Use of McIDAS at EUMETSAT Data Centre

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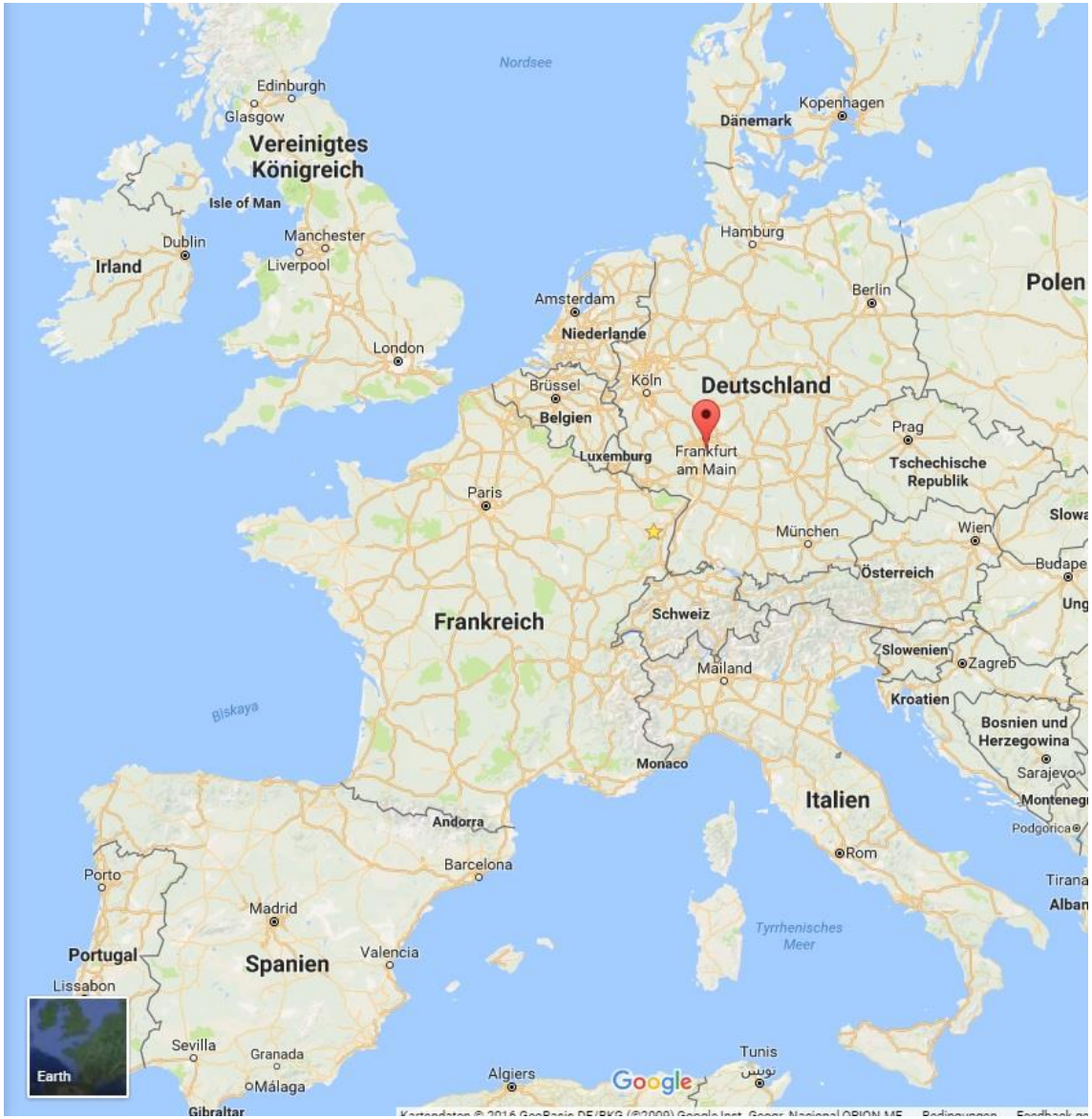
Presentation Overview

- What is the EUMETSAT Data Centre
- EUMETSAT Data Access Services
- McIDAS and the Data Centre
- Future Developments
- Questions

