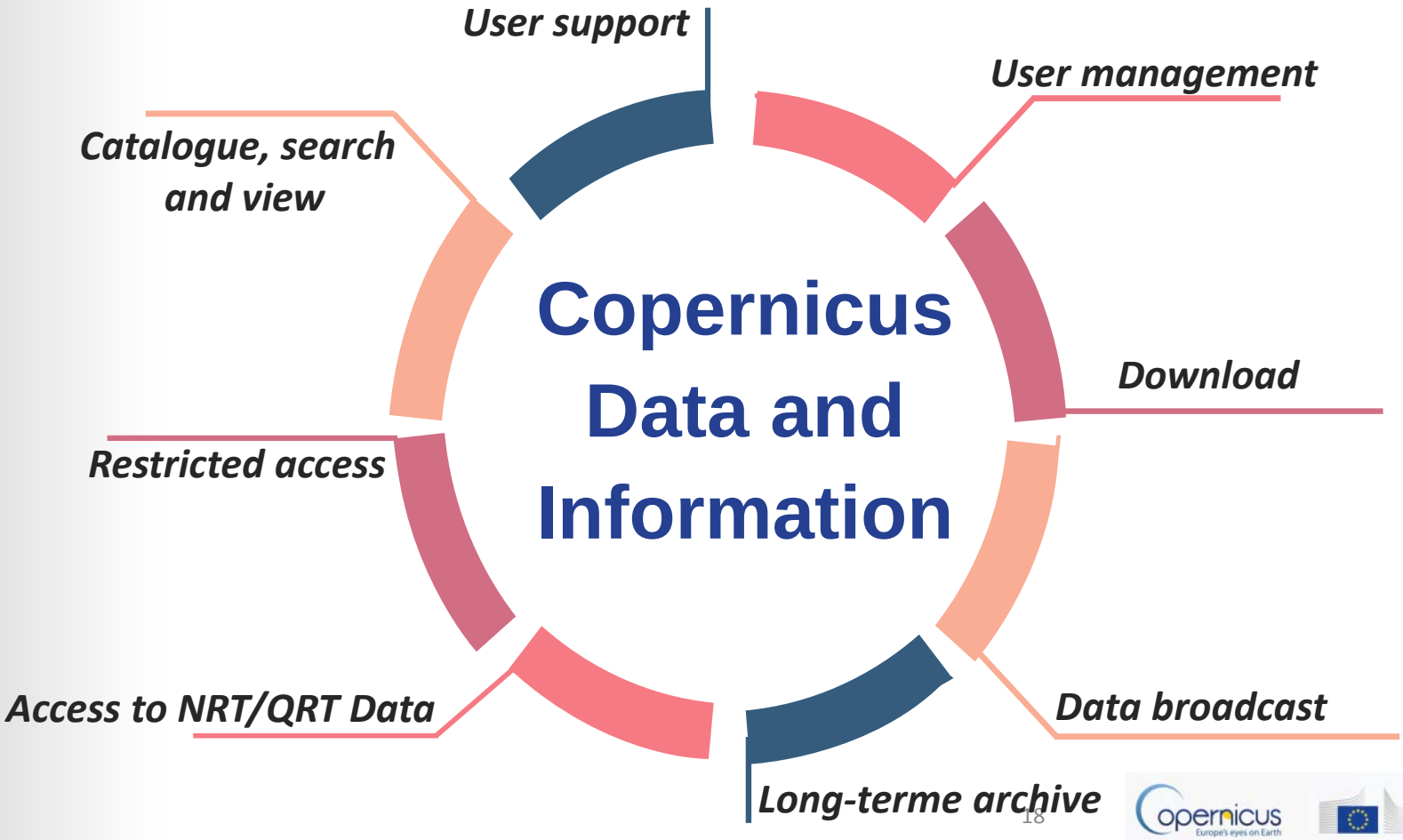
Data Access

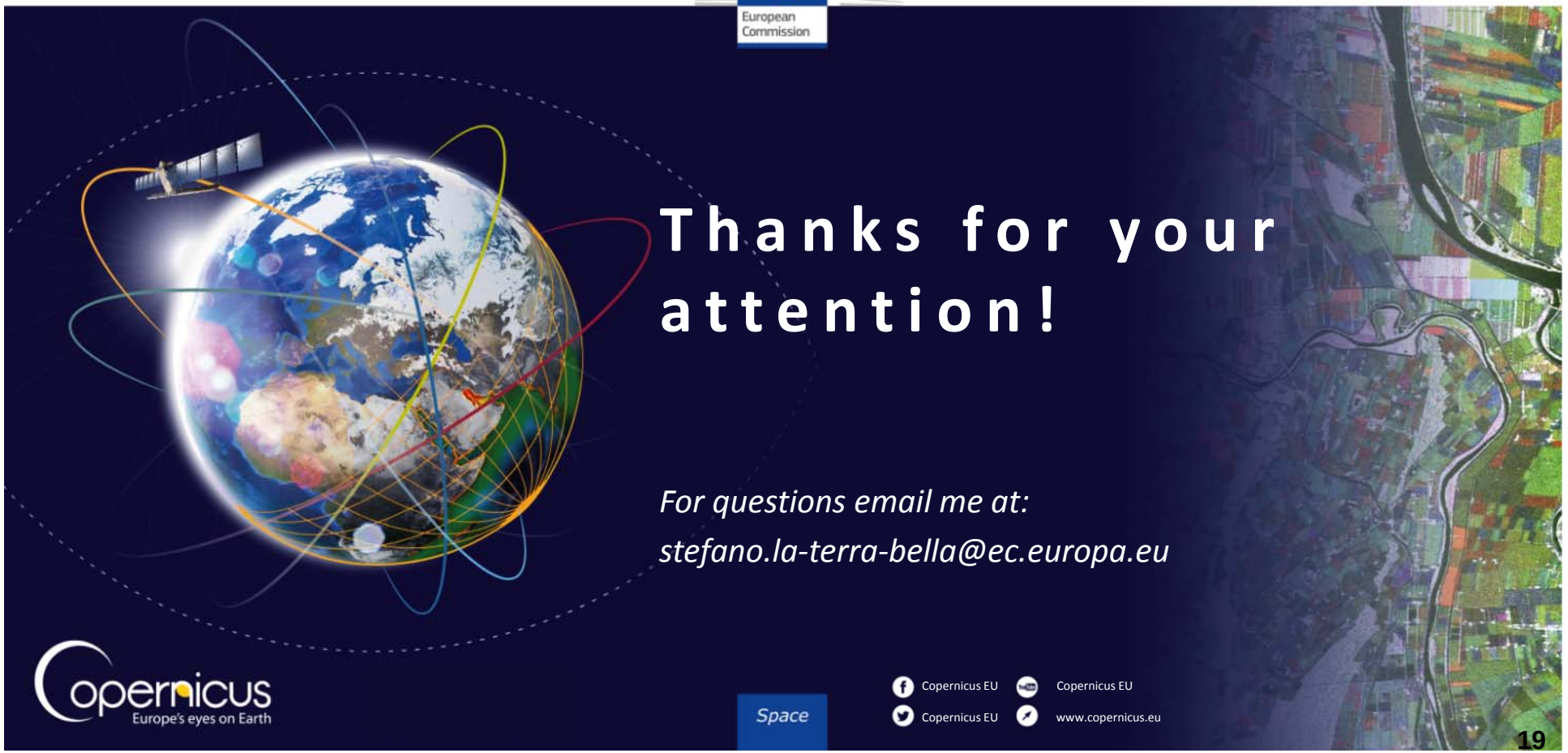
The EUMETSAT Approach



DIAS high level functionalities

Data Access




European Commission
Thanks for your attention!
For questions email me at:
stefano.la-terra-bella@ec.europa.eu
Copernicus
Europe's eyes on Earth
Space
Copernicus EU
Copernicus EU
Copernicus EU
www.copernicus.eu