EUMETSAT Data Centre; Location



Data Centre – Overview

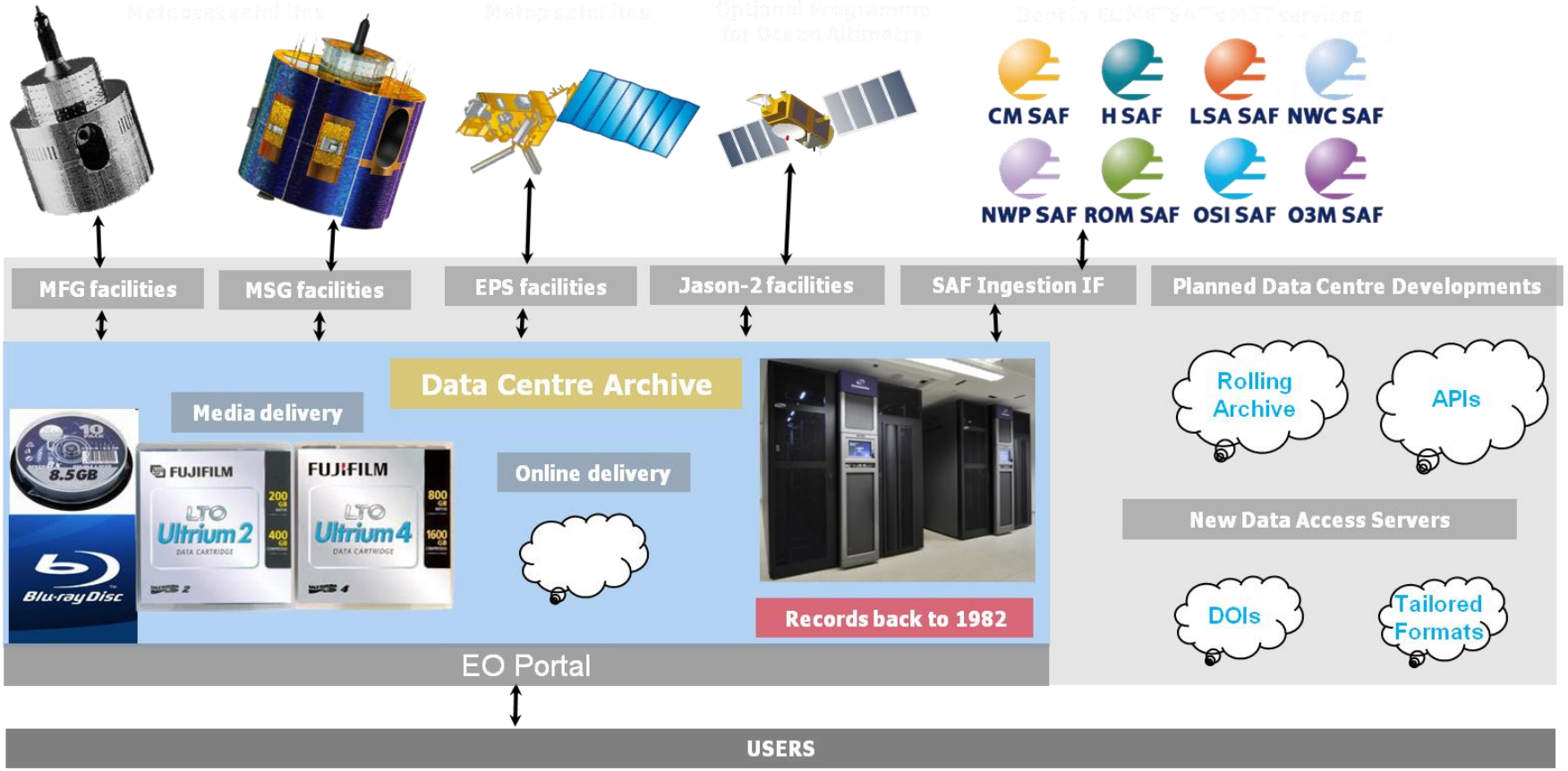
The EUMETSAT Data Centre consists of an Archive and Data Access Services:

- The Data Centre Archive:
  - long-term preservation of data; up to 3 copies (Disaster Recovery)
  - Raw and meteorological products
- EUMETSAT's catalogue of products and Ordering System
- State of the art Archive
  - Operational in 1995
  - Over 30 years of Meteosat Data
  - 200 types of Products; GEO & LEO
  - One of Europe's largest and most comprehensive collections in this field.

Data Centre Archive – Facts and Figures

- The Archive contains approx 72 million products/
- The size of the Archive is approx 1.5 Pbytes.
- In 2016, the average retrieval volume per month ca. 1,000,000 files or 40 TB delivery.
- Products can be ordered in various formats; JPEG, GIF, netCDF, GRIB, BUFR, McIDAS, many more...
- Sub-area or partial orbits can be specified for a product and ordered. This reduces the amount of data delivered, and for the users to store and process.
- There are currently 4,220 Users registered with the Data Centre.
- Users orders can be delivered online to a EUMETSAT web server for download or on various media types which are delivered to the user by post.
- Data Centre Archive Data is free to the user community.

Data Centre Archive - Operations Overview



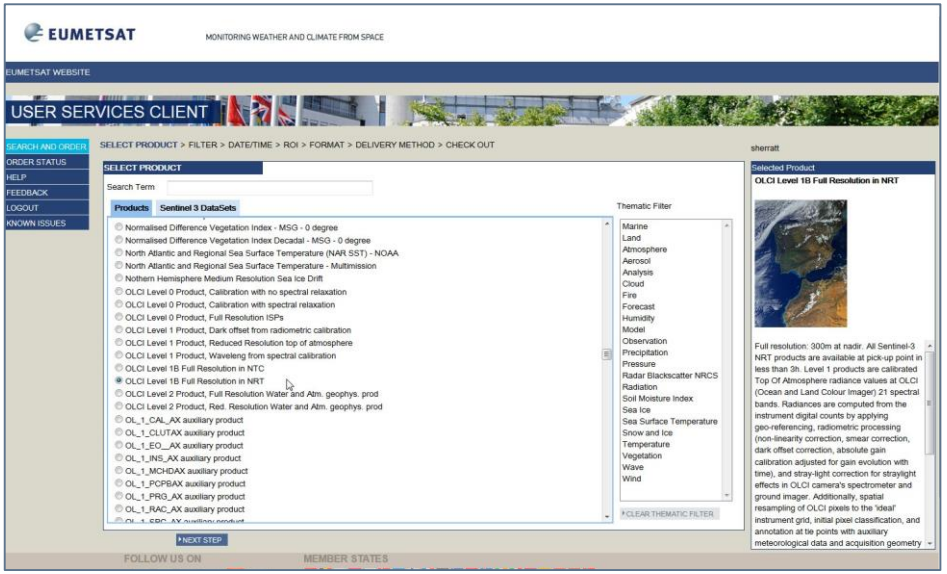
- Ingestion – Products from EUMETSAT's Satellites and from the Satellite Application Facilities (SAFs) are stored into the Data Centre Archive and made available for discovery in its Online Catalogue.
- Ordering – Products in the Data Centre Online Catalogue can be ordered by users via its Online Ordering system (see next slide).

Data Centre – How to use the Data Access Services

- Users can discover EUMETSAT product information from the Product Navigator.
- Users should register an account in the Earth Observation (EO) Portal and this will provide access to the Data Centre Service.
- Using this service will invoke the Data Centre Ordering Client, the client has been designed to intuitively guide users in ordering their products from the Data Centre Archive.
- Users can seek Data Access services support via the EUMETSAT website, YouTube videos or by contacting the User Service Helpdesk.

Data Centre URL: (http://archive.eumetsat.int)

http://www.eumetsat.int/website/home/Data/DataDelivery/EUMETSATDataCentre/index.html



Video on Ordering Process

YouTube: Access Data from EUMETSAT Data Centre

McIDAS and the EUMETSAT Data Centre

- McIDAS: Delivery Format
- McIDAS: ADDE Server
- McIDAS: Users
- McIDAS: Development
- McIDAS: Future

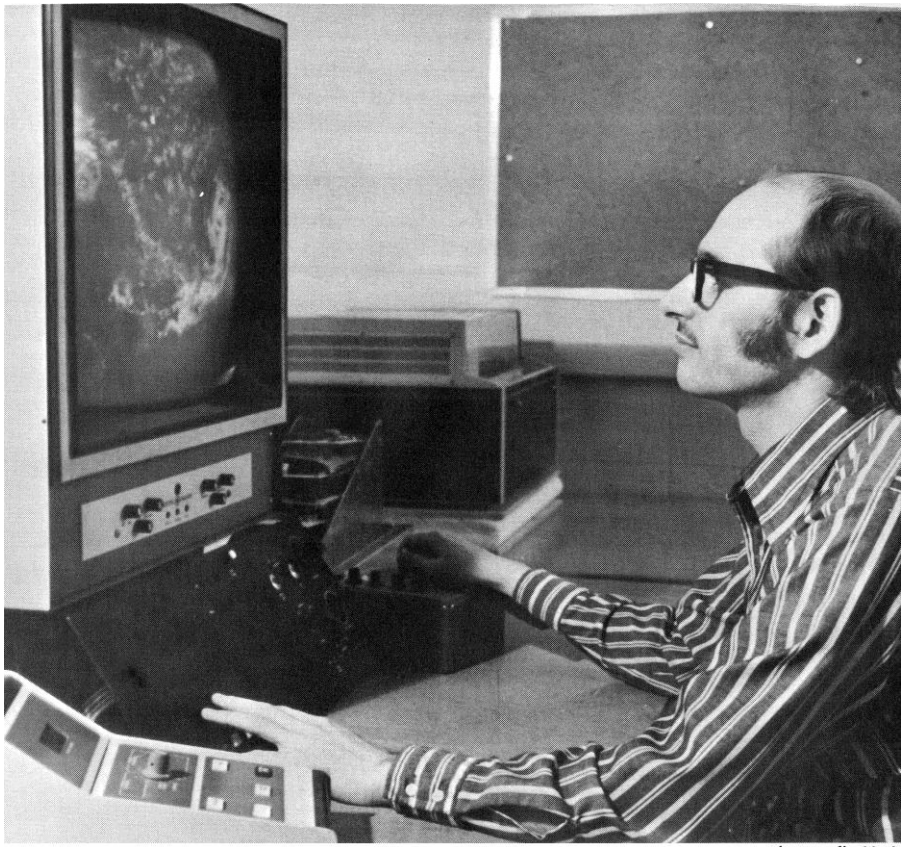


Photo credit: SSEC

Man-Computer Interactive Data Access System (McIDAS) display

McIDAS Development in the Data Centre

- McIDAS – netCDF Secondary Server

  More Products – Generic EPS netCDF product secondary ADDE Server

- McIDAS – Operational ADDE Server

  Currently training use only, operational server intended to provide full access to the wider user community

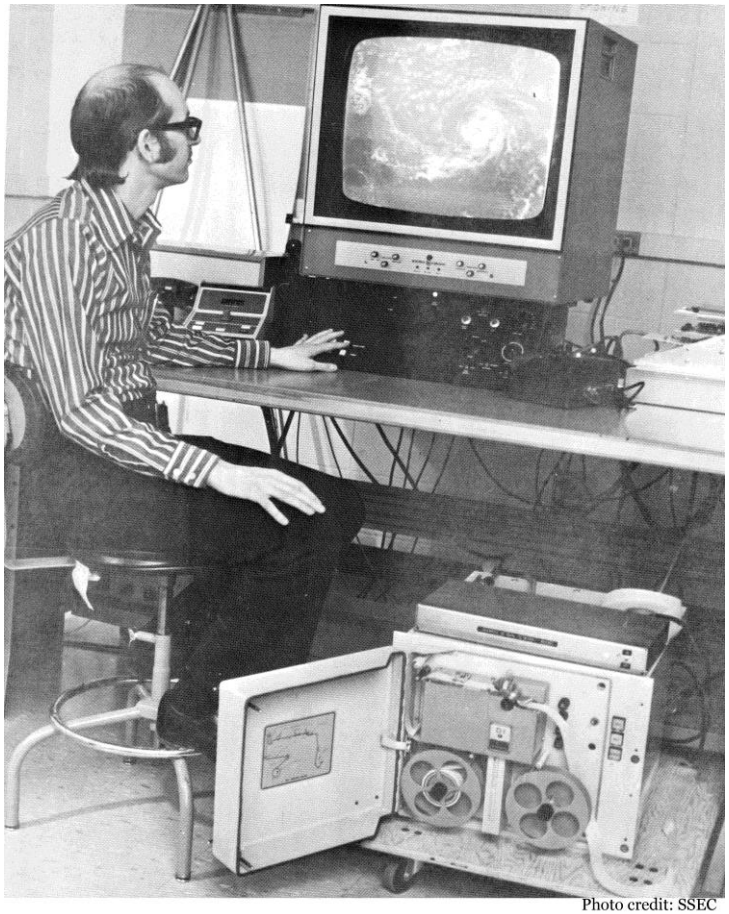
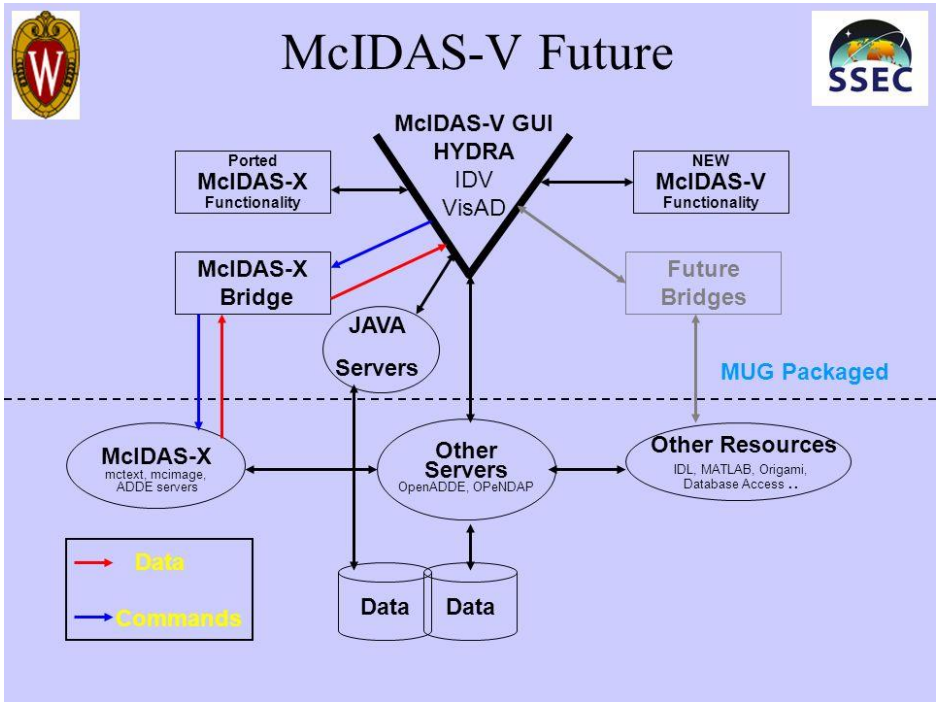


Photo credit: SSEC

Man-Computer Interactive Data Access System (McIDAS) display

McIDAS Future

- McIDAS – new Programme Products; MTG, EPS-SG, …
- McIDAS new products Integration into Data Centre Ordering System
- McIDAS – Visualisation using IDV (?)



Meteosat Third Generation: MTG

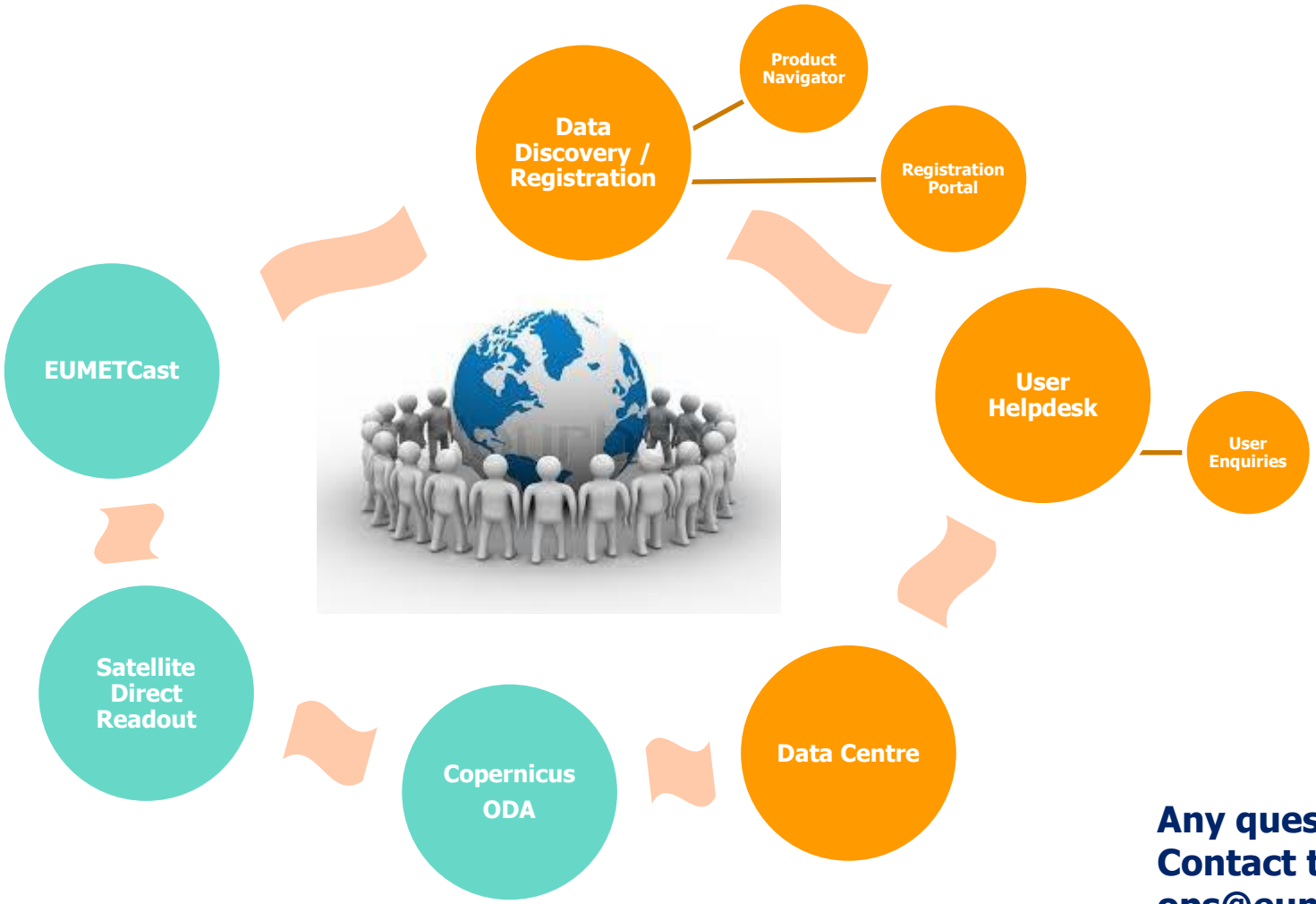
- Twin Satellite Concept, based on 3-axis platforms.
- Four Imaging Satellites (MTG-I) (20 years of operational services expected)
- Two Sounding Satellites (MTG-S) (15.5 years of operational services expected)
- Payload complement of the MTG-I satellites:
  - The Flexible Combined Imager (FCI)
  - The Lightning Imager (LI)
  - The Data Collection System (DCS) and Search and Rescue (GEOSAR)
- Payload complement of the MTG-S satellites:
  - The Infrared Sounder (IRS)
  - The Ultra-violet, Visible and Near-infrared Sounder (UVN)
- The sounder will be one of the key innovations in the new programme, for the first time allowing Meteosat satellites to image weather systems and analyse the atmosphere layer-by-layer, therefore, performing far more detailed chemical composition studies.

EUMETSAT Polar System - Second Generation: EPS-SG

- **The EPS follow-on system (EPS-SG) will provide continuity of observations and respond to the needs of the users in the 2020–2040 time frame.**
- EPS-SG represents Europe's contribution to the future Joint Polar System (JPS), which is planned to be established together with the National Oceanic and Atmospheric Administration (NOAA) of the United States, following on from the Initial Joint Polar System (IJPS).
- Polar orbiting satellites, due to their global coverage and of the variety of passive and active sensors that can be deployed from Low Earth Orbits, have the most significant positive impact on Numerical Weather Prediction (NWP). The Initial Joint Polar System (IJPS), shared by EUMETSAT and NOAA, currently accounts for around 45% of the total error reduction on Day 1 forecasts achieved by all types of observation ingested in real-time by NWP models.
- Polar orbiting satellites also deliver unique infrared and microwave imagery inputs to critical nowcasting of high impact weather at high latitudes. These are vital for the National Meteorological Services of all EUMETSAT Member and Cooperating States.
- The EPS-SG Programme is expected to be one of the most important sources of satellite observations for all forecasts based on NWP in the 2020–2040 time frame. It is expected to increase direct socio-economic benefits to Member States and leverage additional benefits through its integration into the JPS and cooperation in the context of CGMS and WMO.

EPS-SG

End of Presentation: Thank you for your Attention



Any questions?
Contact the User Helpdesk:
ops@eumetsat.int